Andrew Chevallier, FNIMH

ENCYCLOPEDIA OF HERBAL MEDICINE

550 HERBS and REMEDIES for COMMON AILMENTS

ENCYCLOPEDIA OF HERBAL MEDICINE

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DK

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Introduction

In the twenty years since the first edition of this encyclopedia in 1996, herbal medicine has gone through unprecedented change. Herbs, which have always been the principal form of medicine in developing countries, have again become popular in the developed world, as people strive to stay healthy in the face of chronic stress and pollution, and to treat illness with medicines that work in concert with the body's defences. A quiet revolution has been taking place. Tens of millions of people now take herbs such as ginkgo (*Ginkgo biloba*, p. 100) to help maintain mental and physical health, and increasingly people consult trained herbal professionals and naturopaths for chronic or routine health problems. Increasingly too, scientific evidence is accumulating to show that herbal medicines can provide treatment that is as effective as conventional medicines but with few side-effects. Sales of herbal medicines continue to grow year on year – by over 50 per cent in the US since 2000 – and several mainstream pharmaceutical companies now manufacture and market herbal medicines.

Plant Medicines

The variety and sheer number of plants with therapeutic properties are quite astonishing. Some 50,000 to 70,000 plant species, from lichens to towering trees, have been used at one time or another for medicinal purposes. Today, Western herbal medicine still makes use of hundreds of native European plants, as well as many hundreds of species from other continents. In Ayurveda (traditional Indian medicine) about 2,000 plant species are considered to have medicinal value, while the Chinese *Pharmacopoeia* lists over 5,700 traditional medicines, mostly of plant origin.

About 500 herbs are still employed within conventional medicine, although whole plants are rarely used. In general, the herbs provide the starting material for the isolation or synthesis of conventional drugs. Digoxin, for example, which is used for heart failure, was isolated from common foxglove (*Digitalis purpurea*, p. 202), and the contraceptive pill was synthesized from constituents found in wild yam (*Dioscorea villosa*, p. 91).

Ecological Factors

The increased use of medicinal herbs has important environmental implications. Growing herbs as an organic crop offers new opportunities for farmers, and sometimes, especially in developing countries, opportunities for whole communities. In north-eastern Brazil, for example, community-run herb gardens grow medicinal herbs that are sold to local hospitals. Doctors at the hospital then prescribe these medicines for their patients.

The rise in popularity of herbal medicines, however, also directly threatens the survival of some wild species. Demand for goldenseal (*Hydrastis canadensis*, p. 105) has become so great that it now fetches around £170 a kilo ($140 a pound). It was a common plant in the woodlands of northern America two centuries ago, but is now an endangered species, with its survival in the wild threatened by over-collection. This example is by no means unique, and, sadly, many species are similarly threatened across the planet. The extinction of plant species as a result of over-intensive collecting is nothing new. The herb silphion, a member of the carrot family, was used extensively as a contraceptive by the women of ancient Rome.

Silphion proved difficult to cultivate and was gathered from the wild in such large quantities that it became extinct during the 3rd century CE.

Today, if herbal medicine continues to grow at its present rate, it is imperative that manufacturers, suppliers, practitioners and the public use only produce that has been cultivated or wildcrafted in an ecologically sensitive manner.

About This Book

In the past, books on herbal medicine have tended to focus either on the traditional and folkloric use of plants or on their active constituents and pharmacology. *The Encyclopedia of Herbal Medicine*, which features over 550 plants, aims to cover both aspects. It discusses each plant's history, traditions and folklore, and explains in simple terms what is known from scientific research about its active constituents, actions and potential new uses.

It is easy when concentrating on the scientific aspect of herbal medicine to forget that much, in some cases *all*, that we currently know about a particular plant results from its traditional use. Moreover, even when a plant has been well researched, herbal medicines are so complex and variable that what is currently known is rarely definitive, but rather a sound pointer as to how it works. Sometimes the traditional use, in so far as it is based on the experience of practitioners, provides an insight into how best to use a herb that is missing from scientific knowledge alone. Herbal medicine is, after all, both a science *and* an art.

In choosing the plants profiled in the *Encyclopedia*, the aim has been to select herbs that are commonly used in different parts of the world and are considered to have particular health benefits. The index of key medicinal plants (pp. 54–155) contains many herbs that are readily available in health stores and pharmacies, for example St John's wort (*Hypericum perforatum*, p. 106). It also includes herbs that are more commonly known as foods, such as lemon (*Citrus limon*, p. 82), but which, nonetheless, are valuable medicines. The index of other medicinal plants (pp. 156–283) contains some less commonly known but important medicinal herbs, such as andrographis (*Andrographis paniculata*, p. 167), a traditional Indian medicinal plant that stimulates recovery from infection and supports normal liver function.

A global overview of the history of herbal medicine puts the development of different herbal traditions from earliest origins to the present day into perspective. This is complemented with features on herbal medicine in Europe, India, China, Africa, Australia and the Americas, providing a rounded picture of herbal medicine worldwide.

Herbal medicine is nothing if not practical in its approach, and the *Encyclopedia* has a detailed self-help section with advice on preparing and using herbal medicines to treat a range of common health problems.

If more people come to appreciate the immense richness of the world of herbal medicine and are able to benefit from the curative properties of medicinal herbs, this book will have achieved its aim.

Andrew Chevallier

THE DEVELOPMENT OF HERBAL MEDICINE

From the earliest times, herbs have been prized for their pain-relieving and healing abilities, and today we still rely on the curative properties of plants in about 75 per cent of our medicines. Over the centuries, societies around the world have developed their own traditions to make sense of medicinal plants and their uses. Some of these traditions and medicinal practices may seem strange and magical, others appear rational and sensible, but all are attempts to overcome illness and suffering, and to enhance quality of life.

"A wise man ought to realise that health is his most valuable possession."

Hippocrates

How Medicinal Plants Work

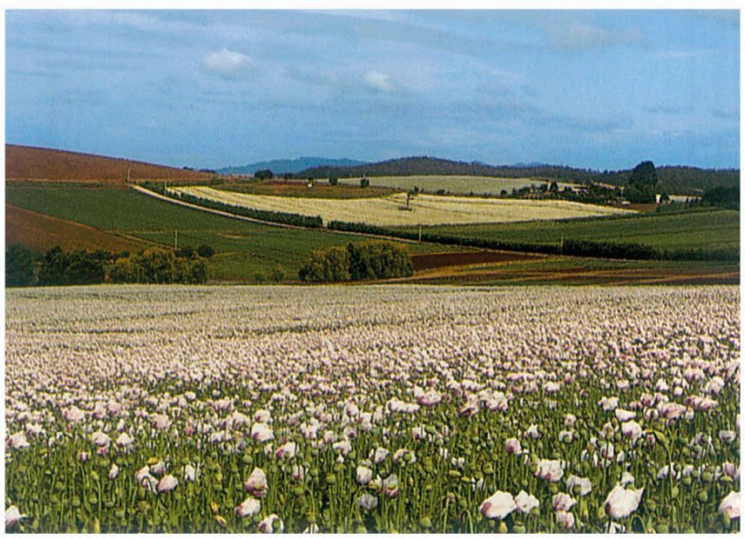
Many of the thousands of plant species growing throughout the world have medicinal uses, containing active constituents that have a direct action on the body. They are used both in herbal and conventional medicine and offer benefits that pharmaceutical drugs often lack, helping to combat illness and support the body's efforts to regain good health.

There is no doubt that in extreme situations, the treatments devised by modern medicine can offer an unparalleled opportunity to relieve symptoms and save lives. A newspaper article in 1993 described the terrible conditions in a hospital in war-torn Sarajevo, the capital of Bosnia-Herzegovina. Deprived of conventional medical supplies and drugs, the doctors were forced to use a well-known European herb, valerian (*Valeriana officinalis*, p. 148), as a painkiller for the wounded and as an anaesthetic. Valerian is an effective herbal medicine for anxiety and nervous tension, but it is woefully inadequate as an analgesic or anaesthetic.

Orthodox pharmaceutical medicines sustain life and counter infections in situations where other types of treatment may have little to offer. Modern surgical techniques, such as keyhole surgery and plastic surgery, and the whole range of diagnostics and of life-support machinery now available can all be used to improve the chances of recovery from serious illness or injury.

The Benefits of Herbal Medicine

Yet despite the dramatic advances and advantages of conventional medicine, or biomedicine as it is also known, it is clear that herbal medicine has much to offer. We tend to forget that in all but the last 70 years or so, humans have relied almost entirely on plants to treat all manner of illnesses, from minor problems such as coughs and colds to life-threatening diseases such as tuberculosis and malaria.



Opium poppy *fields in Tasmania. Opium, derived from the seed capsules of the opium poppy, yields the narcotic alkaloids morphine and codeine, powerful painkillers that are widely used in conventional medicine.*

Today, herbal remedies are coming back into prominence because the efficacy of conventional medicines such as antibiotics, which once had near-universal effectiveness against serious infections, is on the wane. Over the years, infectious organisms have developed resistance to synthesized drugs, and the herb sweet wormwood (*Artemisia annua*, p. 67) and its active constituent artemisinin, for example, are now the standard treatment for malaria in tropical areas where the protozoa causing the infection no longer respond to conventional treatment.

Herbal medicine often complements conventional treatments, providing safe, well-tolerated remedies for chronic illnesses. It is experiencing a dramatic renaissance in Western countries, partly because no effective conventional treatment as yet exists for many chronic illnesses, such as asthma, arthritis and irritable bowel syndrome. In addition, concern over the side-effects of biomedicine is encouraging people to look for more gentle forms of treatment. It is estimated that 10–20% of hospital patients in the West are there due to the side-effects of conventional medical treatment.

Using Herbs Wisely

Most commonly used herbs are extremely safe to use. But some plants can produce side-effects and, like all medicines, herbal remedies must be treated with respect. It is essential to take or use certain plants only under the guidance of a well-trained practitioner, to avoid adverse consequences. Ephedra (*Ephedra sinica*, p. 95), for example, can be extremely toxic at the wrong dosage, and comfrey (*Symphytum officinale*, p. 138), a very popular herb in the past, is thought to cause severe or even fatal liver damage in rare circumstances. When a herbal medicine is used correctly, however, the chances of developing a serious side-effect are remote.

Potent Plant Chemicals

The ability of a herbal medicine to affect body systems depends on the chemical constituents that it contains. Scientists first started extracting and isolating chemicals from plants in the 18th century, and since that time we have grown accustomed to looking at herbs and their effects in terms of the active constituents they contain. This *Encyclopedia* is no exception, providing details of all the main active constituents of the medicinal herbs featured and explaining their actions.

***Ginkgo**, one of the oldest known plant species, improves the circulation of blood to the head.*

Research into isolated plant constituents is of great importance, for it has given rise to many of the world's most useful drugs. Tubocurarine, the most powerful muscle relaxant in existence, is derived from pareira (*Chondrodendron tomentosum*, p. 189) and the strongest painkiller of all, morphine, comes from opium poppy (*Papaver somniferum*, p. 244). Many anaesthetics are also derived from plants – for example cocaine comes from coca (*Erythroxylum coca*, p. 206).

Today, biomedicine still relies on plants rather than the laboratory for at least 25% of its medicines, and many of these are among the most effective of all conventional drugs. It is hard to think of a world deprived of the antimalarial properties of quinine (derived from *Cinchona* spp., p. 80); or the heart remedy digoxin (from *Digitalis* spp., p. 202); or the cough-relieving properties of ephedrine (from *Ephedra sinica*, p. 95), which is present in many prescription and over-the-counter cold remedies. These and many other conventional medicines are all derived from isolated plant constituents.

Value of Whole Plants

Although it is important to understand the actions of individual active constituents, herbal medicine, unlike bio-medicine, is ultimately about the use and actions of whole plants – medicines that are literally god- or goddess-given, rather than developed in a laboratory. In the same way that taking a watch to bits and identifying its key parts will not show you how it works as a whole, dividing up a medicinal herb into its constituent parts cannot explain exactly how it works in its natural form. The whole herb is worth more than the sum of its parts and scientific research is increasingly showing that the active constituents of many herbs, for example those in ginkgo (*Ginkgo biloba*, p. 100), interact in complex ways to produce the therapeutic effect of the remedy as a whole.

***Cultivation of medicinal plants** in Cameroon. Scientific research indicates that whole plant preparations may often be gentler and more effective remedies than isolated plant chemicals.*

Plants contain hundreds, if not thousands, of different constituent chemicals that interact in complex ways. Frequently, we simply do not know in detail how a particular herb works – even though its medicinal benefit is well established. The pharmacological approach to understanding how whole herbs work is like working on a jigsaw where only some of the pieces have been provided. Furthermore, although it is very useful to know that a plant contains certain active constituents, such information can be misleading on its own. For example, Chinese rhubarb (*Rheum palmatum*, p. 126) is a commonly used laxative, containing anthraquinones that irritate the gut wall and stimulate bowel movement. This laxative effect, however, occurs only when large quantities of the herb are used. At lower doses other constituents, notably tannins, which dry and tighten up mucous membranes in the gut, have greater effect. As a result Chinese rhubarb works in two apparently opposite ways depending on the dosage: as a laxative at moderate to high doses; to treat diarrhoea at a lower dose.

This example reveals a couple of fundamental truths about herbal medicine. Firstly, the experience of the herbal practitioner and of the patient often provide the most reliable guide to the medicinal effect of individual herbs. Secondly, the value of a medicinal herb cannot be reduced simply to a list of its active constituents.

Plants as Foods & Medicines

In general, the human body is much better suited to treatment with herbal remedies than with isolated chemical medicines. We have evolved side-by-side with plants over hundreds of thousands of years and our digestive system and physiology as a whole are geared to digesting and utilizing plant-based foods, which often have a medicinal value as well as providing sustenance.

The dividing line between "foods" and "medicines" may not always be clear. Are lemons, papayas, onions and oats foods or medicines? The answer, very simply, is that they are both. Lemon (*Citrus limon*, p. 82) improves resistance to infection; papaya (*Carica papaya*, p. 183) is taken in some parts of the world to expel worms; onion (*Allium cepa*, p. 164) relieves bronchial infections; and oats (*Avena sativa*, p. 175) support convalescence. Indeed, herbal medicine comes into its own when the distinctions between foods and medicines are removed.

Though we might eat a bowl of porridge oblivious to the medicinal benefits, it will, nonetheless, increase stamina, help the nervous system to function correctly, provide a good supply of B vitamins, and maintain regular bowel function. A similar range of benefits is provided by many of the other gentler-acting herbs listed in the *Encyclopedia*.

Herbal Treatments

The strategies that herbal practitioners adopt to prevent illness or restore health in their patients are different in the many and varied herbal traditions across the planet, but the effects that herbal medicines have within the body to improve health do not vary. There are many thousands of medicinal plants in use throughout the world, with a tremendous range of actions and degrees of potency. Most have a specific action on particular body systems and are known to be suitable for treating certain types of ailments. See p. 13 for specific actions.

Digestion, Respiration & Circulation

Improving the quality of the diet is often an essential starting point in sustaining or regaining good health. The saying "You are what you eat" is by and large true, though herbalists prefer to qualify it, saying "You are what you *absorb* from what you eat." Herbal medicines not only provide nutrients, but when needed they also strengthen and support the action of the digestive system, speeding up the rate of processing food and improving the absorption of nutrients.

The body requires another kind of "nutrient" to function – oxygen. The lungs and respiratory system can be helped with herbs that relax the bronchial muscles and stimulate respiration.

Once taken in by the body, nutrients and medicines are carried to the body's estimated one hundred trillion cells. The circulatory system has a remarkable ability to adapt to an endlessly shifting pattern of demand. At rest, the flow of blood is mainly towards the centre of the body, while when active, the muscles in the limbs make huge demands. Herbal medicines work to encourage the circulation in particular ways. Some, for example, encourage blood to flow to the surface of the body; others stimulate the heart to pump more efficiently; while others relax the muscles of the arteries, lowering blood pressure.

Clearing Toxicity & Soothing Skin

After the circulation has carried nutrients to the cells, waste matter must be removed. All too often in our polluted world, high levels of toxicity in the body are an underlying cause of ill health, and herbalists use a wide range of cleansing herbs that improve the body's ability to remove toxins. Perhaps the finest example of a detoxifying herb is burdock (*Arctium lappa*, p. 65), which is used extensively in both Western and Chinese medicine. Once herbs such as this reduce the toxic "load", the body is able to invest greater resources in repairing and strengthening damaged tissue and weakened organs.

The skin also plays an important role in good health. Antiseptic plants fight infection, while vulnerary (wound-healing) herbs such as comfrey (*Symphytum officinale*, p. 138) encourage blood clotting and help speed the healing of wounds.

Nervous, Endocrine & Immune Systems

Good health depends on having a healthy, balanced nervous system. In order to ensure long-term good health of the nervous system, it is important to adapt well to life's daily demands, to avoid excessive anxiety, worry or depression, and to take sufficient rest and exercise.

The latest research shows that the nervous system does not work in isolation but is complemented by the endocrine system, which controls the release of a whole symphony of hormones, including the sex hormones, which control fertility and often affect vitality and mood. The nervous system is also intimately linked with the immune system, which controls the ability to resist infection and to recover from illness and injury.

This incredible complex of systems – part electrical, part chemical, part mechanical – must function harmoniously if good health is to be maintained. In health, the body has a seemingly infinite capacity, via its controlling systems, to adjust and change to external pressures. This ability to adapt to the external world while the body's internal workings remain constant is known as *homeostasis*. Many herbs work with the immune, nervous and endocrine systems to help the body adapt more effectively to stresses and strains of all kinds – physical, mental, emotional and even spiritual. They are effective because they work in tune with the body's processes.

Some herbs are *adaptogenic*, meaning that they have an ability to help people to adapt, either by supporting the nervous system and easing nervous and emotional tension, or by working directly with the body's own physiological processes to maintain health. The prime example of an adaptogenic herb is ginseng (*Panax ginseng*, p. 118), which is an effective remedy at times of great mental or physical stress, but in certain cases can also be taken when a relaxing effect is required, for example to relieve headaches, or to ensure a good night's sleep.

Complex Natural Medicines

As can be seen, a herb is not a "magic bullet" with a single action, but a complex natural medicine composed of many active constituents that work on different body systems. By combining scientific research into active constituents with clinical observation and traditional knowledge of the whole plant, we can develop a rounded picture of each herb's range of medicinal uses.

Herbs & Body Systems

One of the most common ways of classifying medicinal plants is to identify their actions, for example whether they are sedative, antiseptic or diuretic, and the degree to which they affect different body systems. Herbs often have a pronounced action on a particular body system, for example a plant that is strongly antiseptic in the digestive tract may be less so in the respiratory tract. Examples of how herbs work on the body are given below.

Skin

Antiseptics e.g. tea tree (*Melaleuca alternifolia*, p. 112) disinfect the skin. *Emollients* e.g. marshmallow (*Althea officinalis*, p. 165) reduce itchiness, redness and soreness. *Astringents* e.g. witch hazel (*Hamamelis virginiana*, p. 102) tighten the skin. *Depuratives* e.g. burdock (*Arctium lappa*, p. 65) encourage removal of waste products. *Healing and vulnerary herbs* e.g. comfrey (*Symphytum officinale*, p. 138) and marigold (*Calendula officinalis*, p. 73) aid the healing of cuts, wounds and abrasions.

Marigold
(Calendula officinalis)

Echinacea
(Echinacea spp.)

Immune system

Immune modulators e.g. echinacea (*Echinacea* spp. p. 92) and pau d'arco (*Tabebuia* spp., p. 139) encourage the immune system to ward off infection.

Respiratory system

Antiseptics and antibiotics e.g. garlic (*Allium sativum*, p. 59) help the lungs resist infection. *Expectorants* e.g. elecampane (*Inula helenium*, p. 107) stimulate the coughing up of mucus. *Demulcents* e.g. coltsfoot (*Tussilago farfara*, p. 278) soothe irritated membranes. *Spasmolytics* e.g. visnaga (*Ammi visnaga*, p. 62) relax bronchial muscles.

Garlic
(Allium sativum)

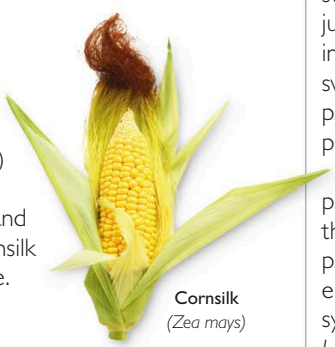
Ginseng
(Panax ginseng)

Endocrine glands

Adaptogens e.g. ginseng (*Panax ginseng*, p. 118) help the body adjust to external pressures and stress. *Hormonally active herbs* e.g. chaste tree (*Vitex agnus-castus*, p. 151) stimulate production of sex and other hormones. *Emmenagogues* e.g. black cohosh (*Cimicifuga racemosa*, p. 79) encourage or regulate menstruation.

Urinary system

Antiseptics e.g. buchu (*Barosma betulina*, p. 71) disinfect the urinary tubules. *Astringents* e.g. horsetail (*Equisetum arvense*, p. 205) tighten and protect the urinary tubules. *Diuretics* e.g. cornsilk (*Zea mays*, p. 154) stimulate the flow of urine.



Cornsilk
(Zea mays)

White Willow
(Salix alba)

Musculo-skeletal system

Analgesics e.g. yellow jasmine (*Gelsemium empervirens*, p. 216) relieve joint and nerve pain. *Anti-inflammatories* e.g. white willow (*Salix alba*, p. 129) reduce swelling and pain in joints. *Antispasmodics* e.g. cinchona (*Cinchona* spp., p. 80) relax tense and cramped muscles.

Nervous system

Nervines e.g. rosemary (*Rosmarinus officinalis*, p. 128) support and strengthen the nervous system. *Relaxants* e.g. lemon balm (*Melissa officinalis*, p. 113) relax the nervous system. *Sedatives* e.g. mistletoe (*Viscum album*, p. 283) reduce nervous activity. *Stimulants* e.g. kola nut (*Cola acuminata*, p. 192) increase nervous activity. *Tonics* e.g. oats (*Avena sativa*, p. 175) improve nerve function and tone, and help to restore the nervous system as a whole.

Rosemary
(Rosmarinus officinalis)

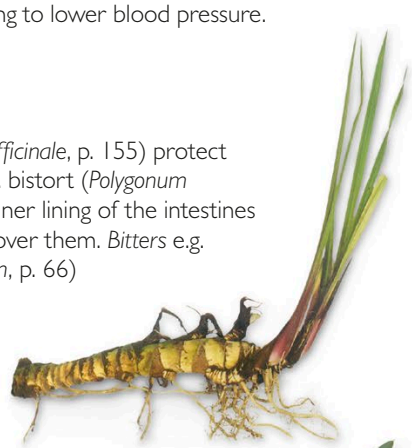
Chilli
(Capsicum frutescens)

Circulation & heart

Cardiotonics e.g. *dan shen* (*Salvia miltiorrhiza*, p. 130) vary in action. Some slow heart beat rate, while others increase it. Some improve the regularity and strength of the heart's contractions. *Circulatory stimulants* e.g. chilli (*Capsicum frutescens*, p. 74) improve the circulation of blood to the extremities. *Diaphoretics* e.g. *ju hua* (*Chrysanthemum* × *morifolium*, p. 78) encourage blood flow to the surface of the body, promote sweating and lower blood pressure. *Spasmolytics* e.g. cramp bark (*Viburnum opulus*, p. 150) relax the muscles, helping to lower blood pressure.

Digestive organs

Antiseptics e.g. ginger (*Zingiber officinale*, p. 155) protect against infection. Astringents e.g. bistort (*Polygonum bistorta*, p. 253) tighten up the inner lining of the intestines and create a protective coating over them. *Bitters* e.g. wormwood (*Artemisia absinthium*, p. 66) stimulate secretion of digestive juices by the stomach and intestines. *Carminatives* e.g. sweet flag (*Acorus calamus*, p. 57) relieve wind and griping pain. *Cholagogues* e.g fringe tree (*Chionanthus virginicus*, p. 188) improve the flow of bile into the intestines. *Choleretics* e.g. artichoke (*Cynara scolymus*, p. 199) stimulate secretion of bile by the liver. *Demulcents* e.g. psyllium (*Plantago* spp., p. 123) soothe the digestive system and protect against acidity and irritation. *Hepatics* e.g. bupleurum (*Bupleurum chinense*, p. 72) prevent liver damage. *Laxatives* e.g. senna (*Cassia senna*, p. 75) stimulate bowel movements. *Stomachics* e.g. cardamom (*Eletteria cardamomum*, p. 93) protect and support the stomach.



Sweet Flag
(Acorus calamus)

Senna
(Cassia senna)

Active Constituents

The medicinal effects of certain plants are well known. German chamomile, for example, has been taken to soothe digestive problems for thousands of years, and aloe vera was known to Cleopatra as a healing skin remedy. It is only relatively recently, however, that active constituents responsible for the medicinal actions of plants have been isolated and observed. Knowing a little about the chemicals contained in plants helps you to understand how they work within the body.

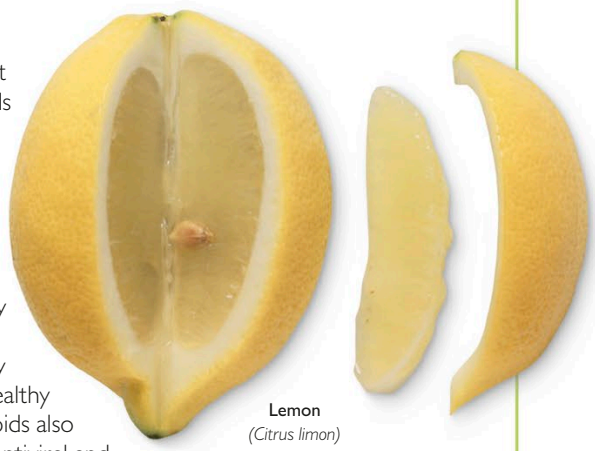
Thyme
(Thymus vulgaris)

Phenols

Phenols are a very varied group of plant constituents ranging from salicylic acid, a molecule similar to aspirin (acetylsalicylic acid), to complex sugar-containing phenolic glycosides. Phenols are often anti-inflammatory and antiseptic, and are thought to be produced by plants to protect against infection and feeding by insects. Phenolic acids, such as rosmarinic acid, are strongly antioxidant and anti-inflammatory, and can also have antiviral properties. Wintergreen (*Gaultheria procumbens*, p. 215) and white willow (*Salix alba*, p. 129) both contain salicylates. Many mint family members contain phenols – for example, the strongly antiseptic thymol, found in thyme (*Thymus vulgaris*, p. 143).

Flavonoids

Found widely throughout the plant world, flavonoids are polyphenolic compounds that act as pigments, imparting colour, often yellow or white, to flowers and fruits. They have a wide range of actions and many medicinal uses. They are antioxidant and especially useful in maintaining a healthy circulation. Some flavonoids also have anti-inflammatory, antiviral and liver-protective activity. Flavonoids such as hesperidin and rutin, found in many plants, notably buckwheat (*Fagopyrum esculentum*, p. 210) and lemon (*Citrus limon*, p. 82), strengthen capillaries and prevent leakage into surrounding tissues. Isoflavones, found for example in red clover (*Trifolium pratense*, p. 277), are oestrogenic and valuable in treating menopausal symptoms.



Lemon
(Citrus limon)

Volatile Oils

Volatile oils – which are extracted from plants to produce essential oils – are some of the most important medicinally active plant constituents, and are also used widely in perfumery. They are complex mixtures often of 100 or more compounds, mostly made up of monoterpenes – molecules containing 10 carbon atoms. Essential oils have many uses. Tea tree oil (*Melaleuca alternifolia*, p. 112) is strongly antiseptic, while sweet gale oil (*Myrica gale*, p. 238) is an effective insect repellent. On distillation, some essential oils contain compounds not found in the volatile oil – chamazulene, found in German chamomile (*Chamomilla recutita*, p. 77) essential oil, is anti-inflammatory and anti-allergenic. Resins – sticky oily substances that seep from plants, for example from the bark of Scots pine (*Pinus sylvestris*, p. 249) – are often linked with essential oils (oleo-resins) and gums (see Polysaccharides), though they are non-volatile.

German Chamomile
(Chamomilla recutita)

Black Catechu
(Acacia catechu)

Tannins

Tannins are produced to a greater or lesser degree by all plants. The harsh, astringent taste of tannin-laden bark and leaves makes them unpalatable to insects and grazing animals. Tannins are polyphenolic compounds that contract and astringe tissues of the body by binding with and precipitating proteins – hence their use to "tan" leather. They also help to stop bleeding and to check infection. Tannin-containing herbs are used to tighten up over-relaxed tissues – as in varicose veins – to dry up excessive watery secretions – as in diarrhoea – and to protect damaged tissue – such as skin problems resulting from eczema or a burn. Oak bark (*Quercus robur*, p. 260) and black catechu (*Acacia catechu*, p. 158) are both high in tannins.

Proanthocyanins

Closely related to tannins and flavonoids, these polyphenolic compounds are pigments which give flowers and fruits a blue, purple or red hue. They are powerfully antioxidant and free-radical scavengers. They protect the circulation from damage, especially the circulation in the heart, hands, feet and eyes. Blackberry (*Rubus fruticosus*, p. 264), red grapes (*Vitis vinifera*, p. 283) and hawthorn (*Crataegus oxycantha*, p. 87) all contain appreciable quantities of these proanthocyanins.

Blackberry
(Rubus fruticosus)

Coumarins

Coumarins of different kinds are found in many plant species and have widely divergent actions. The coumarins in melilot (*Melilotus officinalis*, p. 234) and horse chestnut (*Aesculus hippocastanum*, p. 58) help to keep the blood thin, while furanocoumarins such as bergapten, found in celery (*Apium graveolens*, p. 64), stimulate skin tanning, and khellin, found in visnaga (*Ammi visnaga*, p. 62), is a powerful smooth muscle relaxant.

Celery
(Apium graveolens)

Saponins

The main active constituents in many key medicinal plants, saponins gained their name because, like soap, they make a lather when placed in water. Saponins occur in two different forms – steroidal and triterpenoid. The chemical structure of steroidal saponins is similar to that of many of the body's hormones, for example oestrogen and cortisol, and many plants containing them have a marked hormonal activity. Wild yam (*Dioscorea villosa*, p. 91), from which the contraceptive pill was first developed, contains steroidal saponins. Triterpenoid saponins occur more commonly – for example in liquorice (*Glycyrrhiza glabra*, p. 101) and cowslip root (*Primula veris*, p. 256) – but have less hormonal activity. They are often expectorant and aid absorption of nutrients.

Liquorice
(Glycyrrhiza glabra)

Anthraquinones

Anthraquinones are the main active constituents in herbs such as senna (*Cassia senna*, p. 75) and Chinese rhubarb (*Rheum palmatum*, p. 126), both of which are taken to relieve constipation. Anthraquinones have an irritant laxative effect on the large intestine, causing contractions of the intestinal walls and stimulating a bowel movement approximately 10 hours after being taken. They also make the stool more liquid, easing bowel movements.

Chinese Rhubarb
(Rheum palmatum)

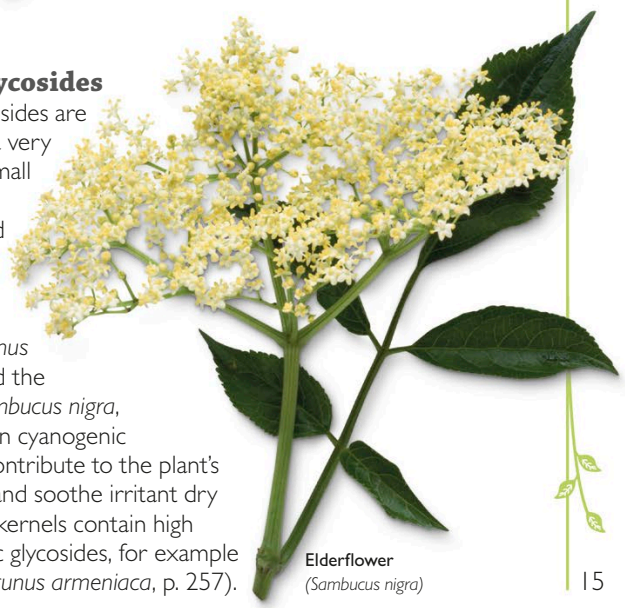
Cardiac Glycosides

Found in various medicinal plants, notably in foxgloves (see common foxglove, *Digitalis purpurea*, p. 202) and in lily of the valley (*Convallaria majalis*, p. 194), cardiac glycosides such as digitoxin, digoxin, and convallotoxin have a strong, direct action on the heart, supporting its strength and rate of contraction when it is failing. Cardiac glycosides are also significantly diuretic. They help to stimulate urine production, thus increasing the removal of fluid from the tissues and circulatory system.

Common Foxglove
(Digitalis purpurea)

Cyanogenic glycosides

Though these glycosides are based on cyanide, a very potent poison, in small doses they have a helpful sedative and relaxant effect on the heart and muscles. The bark of wild cherry (*Prunus serotina*, p. 257) and the leaves of elder (*Sambucus nigra*, p. 132) both contain cyanogenic glycosides, which contribute to the plant's ability to suppress and soothe irritant dry coughs. Many fruit kernels contain high levels of cyanogenic glycosides, for example those of apricot (*Prunus armeniaca*, p. 257).



Elderflower
(Sambucus nigra)

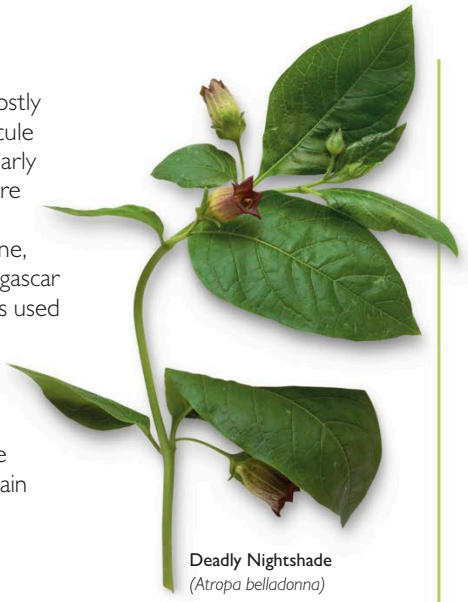
Polysaccharides

Found in all plants, polysaccharides are multiple units of sugar molecules linked together. From a herbal point of view, the most important polysaccharides are the "sticky" mucilages and gums, which are commonly found in roots, bark, leaves and seeds. Both mucilage and gum soak up large quantities of water, producing a sticky, jelly-like mass that can be used to soothe and protect irritated tissue, for example, dry irritated skin and sore or inflamed mucous membranes in the gut. Mucilaginous herbs, such as slippery elm (*Ulmus rubra*, p. 145) and linseed or flaxseed (*Linum usitatissimum*, p. 109), are best prepared by soaking (macerating) in plenty of cold water. Some polysaccharides stimulate the immune system, for example acemannan, which is found in the leaves of aloe vera (*Aloe vera*, p. 60).

Slippery Elm
(Ulmus rubra)

Alkaloids

A very mixed group, alkaloids mostly contain a nitrogen-bearing molecule ($-NH_2$) that makes them particularly pharmacologically active. Some are well-known drugs and have a recognized medical use. Vincristine, for example, derived from Madagascar periwinkle (*Vinca rosea*, p. 282), is used to treat some types of cancer. Other alkaloids, such as atropine, found in deadly nightshade (*Atropa belladonna*, p. 69), have a direct effect on the body, reducing spasms, relieving pain and drying up bodily secretions.



Deadly Nightshade
(Atropa belladonna)

Radish
(Raphanus sativus)

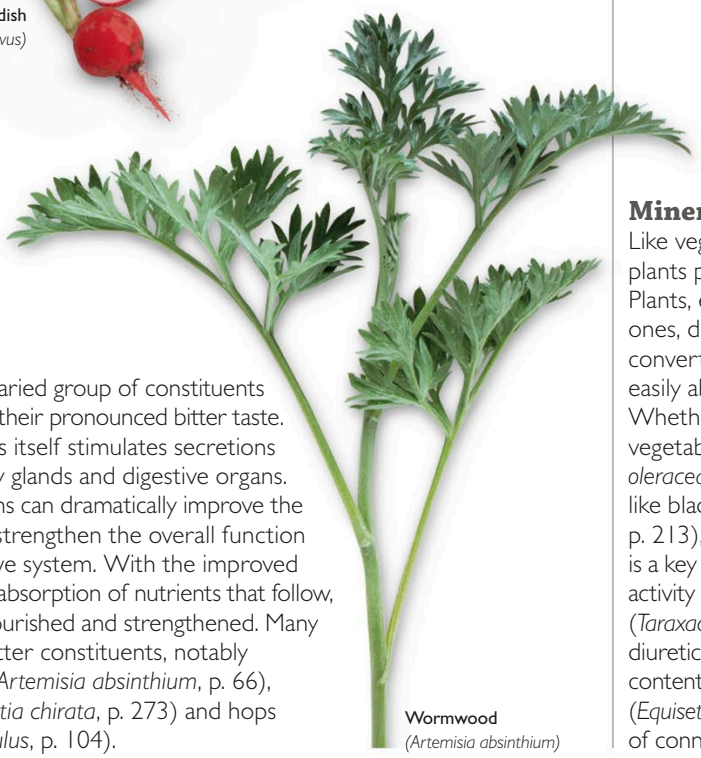
Glucosilinates

Found exclusively in species of the mustard and cabbage family, glucosilinates have an irritant effect on the skin, causing inflammation and blistering. Applied as poultices to painful or aching joints, they increase blood flow to the affected area, helping to remove the build-up of waste products (a contributory factor in many joint problems). On eating, glucosilinates are broken down and produce a strong pungent taste. Radish (*Raphanus sativus*, p. 261) and watercress (*Nasturtium officinale*, p. 239) are typical glucosilinate-containing plants.

Dog Rose
(Rosa canina)

Vitamins

Though often overlooked, many medicinal plants contain useful levels of vitamins. Some are well known for their vitamin content, for example dog rose (*Rosa canina*, p. 263) has high levels of vitamin C, and carrot (*Daucus carota*, p. 201) is rich in beta-carotene (pro-vitamin A), but many are less well recognized. Watercress (*Nasturtium officinale*, p. 239), for example, contains appreciable levels of vitamins B_1, B_2, C and E as well as beta-carotene, while sea buckthorn (*Hippophae rhamnoides*, p. 220) can be regarded as a vitamin and mineral supplement in its own right.



Wormwood
(Artemisia absinthium)

Bitters

Bitters are a varied group of constituents linked only by their pronounced bitter taste. The bitterness itself stimulates secretions by the salivary glands and digestive organs. Such secretions can dramatically improve the appetite and strengthen the overall function of the digestive system. With the improved digestion and absorption of nutrients that follow, the body is nourished and strengthened. Many herbs have bitter constituents, notably wormwood (*Artemisia absinthium*, p. 66), chiretta (*Swertia chirata*, p. 273) and hops (*Humulus lupulus*, p. 104).

Minerals

Like vegetable foods, many medicinal plants provide high levels of minerals. Plants, especially organically grown ones, draw minerals from the soil and convert them into a form that is more easily absorbed and used by the body. Whether plants are eaten as a vegetable, like cabbage (*Brassica oleracea*, p. 180), or taken as a medicine, like bladderwrack (*Fucus vesiculosus*, p. 213), in many cases the mineral content is a key factor in the plant's therapeutic activity within the body. Dandelion leaf (*Taraxacum officinale*, p. 141) is a potent diuretic, balanced by its high potassium content, while the high silica content of horsetail (*Equisetum arvense*, p. 205) supports the repair of connective tissue, making it useful in arthritis.

Dandelion
(Taraxacum officinale)

Quality control

Making the most of herbal medicine means ensuring that herbs and herbal products used are of good quality – properly grown, well dried, correctly processed and within their sell-by date. Using poor-quality herbal produce is all too often a waste of money since there is the strong possibility that you will receive little benefit from it. When it comes to herbal medicine, quality is everything.

Quality is vital for herbal medicine. Without a guarantee that the correct herb of the right quality is being used, it is hard to be confident that the medicine will prove effective. In fact, one reason why the medical profession has generally preferred conventional medicines to herbal ones is the difficulty of guaranteeing quality in herbal remedies. Many herbal products on the market are of high quality but some can be very poor. A 2006 US study of black cohosh (*Cimicifuga racemosa*, p. 79) found that only 7 out of 11 over-the-counter products tested contained what was stated on the label. Four contained a cheaper Chinese species instead. The adulteration of herbal products, particularly in Chinese and Indian herbs sold in the West is, regrettably, not unusual.

Herb quality may be affected not only by deliberate adulteration, but by the use of wrongly identified or poor quality material. The herb may have been poorly harvested, dried or stored, or it may be old or decayed. It may even be that the wrong herb was used. In each case, the lack of attention to quality results in a product with reduced medicinal value – or even none at all.

To try to ensure that only good-quality products are made, manufacturers of genuine herbal medicines use strict quality-control procedures. Usually this involves comparing the dried herb material with listings in a herbal or national pharmacopoeia (a standard reference work that gives the characteristics one would expect to find when analysing a specific herb). Quality control involves making routine checks to establish that the herbal material is what it claims to be and that it meets a number of minimum requirements. The material is inspected with the naked eye, and assessed microscopically, to see if its botanical profile matches the standard. Other checks are made to see whether it contains appropriate levels of active constituents and to ensure that the material is free from contamination.

More sensitive quality-control methods, however, recognize that the quality of a herb does not depend simply on the presence of one or two key active constituents. Increasingly, people in the world of herbal medicine are focusing on the "fingerprint" of a herb – the unique chemical profile that represents the complex pattern of constituents found when good-quality dried herb material is analysed by sensitive scientific machinery. By monitoring the sample and comparing it with this unique fingerprint, it is possible to make a much broader assessment of quality than when using only one or two constituents as a standard.

Buying Herbal Medicines

What should you look for when buying herbal medicines? It is usually most convenient to buy capsules, tablets, essential oils, pessaries and perhaps tinctures, and to make up your own infusions, decoctions and syrups (see p. 291 and p. 293).

- Buy from a reputable herb store, staffed by people knowledgeable about herbal medicines.
- Only buy herbs online from established herbal suppliers.
- Buy organic herbs and products where available.

Marigold

Buying Dried Herbs

Dried herbs are generally available from herbal suppliers. Buying from shops is preferable to buying online because the herbs can be examined before purchasing. However, it is possible some online companies may supply fresher herbs due to higher turnover. To gain the best medicinal effect, good-quality produce is essential. Shop around and bear in mind the following points before buying:

- Herbs should not be stored in clear glass jars or in direct sunlight, as this causes oxidation, which affects their efficacy.
- Good-quality aromatic herbs should have a distinct scent and taste.
- Check for signs of infestation due to poor drying techniques, or adulteration. This can sometimes be recognized by the presence of dried grass or other non-medicinal material in the jar.
- Herbs lose their colour as they age. Look for bright material that has been well dried and stored, and that is not too old. Marigold flowers (*Calendula officinalis*, p. 73) that are a vivid yellow/orange colour are likely to make good medicine. If they have been sitting on a shelf for 18 months, they will probably look drab and pale.

Buying Herbal Products

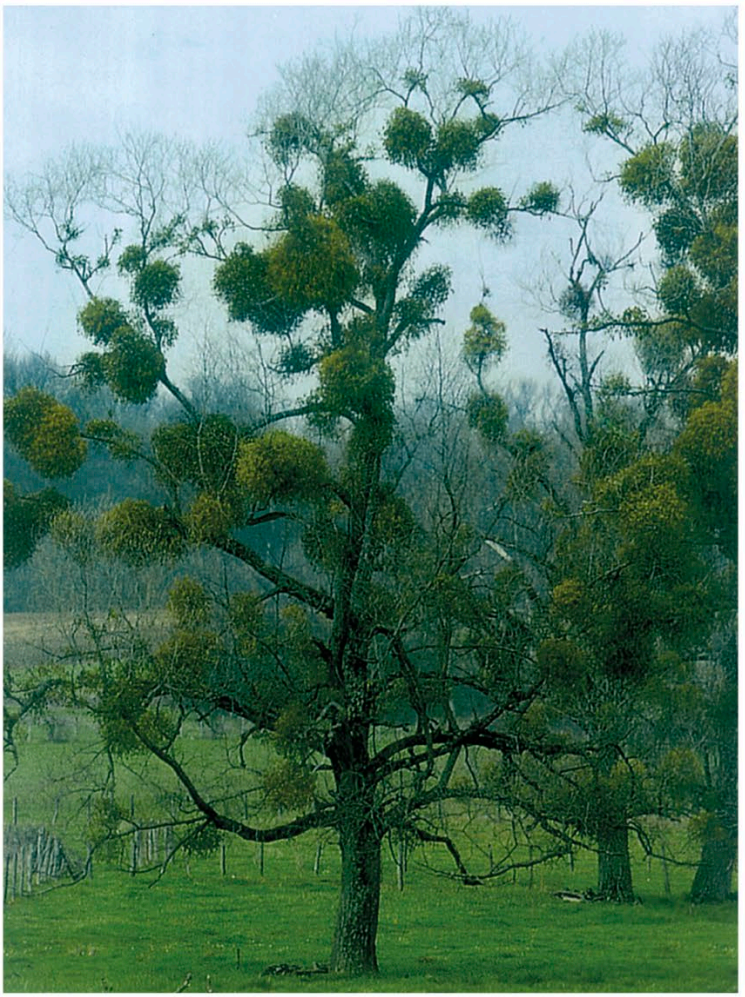
When buying products such as capsules, tablets, essential oils, pessaries and tinctures, always check the label on the jar or packet. If it does not do the following, do not buy it:

- Name all constituents of the product
- State the recommended daily dosage
- State the weight of each capsule or tablet, or volume of bottle
- List the weight of each constituent of a capsule, tablet, etc.
- List the ratio of herb in the product (for example, 1:3, meaning 1 part herb to 3 parts liquid).

Early Origins to the 19th Century

In an age of medical specialization in which an expert in neurology will know little about the latest developments in medicine for the ear, nose and throat, it is difficult to imagine the practices of an earlier time, when healing was holistic in nature and heavily reliant on magic, mysticism and age-old oral traditions.

From the earliest times, medicinal plants have been crucial in sustaining the health and the well-being of mankind. Flaxseed (*Linum usitatissimum*, p. 109), for example, provided its harvesters with a nutritious food oil, fuel, a cosmetic balm for the skin and fibre to make fabric. At the same time it was used to treat conditions such as bronchitis, respiratory catarrh, boils and a number of digestive problems. Given the life-enhancing benefits that this and so many other plants conferred, it is hardly surprising that most cultures believed them to have magical as well as medicinal abilities. It is reasonable to assume that for tens of thousands of years herbs were probably used as much for their ritual magical powers as for their medicinal qualities. A 60,000-year-old burial site excavated in Iraq, for instance, was found to contain eight different medicinal plants, including ephedra (*Ephedra sinica*, p. 95). The inclusion of the plants in the tomb suggests they had supernatural significance as well as medicinal value.



***Mistletoe**, which the Druids called "golden bough", had a central place in their shamanistic religious and healing ceremonies. The Druids had a well-developed knowledge of medicinal plants.*

In some cultures, plants were considered to have souls. Even Aristotle, the 4th-century BCE Greek philosopher, thought that plants had a "psyche", albeit of a lesser order than the human soul. In Hinduism, which dates back to at least 1500 BCE, many plants are sacred to specific divinities. For example, the bael tree (*Aegle marmelos*, p. 161) is said to shelter Shiva, the god of health, beneath its branches.

In medieval Europe, the Doctrine of Signatures stated there was a connection between how a plant looked – God's "signature" – and how it might be used medicinally. For example, the mottled leaves of lungwort (*Pulmonaria officinalis*, p. 259) were thought to resemble lung tissue, and the plant is still used to treat ailments of the respiratory tract.

Even in Western cultures, beliefs in plant spirits linger. Until the first half of the 20th century, British farmworkers would not cut down elder trees (*Sambucus nigra*, p. 132) for fear of arousing the anger of the Elder Mother, the spirit who lived in and protected the tree.

In a similar vein, native peoples of the Andes in South America believe that the coca plant (*Erythroxylum coca*, p. 206) is protected by Mama Coca, a spirit who must be respected and placated if the leaves are to be harvested and used.

Shamanistic Medicine

In many traditional societies today, the world is believed to be shaped by good and evil spirits. In these societies, illness is thought to stem from malignant forces or possession by evil spirits. If a member of the tribe falls ill, the shaman (the "medicine" man or woman) is expected to intercede with the spirit world to bring about a cure. Shamans often enter the spiritual realm with the aid of hallucinogenic plants or fungi, such as ayahuasca (*Banisteriopsis caapi*, p. 176), taken by Amazonian shamans, or fly agaric (*Amanita muscaria*), taken by traditional healers of the Siberian steppes.

At the same time, the shaman provides medical treatment for the physical needs of the patient – putting salves and compresses on wounds, boiling up decoctions and barks for internal treatment, stimulating sweating for fevers, and so

***Shiva**, the Hindu god who oversees health, is traditionally thought to live under the bael tree, an important medicinal plant in India.*

on. Such treatment is based on a wealth of acutely observed plant lore and knowledge, handed down in an oral tradition from generation to generation.

The Development of Medicinal Lore

It is generally recognized that our ancestors had a wide range of medicinal plants at their disposal, and that they likewise possessed a profound understanding of plants' healing powers. In fact, up until the 20th century, every village and rural community had a wealth of herbal folklore. Tried and tested local plants were picked for a range of common health problems and taken as teas, applied as lotions or even mixed with lard and rubbed in as an ointment.

But what were the origins of this herbal expertise? There are no definitive answers. Clearly, acute observation coupled with trial and error has played a predominant role. Human societies have had many thousands of years to observe the effects – both good and bad – of eating a particular root, leaf or berry. Watching the behaviour of animals after they have eaten or rubbed against certain plants has also added to medicinal lore. If one watches sheep or cattle, they almost unerringly steer a path past poisonous plants such as ragwort (*Senecio jacobaea*) or oleander (*Nerium oleander*). Over and above such close observation, some people have speculated that human beings, like grazing animals, have an instinct that recognizes poisonous as opposed to medicinal plants.

Ancient Civilizations

***Castor oil plant** has been used medicinally for about 4000 years.*

As civilizations grew from 3000 BCE onwards in Egypt, the Middle East, India and China, so the use of herbs became more sophisticated, and the first written accounts of medicinal plants were made. The Egyptian Ebers papyrus of *c.* 1500 BCE is the earliest surviving example. It lists dozens of medicinal plants, their uses and related spells and incantations. The herbs include myrrh (*Commiphora molmol*, p. 85), castor oil (*Ricinus communis*, p. 262) and garlic (*Allium sativum*, p. 59).

In India, the *Vedas*, epic poems written *c.* 1500 BCE, also contain rich material on the herbal lore of that time. The *Vedas* were followed in about 400 BCE by the *Charaka Samhita*, written by the physician Charaka. This medical treatise includes details of around 350 herbal medicines. Amongst them are visnaga (*Ammi visnaga*, p. 62), a herb of Middle Eastern origin that has recently proven effective in the treatment of asthma, and gotu kola (*Centella asiatica*, p. 76), which has long been used to treat leprosy.

Medicine Breaks from its Mystical Origins

By about 500 BCE in developed cultures, medicine began to separate from the magical and spiritual world. Hippocrates (460–377 BCE), the Greek "father of medicine", considered illness to be a natural rather than a supernatural phenomenon, and he felt that medicine should be given without ritual ceremonies or magic.

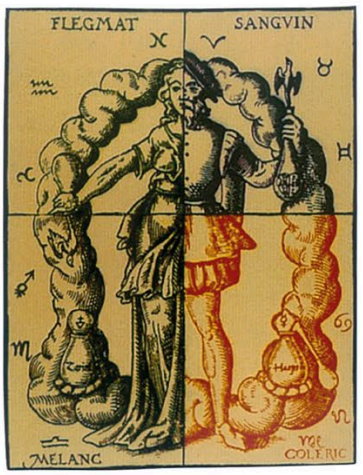
In the earliest Chinese medical text, the *Yellow Emperor's Classic of Internal Medicine* written in the 1st century BCE, the emphasis on rational medicine is equally clear: "In treating illness, it is necessary to examine the entire context, scrutinize the

***The bump** in the right cheek of this Peruvian figurine may represent coca, taken in that country to increase endurance.*

symptoms, observe the emotions and attitudes. If one insists on the presence of ghosts and spirits one cannot speak of therapeutics."

Foundation of Major Herbal Traditions 300 BCE–600 CE

Trade between Europe, the Middle East, India and Asia was already well under way by the 2nd century BCE, and trade routes became established for many medicinal and culinary herbs. Cloves (*Eugenia caryophyllata*, p. 97), for example, which are native to the Philippines and the Molucca Islands near New Guinea, were imported into China in the 3rd century BCE, and first arrived in Egypt around 176 CE. As the centuries passed, the popularity of cloves grew and by the 8th century CE, their strong aromatic flavour and powerfully antiseptic and analgesic properties were familiar throughout most of Europe.



***Galen's "four humours"**, which he believed made up the human constitution.*

As trade and interest in herbal medicines and spices flourished, various writers tried to make systematic records of plants with a known medicinal action and record their properties. In China, the *Divine Husbandman's Classic* (*Shen'nong Bencaojing*), written in the 1st century CE, has 364 entries, of which 252 are herbal medicines, including bupleurum (*Bupleurum chinense*, p. 72), coltsfoot (*Tussilago farfara*, p. 278) and *gan cao* (*Glycyrrhiza uralensis*). This Daoist text laid the foundations for the continuous development and refinement of Chinese herbal medicine up to the present day.

In Europe, a 1st-century CE Greek physician named Dioscorides wrote the first European herbal, *De Materia Medica*. His intention was to produce an accurate and authoritative work on herbal medicines and in this he was dramatically successful. Amongst the many plants mentioned are juniper (*Juniperus communis*, p. 224), elm (*Ulmus carpinifolia*), peony (*Paeonia officinalis*, p. 243) and burdock (*Arctium lappa*, p. 65). The text, listing about 600 herbs in all, was to have an astonishing influence on Western medicine, being the principal reference used in Europe until the 17th century. It was translated into languages as varied as Anglo-Saxon, Persian and Hebrew. In 512 CE, *De Materia Medica* became the first herbal to feature pictures of the plants discussed. Made for Juliana Arnicia, the daughter of the Roman emperor Flavius Avicius Olybrius, it contained nearly 400 full-page colour illustrations.

***Frontispiece** decoration for the first illustrated herbal, Dioscorides'* De Materia Medica, *produced in Constantinople in 512 CE.*

Galen (131–200 CE), physician to the Roman emperor Marcus Aurelius, had an equally profound influence on the development of herbal medicine. Galen drew inspiration from Hippocrates and based his theories on the "theory of the four humours" (see p. 32). His ideas shaped and, some would say, distorted medical practice for the next 1,400 years.

In India and in China, elaborate medical systems somewhat resembling the theory of the four humours developed (see pp. 36–38 and pp. 40–41 respectively) that have endured to the present day.

Though European, Indian and Chinese systems differ widely, they all consider that imbalance within the constituent elements of the body is the cause of illness, and that the aim of the healer is to restore balance, often with the aid of herbal remedies.

Folk Healing in the Middle Ages

The theories of Galenic, Ayurvedic (Indian) and Chinese traditional medicine, however, would have meant practically nothing to most of the world's population. As is still the case today for some indigenous peoples who have little access to conventional medicines, in the past most villages and communities relied on the services of local "wise" men and women for medical treatment. These healers were almost certainly ignorant of the conventions of scholastic medicine, yet through apprenticeship and practice in treating illness, attending childbirth and making use of locally growing herbs as a natural pharmacy, they developed a high level of practical medical knowledge.

We tend to underestimate the medical skills of apparently undeveloped communities – particularly during the so-called Dark Ages in medieval Europe – but it is evident that many people had a surprisingly sophisticated understanding of plant medicine. For example, recent excavations at an 11th-century monastic hospital in Scotland revealed that the monks were using exotic herbs such as opium poppy (*Papaver somniferum*, p. 244) and marijuana (*Cannabis sativa*, p. 182) as painkillers and anaesthetics. Likewise, the herbalists in Myddfai, a village in South Wales, obviously knew of Hippocrates' writings in the 6th century CE and used a wide variety of medicinal plants. The texts that have been handed down from that herbal tradition are filled with an engaging blend of superstition and wisdom. Two prescriptions from a 13th-century manuscript illustrate the point. The first recipe could have been written by a modern, scientifically trained herbalist, the second, one must presume, is pure fancy, and would not choose to try it out!

To Strengthen the Sight

Take Eyebright and Red Fennel, a handful of each, and half a handful of Rue, distil, and wash your eye daily therewith.

To Destroy a Worm in the Tooth

Take the root of a cat's ear, bruise, and apply to the patient's tooth for three nights, and it will kill the worm.

Islamic & Indian Medicine 500–1500 CE

Folk medicine was largely unaffected by sweeping forces of history, but Western scholastic medicine suffered greatly with the decline of the Roman Empire.

It was thanks to the flowering of Arabic culture in 500–1300 CE that the gains of the classical Greek and Roman period were preserved and elaborated. The spread of Islamic culture along North Africa and into present-day Italy, Spain and Portugal led to the founding of renowned medical schools, notably at Cordoba in Spain. The Arabs were expert pharmacists, blending and mixing herbs to improve their medicinal effect and their taste. Their contacts with both Indian and Chinese medical traditions meant that they had a remarkable range of medical and herbal knowledge to draw on and develop. Avicenna (980–1037 CE), author of *Canon of Medicine*, was the most famous physician of the day, but perhaps the most unusual herbal connection was made a century before his time by Ibn Cordoba, an intrepid Arab seafarer, who brought ginseng root (*Panax ginseng*, p. 118) from China to Europe. This valuable tonic herb was to be regularly imported into Europe from the 16th century onwards.

Further east, in India, the 7th century saw a golden age of medicine. Thousands of students studied Ayurveda at university, especially at Nalanda. There, scholars recorded the medical achievements of the time, with advances such as the development of hospitals, maternity homes and the planting of medicinal herb gardens.

Central & South American Cures

On the other side of the world, the ancient civilizations of Central and South America – Maya, Aztec and Inca – all had herbal traditions with a profound understanding of local medicinal plants. One account tells of Incas taking local herbalists from what is now Bolivia back to their capital Cuzco in Peru because of the herbalists' great capabilities, which reputedly included growing penicillin on green banana skins.

At the same time, medicine and religion were still closely interwoven in these cultures, possibly even more so than in Europe. One gruesome account tells of Aztec sufferers of skin diseases who sought to appease the god Xipe Totec by wearing the flayed skins of sacrificial victims. Fortunately, a supernatural appeal to the gods was not the sole means to relieve this and other afflictions. Many herbs were available as alternative treatments, including sarsaparilla (*Smilax* spp., p. 270), a tonic and cleansing herb that was used in treatments for a variety of skin complaints including eczema and psoriasis.

***Galen and Hippocrates**, two of the pre-eminent physicians of the classical era, debate in this imaginary scene depicted in a fresco.*

Marco Polo's *voyage to China in the 14th century opened the door for a flourishing reciprocal trade in goods, including medicinal herbs, between East and West. Eventually, exotic herbs like ginger, cinnamon and cloves became widely used in European medicine and cookery.*

Rebirth of European Scholarship 1000–1400 CE

As European scholars slowly started to absorb the lessons of Arabic medical learning in the early Middle Ages, classical Greek, Roman and Egyptian texts preserved in the libraries of Constantinople (later Istanbul) filtered back to Europe, and hospitals, medical schools and universities were founded. Perhaps the most interesting among them was the medical school at Salerno on the west coast of Italy. It not only allowed students from all faiths – Christian, Muslim and Jewish – to study medicine, but it also allowed women to train as physicians. Trotula, a woman who wrote a book on obstetrics, practised and taught there in the 12th century CE. Herbs were, of course, central to the healing process. An adage from the Salerno school on sage (*Salvia officinalis*, p. 131) went as follows: *Salvia salvatrix, natura conciliatrix* (sage, the saviour; nature, the conciliator).

By the 12th century, trade with Asia and Africa was expanding and new herbs and spices were being regularly imported into Europe. Hildegard of Bingen (1098–1179), the famous German mystic and herbal authority, considered galangal (*Alpinia officinarum*, p. 61) – used in Asia as a warming and nourishing spice for the digestive system – to be the "spice of life", given by God to provide health and to protect against illness.

Asian Unification

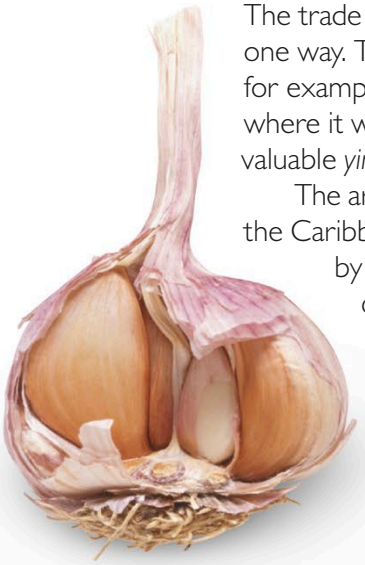
Marco Polo's travels to China in the 14th century coincided with the unification of the whole of Asia from the Yellow Sea in China to the Black Sea in south-eastern Europe by Genghis Khan and his grandson Kublai Khan, whose capital was in China, not far from Beijing. Neither the Chinese nor Ayurvedic medical traditions were directly threatened by this conquest. The Mongol rulers were strict in banning the use of certain toxic plants such as aconite (*Aconitum napellus*, p. 160), but their decree may have held an element of self-preservation, given aconite's alternative use as an arrow poison – one that could have been used against the ruling powers. Moreover, the Mongol unification may have encouraged greater communication between the two medical disciplines.

In other parts of Asia, such as Vietnam and Japan, Chinese culture and medicine exerted the primary influence. While *kampoh* – the traditional herbal medicine of Japan – is distinctive to that country, its roots stem from Chinese practices.

Trade between Continents 1400–1700

Trade routes had slowly expanded during the Middle Ages, bringing exotic new herbs in their wake. From the 15th century onwards, an explosion in trade led to a cornucopia of new herbs becoming readily available in Europe. They included plants such as ginger (*Zingiber officinale*, p. 155), cardamom (*Elettaria cardamomum*, p. 93), nutmeg (*Myristica fragrans*, p. 115), turmeric (*Curcuma longa*, p. 90), cinnamon (*Cinnamomum* spp., p. 81) and senna (*Cassia senna*, p. 75).

Manuscript page *from an Anglo-Saxon herbal of about 1050 CE, illustrating the aerial parts and root system of a medicinal plant.*



Garlic *is native to Asia but was readily adopted for its medicinal and culinary qualities in the West.*

The trade in herbs was not entirely one way. The European herb sage, for example, came into use in China, where it was considered to be a valuable *yin* tonic.

The arrival of Columbus' ships in the Caribbean in 1492 was followed by the rapid conquest and colonization of central and south America by the Spanish and Portuguese. Along with their booty of plundered gold, the conquistadores returned to the Old World with previously unheard-of medicinal plants. Many of these herbs from the Americas had highly potent medicinal actions, and they soon became available in the apothecaries of the major European cities. Plants such as lignum vitae (*Guaiacum officinale*, p. 218) and cinchona (*Cinchona* spp., p. 80) with strong medicinal actions were used with greater and lesser degrees of success as treatments for fever, malaria, syphilis, smallpox and other serious illnesses.

For most rural communities, however, the only foreign plants that were used medicinally were those that could also be grown locally as foods. Garlic offers one of the earliest and clearest examples. Originating in central Asia, over time it was cultivated further and further west and was grown in Egypt around 4500 BCE. In Homer's 8th-century BCE epic poem *The Odyssey*, the hero is saved from being changed into a pig thanks to garlic. The herb was introduced into Britain after the Roman conquest in the 1st century CE, and by the time it reached the island its remarkable medicinal powers were well understood. In later centuries, potatoes (*Solanum tuberosum*, p. 271) and maize (*Zea mays*, p. 154), both native to South America, would become common foods. These plants have clear medicinal as well as nutritional benefits. Potato juice is a valuable remedy for the treatment of arthritis, while cornsilk makes an effective decoction for urinary problems such as cystitis.

Health & Hygiene 1400–1700

Between the 12th and 18th centuries, the influx of exotic medicinal plants added to an already large number of useful European herbs. Conceivably, an overall improvement of health in Europe might have resulted. After all, not only were new medicinal plants available, but Europeans had the opportunity to observe the different medical practices of people in South America, China, Japan and especially in India, where trade was well established. But, in fact, the reverse was the case. People living in Europe during this period probably experienced some of the most unhealthy conditions the world has ever seen. In contrast, Native Americans before the arrival of Columbus lived longer, healthier lives than their counterparts in Europe. This fact is unsurprising given the cities of medieval Europe, with their open sewers, overcrowding and ignorance of simple hygiene.

Conditions such as these laid fertile ground for the spread of plague-infested rats from the ports of the Mediterranean throughout Western Europe. From the mid-14th century onwards, plague killed millions, in some cases close to 50 per cent of the population. No medical treatment – herbal or mineral – was able to alter its fatal course. Epidemics continued to decimate the cities of Europe and Asia well into the 18th century. An outbreak in India in 1994 reawakened the terror inspired simply at the mention of the word "plague".

Syphilis was another disease spread by seafarers. It was reputedly brought back from the Caribbean to Naples by Columbus' crew in the 1490s, spreading quickly throughout Europe and to the rest of the world, reaching China in 1550.

European doctors had little success in combating diseases as devastating as plague. The medicine they practised was based on the blind acceptance of Galen's humoral principles. Perhaps if, as in Chinese and Indian medicine, European medicine had continued to evolve, revising ancient medical texts and reinterpreting them in the light of new discoveries, it would have had greater success. As it was, European physicians were at least as likely to kill their patients with bloodletting and toxic minerals in misbegotten attempts to balance the humours as they were to cure. Indeed, the increasingly fashionable use of mineral cures such as mercury led to the growth of chemical formulations, culminating in scientific medicine's ultimate break away from herbal practices.

17th-century doctor *wearing a costume designed to protect against contamination by the plague.*

The Influence of Paracelsus

One of the key European figures of the 16th century was Paracelsus (1493–1541), a larger-than-life character who rejected the tired repetition of Galen's theories in favour of detailed observation in medicine. "I have not borrowed from Hippocrates, Galen or anyone else," he wrote, "having acquired my knowledge from the best teacher, that is, by

***The iconoclastic Paracelsus**, an alchemist and chemist, was one of the greatest scientists of the 16th century, and advocated the use of minerals in healing, but only in tightly controlled dosages.*

experience and hard work." And again, "What a doctor needs is not eloquence or knowledge of language and of books, but profound knowledge of nature and her works." He also paid great attention to the exact dosage, saying that "it depends only on the dose whether a poison is a poison or not."

As a result, Paracelsus was an influential force in the future development of chemistry, conventional medicine, herbal medicine and homeopathy. Though he is known as the "father of chemistry", he also explored alchemy, which concerned itself with the transmutation of base materials to gold, and the search for immortal life. Paracelsus also revived interest in the Doctrine of Signatures – the ancient theory that held that a plant's appearance indicated the ailments it would treat – and affirmed the value of locally grown medicinal herbs over expensive, imported specimens.

Culpeper & Printed Herbals

Paracelsus' advocacy of local herbs was later fiercely espoused by Nicholas Culpeper (1616–1654). The frontispiece to his *The English Physitian* contains the memorable words: "Containing a Compleat Method of Physick, whereby a Man may preserve his Body in Health, or Cure himself, being Sick, for three pence Charge, with such things only as grow in England, they being most fit for English Bodies."

Wounded during the English Civil War fighting for the Commonwealth, Culpeper championed the needs of the ordinary people who could afford neither the services of a doctor nor the expensive imported herbs and formulations that doctors generally prescribed. Drawing to some degree on Dioscorides, Arabian physicians and Paracelsus, Culpeper developed a medical system that blended astrology and sound personal experience of the therapeutic uses of local plants. His herbal became an instant "bestseller" and appeared in many subsequent editions. The first herbal published in North America, in 1700, was an edition of his herbal.

While the popularity of *The English Physitian* was notable, other herbals also found a place in households. The development of the printing press in the 15th century brought herbal medicine into homes on a wide scale. Texts such as Dioscorides' *De Materia Medica* were printed for the first time, and throughout Europe herbals were published and ran through many editions.

Deadly Cures 1700–1900

By the end of the 16th century, Paracelsus had become the figurehead of the new chemical medicine. However, where he had insisted upon caution in the use of metallic poisons – mercury, antimony and arsenic – the new medical thinkers were not so inhibited. Larger and larger doses of the purgative known as calomel (mercurous chloride, Hg_2Cl_2) were given to those suffering from syphilis and many other diseases. The treatment was very often worse than the illness, with some patients dying and many more suffering from the long-term consequences of mercury poisoning.

Hippocrates' saying "Desperate cases need the most desperate remedies" was taken very literally, as is evident in the incredible excess of purging and bleeding that developed over the next three centuries in Europe and North America. These practices reached a peak in the "heroic" medicine of the early 19th century. Its leading proponent, Dr Benjamin Rush (1745–1813), maintained that only bloodletting and calomel were required in medical practice. His position was obviously extreme, but it is clear that in this new climate herbal medicines were becoming increasingly irrelevant.

The New Rationalism

Along with the new emphasis on chemical cures, modern medicine came to look askance at the notion of the "vital force". Up until the end of the 16th century, nearly all medical traditions had been based on the concept of working with nature, with the body's healing capacities, which could be supported and strengthened with appropriate medicinal herbs. In traditional Chinese medicine, *qi* is the primal energy that maintains life and health. In Ayurveda, it is *prana*, and

The symbol for "om"– life force – is used by followers of the Indian practice of Ayurveda as a focus for meditation.

in the Western tradition, Hippocrates writes about "*vis medicatrix naturae*" or the healing power of nature, while modern Western medical herbalists and homeopaths use the term "vital force".

The importance of the vital force was diminished in the West by the philosophy of René Descartes (1596–1650). This French mathematician divided the world into body and mind, nature and ideas. His philosophy ordained that the intangible vital force that maintains life and governs good health was the province of religion rather than of the newly self-aware "science" of medicine. To the new medical establishment, inching its way forward towards scientifically sound medical practices, "supernatural" concepts such as the vital force were a reminder of the ignorance and superstition that were part and parcel of older healing practices.

Even before Descartes' theories, the rational approach to scientific and medical exploration was beginning to reap rewards. Slowly, medical understanding of bodily functions was gaining ground. William Harvey (1578–1657) made a detailed study of the heart and circulation, proving for the first time that, contrary to Galenic thought, the heart pumped blood around the body. Published in 1628, his study is a classic example of the revolution in medical science.

Since Harvey's time, science has had astounding success in revealing how the body works on a biochemical level and in distinguishing different disease processes. However, by comparison it has been altogether less successful in developing effective medical treatments for the relief and cure of diseases.

The Gap in the Scientific Approach

In hindsight, it seems as if the new science of medicine could only be born in separation from the traditional arts of healing, with which it had always been intertwined. As a result, even though traditional medicine has generally lacked scientific explanation, it has frequently been far ahead of medical science in the way it has been applied therapeutically. In *American Indian Medicine* (University of Oklahoma Press, 1970), Virgil Vogel provides a good example of "ignorant" folk medicine outstripping scientific understanding in therapeutic application:

"During the bitter cold winter of 1535–6, the three ships of Jacques Cartier were frozen fast in the fathom-deep ice of the St Lawrence River near the site of Montreal. Isolated by four feet of snow, the company of 110 men subsisted on the fare stored in the holds of their ships. Soon scurvy was so rampant among them that by mid-March, 25 men had died and the others, 'only three or foure excepted', were so ill that hope for their recovery was abandoned. As the crisis deepened Cartier had the good fortune to encounter once again the local Indian chief, Domagaia, who had cured himself of the same disease with 'the juice and sappe of a certain tree'. The Indian women gathered branches of the magical tree, 'boiling the bark and leaves for a decoction, and placing the dregs upon the legs'. All those so treated rapidly recovered their health, and the Frenchmen marvelled at the curative skill of the natives."

Naturally, the Native Americans had not heard of vitamin C deficiency, which causes scurvy, nor would they have been able to explain in rational terms why the treatment worked. Indeed, it was not until 1753 that James Lind (1716–1794), a British naval surgeon, inspired partly by Cartier's account, published *A Treatise of the Scurvy*, which showed conclusively that the disease could be prevented by eating fresh greens, vegetables and fruit, and was caused by their lack in the diet. James Lind's work is a marvellous example of what can be achieved by combining a systematic and scientific approach with traditional herbal knowledge.

Mask of a north-western Native American shaman. *The efficacy of techniques used by native healers often surpassed that of conventional medical practices of the time.*

Isolating Chemicals

The discovery of the medicinal value of foxglove (*Digitalis purpurea*, p. 202) is another case where traditional herbal knowledge led to a major advance in medicine. Dr William Withering (1741–1799), a conventionally trained doctor with a long interest in medicinal plants, started to investigate foxglove after encountering a family recipe for curing dropsy (water retention). He found that in some regions of England, foxglove was traditionally used to treat this condition, which is often one of the indications of a failing heart. In 1785, he published *Account of the Foxglove*, documenting dozens of carefully recorded case histories, and showing how foxglove's powerful (and potentially dangerous) active constituents, now known as cardiac glycosides, made it a valuable plant medicine for dropsy. Cardiac glycosides remain in common use to the present day. Yet despite this clearcut example of the possibilities inherent in a marriage of herbal medicine and scientific method, conventional medicine was to take another path in the 19th century.

***In the 18th century**, the physician William Withering documented foxglove's ability to restore a failing heart.*

Laboratory versus Nature

From the early 19th century, the chemical laboratory began to regularly supplant Mother Nature as the source of medicines. In 1803, narcotic alkaloids were isolated from the opium poppy (*Papaver somniferum*, p. 244). A year later, inulin was extracted from elecampane (*Inula helenium*, p. 107). In 1838, salicylic acid, a chemical forerunner of aspirin, was isolated from white willow bark (*Salix alba*, p. 129), and was first synthesized in the laboratory in 1860. From this point on, herbal medicine and biomedicine were to take separate paths. Aspirin, an entirely new chemical formulation, was first developed in Germany in 1899. But this was still an early step. For the time being, the influence of the universities, medical schools and laboratories of Europe would remain limited, and herbal medicine would prevail as the predominant form of treatment for most people around the world.

***Opium poppy**, native to Asia, yields a resin that has long been smoked for its narcotic effect. The main active constituent, morphine, was first isolated in the laboratory in 1803 and is used to relieve pain.*

New Frontiers, New Herbal Medicines

Wherever Europeans settled during the great migrations of the 18th and 19th centuries – North America, South America, southern Africa or Australia – much of the European medicine familiar from home was either unavailable or prohibitively expensive. Settlers came to learn that native peoples were a wellspring of information about the medicinal virtues of indigenous plants. For example, European settlers in southern Africa learned about the diuretic properties of buchu (*Barosma betulina*, p. 71) from native peoples; and Australian settlers came to understand the remarkable antiseptic properties of tea tree (*Melaleuca alternifolia*, p. 112) from observing the medicinal practices of the Aborigines. Mexican herbal medicine as it exists today is a blend of Aztec, Mayan and Spanish herbs and practices.

In North America, native herbalists were particularly adept at healing external wounds and bites – being superior in many respects to their European counterparts in this area of medicine. This is not surprising, given the range of highly

effective medicinal plants Native Americans had discovered – including well-known herbs such as echinacea (*Echinacea* spp., p. 92), goldenseal (*Hydrastis canadensis*, p. 105) and lobelia (*Lobelia inflata*, p. 110).

European settlers learned much from observing native practices. Over the course of the 19th and early 20th centuries, as pioneers moved west across the frontier territory, new plants were constantly being added to the official record of healing herbs. In addition to the three species mentioned above, about 170 native plants were listed in *The Pharmacopoeia of the United States*.

Samuel Thomson & his Followers

Lobelia was one of the key herbs, along with chilli (*Capsicum frutescens*, p. 74), advocated by Samuel Thomson (1769–1843), an unorthodox herbal practitioner who believed that all illness resulted from cold. His simple approach was entirely at odds with the conventional practices of his time (*see* North America, p. 50). Thomson's methods were often very effective and were well suited to the needs of people living in frontier territory. His system of medicine – in many ways an early form of naturopathy, in which ill health is treated with naturally grown food, sunlight, fresh air and natural medicines – became extraordinarily popular, with millions of people across North America following his methods. Thomson's success waned as other more sophisticated herbal approaches were developed – those of the Eclectics and Physiomedicalists, for example – in the fertile medical world of 19th-century America, which also saw the birth of osteopathy (a system of healing based upon the manipulation of bones) and chiropractic (a similar system primarily involving manipulation of the spine).

***Ginseng** has been used as a tonic remedy in Chinese medicine for at least 5,000 years.*

Western Influences on Asian Medicine

Across the world in China, Thomson's practices might have been looked on with a measure of surprise, but they would have been familiar. In Chinese medicine, there has always been a debate as to what degree illness arises from cold, and to what degree it arises from heat. *The Shanghanlun (On Cold-Induced Maladies)*, written in the 2nd century CE, and revised and reinterpreted in commentaries over the last 1,800 years, recommends the herb cinnamon (*Cinnamomum* spp., p. 81) as a principal remedy when the patient "shivers with fever, breathes heavily and feels nauseous". In the 14th century, Wang Lu distinguished between cold-induced illness and febrile illness, and treated them in different ways, and this distinction was elaborated in greater and greater detail by different Chinese herbalists right up to the 19th century.

During the early 19th century, the influence of Western biomedicine was beginning to affect traditional practices in both China and India. This was certainly beneficial in many respects. The judicious incorporation of scientific principles and methods into traditional herbal healing offers the possibility of greatly refining the effectiveness of treatment.

But in India under British rule, Western medicine eventually became the only alternative. Ayurveda was seen as inferior to biomedicine (*see* India & the Middle East, p. 39). Western practice was introduced not as a complement to traditional medicine, but rather as a means to supplant it. According to one authority, "before 1835 Western physicians and their Indian counterparts exchanged knowledge; thereafter only Western medicine was recognised as legitimate and the Eastern systems were actively discouraged" (Robert Svoboda, *Ayurveda, Life, Health and Longevity*, 1992).

In China, the influx of Western ideas was less traumatic. Increasing numbers of Chinese medical students studied Western medicine, but this did not stop the continuing development of traditional herbal practice. By and large, each tradition was recognized as having both advantages and disadvantages.

Herbalism Outlawed 1850–1900

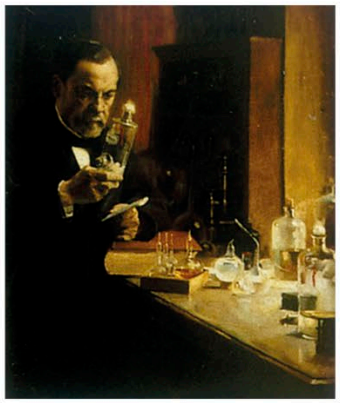
In Europe, conventional medicine was seeking to establish a monopoly for its own type of practice. In 1858, the British Parliament was asked to impose legislation banning the practice of medicine by anyone who had not been trained in a conventional medical school. Fortunately, this proposal was rejected, but in countries such as France, Spain and Italy and in some states of the US it became illegal to practise herbal medicine without an orthodox qualification. Herbalists were forced to risk fines or imprisonment simply for providing herbal medicine to patients who had sought their help.

In Britain, concerns such as these, combined with a desire to establish Western herbal medicine as an alternative to conventional practices, particularly in the industrial cities of the North of England, led to the formation in 1864 of the National Institute of Medical Herbalists, the first professional body of herbal practitioners in the world. Its history is an example of how tenacious herbal practitioners have had to be simply to retain their right to give safe, gentle and effective herbal medicines to their patients.

20th Century Onwards

For most of us, modern medicine is exemplified by drugs such as antibiotics and highly technical methods of diagnosis and treatment. However, many might be surprised to discover that, for much of the last century, herbal medicines have been the primary form of treatment, even in Western countries.

Even as late as the 1930s, around 90 per cent of medicines prescribed by doctors or sold over the counter were herbal in origin. It is only during the last 70 years that laboratory-produced medicines have become the norm. During the First World War (1914–1918), for example, garlic (*Allium sativum*, p. 59) and sphagnum moss (*Sphagnum* spp.) were used by the ton in the battle trenches to dress wounds and to treat infections. Garlic is an excellent natural antibiotic, and was the most effective antiseptic available at the time, and sphagnum moss, gathered from the moorlands, makes a natural aseptic dressing.



Louis Pasteur *was a pioneer in the identification of bacteria.*

Science & Medicine

The development of new medicines in the laboratory – either extracted from medicinal plants or synthesized – stretches back to the early 19th century, when chemists first isolated constituents such as morphine, from opium poppy (*Papaver somniferum*, p. 244), and cocaine, from coca (*Erythroxylum coca*, p. 206). From that time onwards, scientists made tremendous progress in understanding how isolated chemicals affect the body, as well as how the body works in health and disease. From the 1860s, scientists – most notably Louis Pasteur (1822–1895) – began to identify the micro-organisms that were ultimately responsible for causing infectious diseases, such as tuberculosis and malaria.

Naturally enough, the first aim of those engaged in medical research was to seek out medicines that would act as "magic bullets", directly attacking the micro-organisms concerned and ridding the body of the threat. This eventually led to the discovery, or, more accurately, the rediscovery of penicillin by a number of medical researchers, most notably Alexander Fleming (1881–1955) in 1929. However, while 20th-century scientists were the first to scientifically evaluate antibiotics as medicines, they were not the first to employ them in healing. Antibiotic moulds had been grown and used to combat infection in ancient Egypt, 14th-century Peru and in recent European folk medicine.

In the decades following the Second World War (1939–1945), when antibiotics first came into use, it seemed as though a new era had dawned in which infection could be conquered, and life-threatening diseases such as syphilis, pneumonia and tuberculosis would cease to be major causes of death in the developed world. Modern medicine also provided other highly effective drugs such as steroid anti-inflammatories and it seemed as if it was simply a question of time until cures for most illnesses were found.

Ascendancy of Biomedicine

As Americans and Europeans became accustomed to medication that led to an almost instant short-term improvement in symptoms (if not in underlying health), herbal medicines came to be seen by the public as outmoded and "cranky". Increasingly, the practice of herbal medicine was outlawed in North America and most of Europe, while the wealthy in developing countries abandoned herbal medicine in favour of the new treatments available.

This was in no small part due to the medical profession itself, which saw herbal medicine as a throwback to the superstitions of the past. From the late 19th century onwards, the aim of organizations such as the American Medical Association and the British Medical Association had been to monopolize conventional medical practice. Herbal medicine thus neared extinction in many countries, especially in the US and Britain. In Britain, for example, from 1941 until 1968 it was illegal to practise herbal medicine without medical qualifications.

The Tide Turns

Although there were spectacular successes with modern chemical medicines, there were also horrific disasters, most notably the thalidomide tragedy in 1962 in Britain and Germany, when 3,000 deformed babies were born to mothers who had taken the drug for morning sickness during pregnancy. This event marked a turning point in the public's opinion of chemical medicines.

An electron micrograph *of the parasite* Plasmodium. *Transmitted to man by infected mosquitoes, it causes the disease malaria.*

"Slash-and-burn" farming *in the rainforest of Brazil results in the eradication of native medicinal plants. Efforts are now under way to provide local farmers with alternative means of profiting from the land.*

People began to realize that a serious cost could accompany the benefits of treatment with modern pharmaceutical drugs. This, and the factors described below, have brought about a sea change in public perceptions of the value of herbal medicine.

The Chinese Example

Herbal medicine experienced a major gain in fortune in 1949 in China, when Mao Zedong and the Communist Red Army gained control of the country.

Traditional Western medicine by that time was well established in China, but most of the population had little hope of access to modern hospitals, let alone to new drugs. Out of necessity, traditional Chinese medicine – essentially herbal medicine and acupuncture – once more began to be used alongside Western conventional medicine. The authorities aimed to provide the best of both worlds. Five teaching hospitals for traditional Chinese medicine (TCM) were established, where it was taught on a scientific basis. In addition, great efforts were made to improve the quality of plant medicines.

Contrary to the trend in conventional Western medicine that makes the patient ever more dependent upon the doctor and high-tech machinery, TCM, like other forms of complementary medicine, stresses the patient's personal responsibility for his or her own cure, encouraging a holistic approach to treatment.

In the 1960s, China also established a system of "barefoot doctors". After a period of basic medical instruction that blended herbal medicine, acupuncture and Western practices, these practitioners were sent out to provide health care for the millions of rural Chinese too remote from cities to benefit from the facilities available there. The barefoot doctors in the late 1960s became a model for the World Health Organization, which created a strategy of including traditional herbal practitioners in planning for the health care needs of developing countries.

Western Medicine & Herbal Practices

Further to the initiative by the World Health Organization, experience has shown that traditional (usually herbal) and Western medicine can indeed work well in tandem, although the relationship is often quite complex. J. M. Janzen's *The Quest for Therapy in Lower Zaïre* (University of California Press, 1978) describes one such interaction in Africa:

> "The people of Zaïre recognize the advantages of Western medicine and seek its surgery, drugs and hospital care, but contrary to what might have been expected, native doctors, prophets, and traditional consultations among kinsmen do not disappear with the adoption of Western medicine. Rather a [working relationship] has developed in which different forms of therapy play complementary rather than competitive roles in the thoughts and lives of the people."

The high cost of Western medical treatment is another factor that has encouraged people and governments to re-examine traditional healing. In China, Mexico, Cuba, Egypt, Ghana, India and Mongolia, to give but a few examples, herbal medicines are being cultivated in greater quantities, and are being used to some degree by conventional as well as traditional practitioners.

Likewise, different types of treatment have evolved to meet the variety of needs within a population. India offers an extraordinary example of the kind of choices available in types of medical care. Alongside physicians trained in conventional Western medicine, there are medically trained Ayurvedic practitioners, traditional Ayurvedic practitioners, local healers and homeopaths.

Changing Attitudes

Perhaps the most important factor behind the growing interest in complementary medicine is the poor state of health in Western societies. Conventional medicine has by and large brought serious infectious diseases under control, although there are worrying signs that infectious organisms are becoming resistant to antibiotic treatment, largely as a result of their indiscriminate use. Chronic illness, however, seems to be on the increase. Probably around 50 per cent of people in Western countries daily take one or more conventional medicines – for conditions as diverse as high blood pressure, asthma, arthritis and depression. Many Western countries such as the US and France spend astronomical sums on health care, yet despite this massive investment much of the population remains demonstrably unhealthy. Even the significant increase in life expectancy in developed countries is starting to go into reverse, perhaps a result of environmental pollutants and toxic accumulation within the body.

Over the years, changes in public awareness have led to a renewed interest in herbal medicine. In fact, some herbal preparations are now so commonly used that they are accepted as a part of everyday life. One of many possible examples is evening primrose oil, which is used by hundreds of thousands of women in Britain to help relieve pre-menstrual tension. It is extracted from the seeds of *Oenothera biennis* (p. 241), a North American plant. Peppermint oil (*Mentha* × *piperita*, p. 114), prescribed for irritable bowel syndrome and other gut problems, is another example, while senna (*Cassia senna*, p. 75), a simple, effective treatment for short-term constipation, is one of the most frequently used medicines throughout the world.

The growing awareness of how our lives as human beings are interwoven with the fate of our planet also reinforces the value of herbal medicines. As long as care is taken to prevent over-harvesting, herbal medicine is ecologically in tune with the environment.

Herbalism & Holism

The "germ theory of disease", which holds that illness springs from contact with an infectious organism, remains the dominant view in mainstream medicine. Many people, however, recognize that this is only part of the picture. While illnesses such as cholera and typhoid are highly infectious and are indeed likely to be caught by almost anyone, many infectious diseases are not transmitted automatically from one person to another. The question arises, therefore, what weakness in the patient has allowed the "seed" of infection to find fertile ground? Unlike much conventional medical practice, which focuses on eradicating the "bug" or abnormal condition, herbal medicine seeks to treat the weakness that gave rise to ill health, and sets this in the context of the patient's life as a whole. A complex web of factors may lie behind the onset of illness. While bodily signs and symptoms are the most obvious indicators, dietary, emotional and spiritual factors may be of equal importance.

Our bodies contain over one hundred trillion cells, which collectively must function in harmony if good health is to be maintained. Used wisely, herbs work in tune with our bodies, stimulating, supporting or restraining different sets of cells in their allotted tasks within the body, encouraging a return to normal balanced function. Remedies aim to strengthen the patient's own resistance, improve the vitality of weakened tissue, and encourage the body's innate ability to return to good health.

Of course, for people with severe acute illnesses, it may be too late to use a herbal approach to treatment. In these circumstances, strong-acting conventional medicines such as heart drugs, antibiotics and painkillers, as well as surgery can all be life-savers. However, a health-care system that is carefully attuned to the needs of the patient might well provide herbal remedies as a first line of treatment, with conventional medicines held in reserve to be used only when necessary.

Evening primrose *is native to North America and has been used to treat a wide range of conditions, including pre-menstrual tension, asthma, whooping cough, digestive disorders and eczema.*

Evidence in Support of Herbal Cures

Many medical scientists still find it hard to accept that natural medicines, with their complex chemical make-up and variable constituents, can be as good as chemical cures in treating illness. However, as more and more research reveals that herbal medicines can be as effective as conventional medicines – and are far safer – this thinking is beginning to change.

This is well illustrated by the change in attitude towards St John's wort (*Hypericum perforatum*, p. 106) – a European plant commonly taken as an antidepressant. Extracts of the herb are now scientifically recognized as having value in mild to moderate depression. Since the 1980s, over 30 clinical trials have found extracts of St John's wort to be as effective as conventional antidepressants and to have far fewer side-effects. In 15 of these trials, the herbal extract produced fewer side-effects than the placebo (or inert "medicine") used as a comparison. Other investigations suggest that St John's wort may have a role in countering viral infections, promoting wound healing and helping withdrawal from addiction, especially from alcohol.

As is so often the case, research has confirmed traditional views. In the 16th century, Paracelsus (see p. 23), had this to say about the herb: "Nothing chases away disease like strength. Therefore, we should seek medicines with power and strength to overcome whatever illnesses they are used against. From this it follows that God has given to Perforatum [St John's wort] the strength to chase [away] the ghosts of nature…and all downheartedness."

As a result of scientific research, today's practitioners have an important advantage – how the plant works in the body is

now better understood, so that it is possible to be precise about dosages, aware of side-effects, and confident in what form the herb should be taken as a medicine.

All over the world research is now being directed into plants with a traditional use as medicines, in the hope of finding new treatments for all manner of health problems. To give but two examples: the Indian gooseberry (*Emblica officinalis*, p. 204) appears to protect the liver against cancer, lowers blood cholesterol levels, and may prove valuable for acute pancreatitis; while thyme (*Thymus vulgaris*, p. 143), better known as a culinary herb, is a potent antioxidant that may prevent the breakdown of essential fatty acids in the brain and slow the ageing process.

Medicinal Herbs & Big Business

The major pharmaceutical companies have realized that rainforests, grasslands and even hedgerows and fields are sources of potentially invaluable medicines. As a result, the industry has invested vast resources into screening the active constituents of medicinal plants from all over the world. The drug taxol, first extracted from the Pacific yew (*Taxus brevifolia*), and one of the most effective treatments for breast cancer, was developed in this way.

In this search through the plant world it is likely that other remarkable medicines will be found, though far fewer new drugs have been successfully developed via this research than was originally anticipated. In fact, there is a key problem to this approach, for it is geared to the production of isolated plant chemicals which can then be synthesized and patented. With a patent, a company can make a profit, recouping the massive investment required to research and develop new medicines. Herbs, however, are whole, naturally occurring remedies. They cannot and should not be patented. Even if the major pharmaceutical companies were able to find a herb such as St John's wort, which proved to be more effective and safer than conventional medicines, they would prefer to develop synthetic chemical drugs rather than plant medicines.

***St John's wort's traditional** use as a remedy for nervous exhaustion and depression has been confirmed by clinical trials.*

Herbal Synergy

One word more than any other separates herbal from conventional medicine: synergy. When the whole plant is used rather than extracted constituents, the different parts interact, often, it is thought, producing a greater therapeutic effect than the equivalent dosage of isolated active constituents that are generally preferred in conventional medicine.

***The Moreton Bay chestnut** is being investigated for its anti-HIV activity.*

Increasingly, research shows that herbs such as ephedra (*Ephedra sinica,* p. 95), hawthorn (*Crataegus oxyacantha*, p. 87), ginkgo (*Ginkgo biloba*, p. 100) and lily of the valley (*Convallaria majalis*, p. 194) have a greater-than-expected medicinal benefit thanks to the natural *combination* of constituents within the whole plant. In some cases, the medicinal value of the herb may be due entirely to the combination of substances and cannot be reproduced by one or two "active" constituents alone.

The Future of Herbal Medicine

The main issue for the future of herbal medicine is whether medicinal plants, and the traditional knowledge that informs their use, will be valued for what they are – an immense resource of safe, economical, ecologically balanced medicines – or whether they will be yet another area of life to be exploited for short-term profit.

Another issue is convincing sceptics in the medical world that herbal medicine is not just a poor substitute for conventional medicine but a valuable form of treatment in its own right. In trials into the effect of certain Chinese herbs on patients with eczema at London's Royal Free Hospital in the early 1990s, conventional specialists were astonished when the addition of one extra herb to a Chinese formula containing 10 others resulted in a dramatic improvement in a previously unresponsive patient. This story offers evidence of the skill and art involved in herbal practice. In tailoring the remedy to suit the individual needs of the patient and in treating the underlying cause, major improvements were made. This approach is a far cry from the standard medical view of using a single drug to treat a single disease.

In India and China, there have been university courses in herbal medicine for decades. In the West this process has been slower, with undergraduate courses emerging only in the last 20 years. There are now degree courses in herbal medicine or naturopathy in several Western countries, including Australia, the UK and the US, while in Germany, medical students have been required to study naturopathy and phytotherapy (herbal medicine) as part of their medical training since 2003. Such developments point towards a future where patients might be able to choose between medical and herbal approaches when considering what medical treatment will suit them best.

Europe

Despite regional variations, European herbal practices largely arose from the common root of the classical tradition. Today, herbalism is increasingly popular in Europe, and in some countries it is widely practised by orthodox medical practitioners as well as by qualified herbalists.

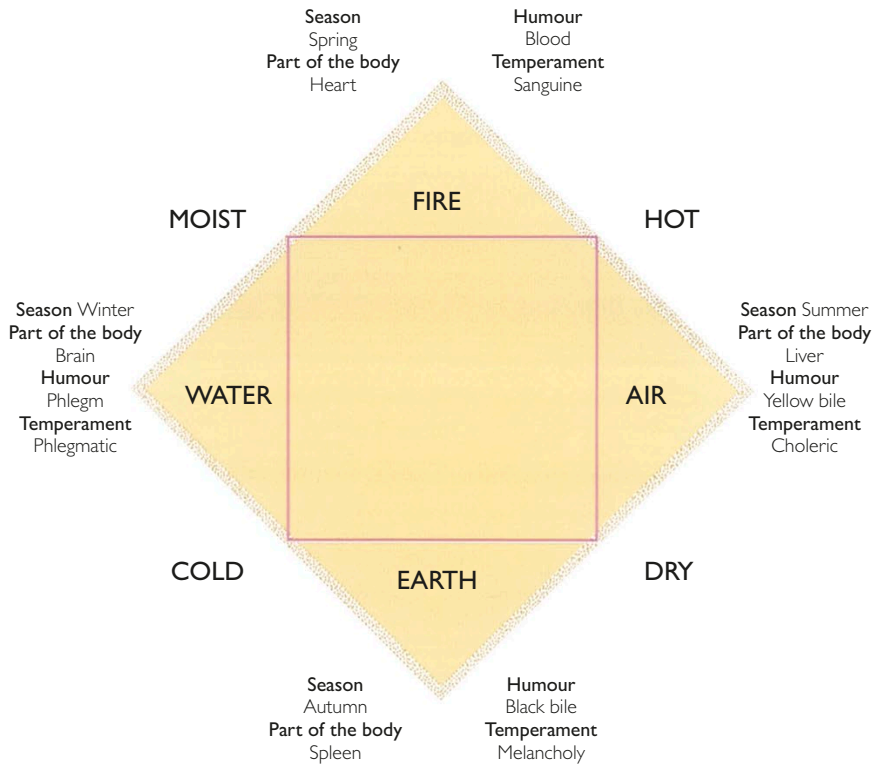
Each of the world's major herbal traditions developed its own framework for making sense of illness. In Europe, the principal model for understanding and explaining illness was the "theory of the four humours", which persisted well into the 17th century. It was laid down by Galen (131–201 CE), physician to the Roman emperor Marcus Aurelius. Galen was born in Pergamum and part of his medical practice involved caring for the gladiators of the city, which gave him the opportunity to learn about anatomy and the remedies best suited to healing wounds. He wrote literally hundreds of books and had a crucial influence on European medicine for over 1,500 years. To this day, plant medicines are sometimes called Galenicals to distinguish them from synthesized drugs.

The Theory of the Four Humours

Galen developed his ideas from the texts of Hippocrates (460–*c.* 377 BCE) and Aristotle (384–322 BCE), who in turn had been influenced by Egyptian and Indian ideas. Hippocrates, expanding on the early belief that the world was made up of the elements fire, air, earth and water, classified herbs as having hot, dry, cold and moist properties. Aristotle developed and endorsed the theory of the four humours. According to the theory, four principal fluids – or humours – exist within the body: blood, choler (yellow bile), melancholy (black bile) and phlegm. The "ideal" person bore all four in equal proportion. However, in most people, one or more humours predominate, giving rise to particular temperaments or characters. For instance, excess choler produced a choleric-type person, who was likely to be short-tempered, sallow, ambitious and vengeful. Galen also believed that *pneuma* (spirit) was taken in with each breath, and processed in the body to form the "vital spirit". Vitality and health depended upon the proper balance between the four humours and the four elements and the correct mix with the inspired *pneuma*.

Influence of Classical Herbalists

Two other classical writers strongly influenced the European herbal tradition. Dioscorides (40–90 CE), a Greek-born Roman army surgeon, wrote the classical world's most comprehensive book on herbal medicines, *De Materia Medica*, based on observations of nearly 600 plants. Pliny the Elder (23–79 CE) drew together writings from over 400 authors in his *Natural History*, recording, amongst other things, herbal lore of the time. Much traditional European knowledge of medicinal herbs comes from Dioscorides and Pliny. One of the most interesting herbs mentioned by both is



The ancient theory of the four humours *holds that four fluids within the body – black bile, phlegm, yellow bile and blood – correspond to the four elements (earth, water, air and fire), the four seasons, and other aspects of the natural world. Until the 17th century, physicians believed that an imbalance of the humoral system caused mental and physical illness.*

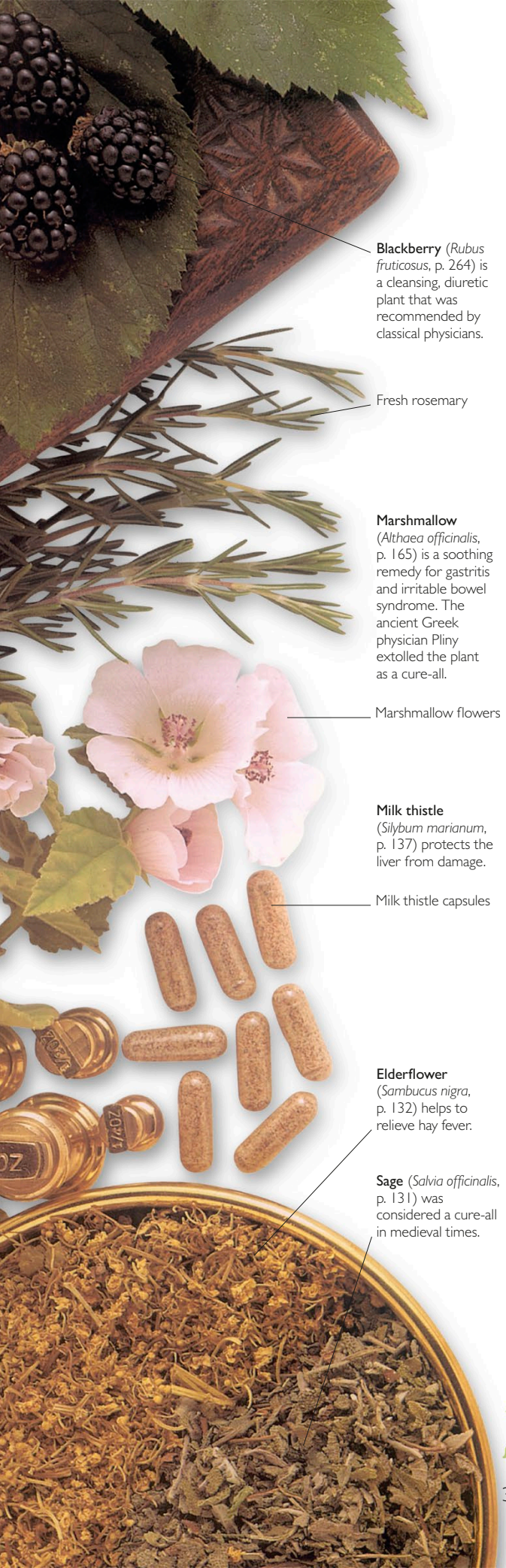
mandrake (*Mandragora officinarum*, see p. 232). With a forked root that resembles the human shape, mandrake was credited with great magical and healing powers. It was recommended by Dioscorides for many ailments, including sleeplessness and inflammation of the eyes.

With the collapse of the Roman empire in the 5th century CE, the debate about how illness arose and how it should be treated shifted to the East. By the 9th century, Islamic physicians had translated much of Galen's work into Arabic, and his ideas affected the development of Arabic medicine into the Middle Ages, influencing Avicenna (980–1037). Later in the Middle Ages, Galen's writings were translated back into Latin from the Arabic and, for 400 years, his ideas held sway and were diligently applied in European medical practice. Even in the 16th and 17th centuries, students in university medical schools were given an academic training in the principles of the humoral system, as established by Galen. They learnt how to diagnose an imbalance of the humours, and the methods of restoring equilibrium, primarily bloodletting and purging (see pp. 23–24).

Printing & Herbal Medicine

The invention of printing in the 15th century changed the face of herbal medicine in Europe. Before that time, European folk medicine had been handed down from generation to generation. While some early herbals were written in Anglo-Saxon, Icelandic and Welsh, for example, for the most part the tradition was orally based.

During the following centuries, herbals were published throughout Europe in different languages, making standardized catalogues of herbs and their applications accessible to the general public, not just to those who understood Latin. As literacy rates rose, women in particular used the advice in the herbals to treat their families.



In some cases, the printed herbals were written by physicians, and largely reflected the writings of classical authors such as Dioscorides. In other instances they were based directly on first-hand experience – the English herbals of John Gerard (1597) and Nicholas Culpeper (1652) being good examples.

John Gerard's *The Herball* is clearly the work of a horticulturist, rather than of a herbal practitioner, but is nonetheless a mine of information. The book includes many plants that had been recently brought back to Europe by explorers and traders.

Culpeper's *The English Physitian* has been widely used as a practical reference book ever since its publication. It is a rich blend of personal and practical experience, traditional European medicine and astrological thought. Each herb is assigned a "temperature", a use within the humoural system, and a ruling planet and star sign. Like Dioscorides' *De Materia Medica* it has the merit of being based on close observation and extensive experience in the use of herbal medicines.

Foreign Herbs & Synthesized Drugs

The growing use of foreign herbs in the 17th century prompted heated debate about the relative value of indigenous European herbs, but for the majority of the population this was irrelevant as the imported herbs were well out of their price range. In the end, it created a rift in herbal medicine. Poor and rural peoples used locally available herbs, while affluent city-dwellers and aristocrats purchased plants of foreign origin, prescribed by university-trained physicians. By the beginning of the 18th century, approximately 70 per cent of plant medicines stocked by European apothecaries were imported. Over time, this city-based herbalism evolved into conventional scientific medicine, which in turn rejected its herbal roots and regarded plant medicines as inferior.

Once conventional medicine established its monopoly of practice – in most European countries by the end of the 19th century – it became (and in many cases still remains) illegal to practise herbalism without medical certification. In Greece, traditional herbalists, known as *komboyannites*, were persecuted, and the word itself became an insult meaning "trickster" or "quack". In France and Italy, experienced traditional herbalists were imprisoned for providing treatment to their patients. The renaissance in herbal medicine that has occurred in the last 40 years offers hope that official censure will change.

Modern Practitioners

The pattern of herbal medicine across Europe today is remarkably varied, but a common thread runs through the different traditions and practices. Most European herbalists use orthodox methods of diagnosis, looking for signs of infection and inflammation, for example. However, most also try to establish a broad, holistic picture, placing the illness in the context of the patient's life as a whole. Herbalists then choose plant medicines and recommend suitable

Healers in medieval Europe *frequently sought to restore physical imbalance with bloodletting, purges and preparations that caused vomiting.*

John Gerard's 1597 Herball *is one of the classic texts on healing plants.*

dietary and lifestyle changes that will allow the body's self-regenerating powers – the modern equivalent of the "vital spirit" – to establish good health once again. Recovery may take longer than it would if treated with conventional medicine, but relief is generally enduring and free from side-effects.

A patient with a stomach ulcer, for example, may be treated with a variety of herbs such as meadowsweet (*Filipendula ulmaria*, p. 98), German chamomile (*Chamomilla recutita*, p. 77), marshmallow (*Althaea officinalis*, p. 165) and deadly nightshade (*Atropa belladonna*, p. 69) to soothe inflammation, astringe and protect the inner lining of the stomach, and reduce excess acid production. In addition, herbal practitioners also address poor dietary habits, bad posture and stress – which are all conditions that may have undermined the body's healing ability. Problems such as these are reversed with herbs to relieve stress, a diet rich in non-acidic vegetables and fruits, and exercise.

Popular Herbs

In European herbal medicine, native herbs are still highly popular. Alpine plants such as arnica (*Arnica montana*, p. 172) and pasque flower (*Anemone pulsatilla*, p. 168) are much used in Swiss, German, Italian and French herbal medicine, while comfrey (*Symphytum officinale*, p. 138) is particularly well liked in Britain. There has also been a surge in demand for exotic herbs. The Chinese ginkgo tree (*Ginkgo biloba*, p. 100), which improves circulation of blood to the head and helps the memory, is now cultivated in vast plantations in France, and has been a bestselling medicine in Germany for over 20 years.

European Traditions & the Future

Sales of over-the-counter herbal medicines in Europe have continued to increase over the last two decades, though the reasons for this growth vary widely.

It is possibly a reaction to the over-reliance on drug treatment in conventional medicine. Sound advice on a healthy diet and lifestyle, including food herbs, such as turmeric (*Curcuma longa*, p. 90), might well prove more beneficial than conventionally prescribed drugs in helping an ageing population to stay healthy for longer.

Nevertheless, in several European countries herbal medicines are routinely prescribed by GPs, offering doctors a choice of gentle acting treatments for chronic and more minor health problems. In Germany and Poland, herbal medicines can be frontline treatments for digestive disorders and chronic problems such as arthritis. This approach leaves conventional drug treatments available for more acute or serious conditions.

In contrast, a barely reported trend is that more and more people are growing medicinal plants. There seems to be a desire to rediscover the magic of cultivating and harvesting plants, and involving them (as food and medicine) in one's daily life.

India and the Middle East

In India and the neighbouring regions a variety of herbal traditions continue to flourish. Ayurveda is the main system of healing in India, but Unani Tibb, traditional Arabic medicine, and Siddha, practised in Tamil areas of southern India and Sri Lanka, are also major herbal traditions.

The name Ayurveda derives from two Indian words: *ayur* meaning longevity, and *veda* meaning knowledge or science. Ayurveda is as much a way of life as a system of medicine, and encompasses science, religion and philosophy. Its ultimate aim, drawing on its many different practices – yoga and meditation, for example – is to promote self-realization and a harmonious relationship with the world.

Early Origins

Ancient Indian culture developed around 5,000 years ago along the banks of the Indus river in northern India. This is thought of as a time of great spiritual enlightenment, with knowledge and wisdom being transmitted orally from teacher to student over many generations, and eventually set down in Sanskrit poetry known as the *Vedas*. These writings, dating from approximately 1500 BCE, distilled the prevailing historical, religious, philosophical and medical knowledge, and form the basis of Indian culture. The most important of these texts are the *Rig Veda* and the *Atharva Veda*.

In about 400 BCE, the first Ayurvedic medical school was founded by Punarvasu Atreya. He and his pupils recorded medical knowledge in treatises that would in turn influence Charaka, the scholar who is thought to have written the *Charaka Samhita*. This compendium of writings, in the form that it has come down to us, dates from around 100 CE and describes 341 plant medicines as well as medicines of animal and mineral origin. The second major work was the *Susruta Samhita*, dating from around the same time; it displays detailed knowledge of surgery, especially plastic surgery, and is still consulted today.

The Influence of Ayurveda

Other traditions of medicine share common roots with Ayurveda, and Ayurveda has some claim to being the oldest surviving medical tradition in the world. From the time of the Buddha (563–483 BCE) onwards, Ayurvedic medical ideas and practices spread across Asia, accompanying the spread of Buddhism itself. Buddhism, and Ayurvedic approaches to medicine, strongly influenced the development of Tibetan medicine, and these ideas in turn combined fruitfully with traditional Chinese medicine. Ancient civilizations of East and

***Cloves** have been used medicinally for thousands of years in India. The flowerbuds are dried in the open air.*

West were linked to one another by trade routes, campaigns and wars. In each case, this led to the exchange of ideas, medicinal plants and medical practices, including fertile connections between Ayurveda, Siddha and traditional Chinese medicine to the east, and ancient Greek and Roman medicine to the west. Later, from around 700 CE, traditional Greek medicine, based on Hippocratic ideas, developed in the Arabic world as classical Greek texts were translated into Arabic. This tradition, known as Unani Tibb (meaning "Ionian medicine", referring to the island of Iona where Hippocrates lived), at one time spanned from India to Spain, and is still the main form of herbal medicine practised by hakims in the Middle East.

***The* chakras** *are represented in this figure. India's medical system, Ayurveda, identifies seven energy centres, chakras, sited along the spinal column from the head to the base of the spine. If they are blocked, illness results.*

The Five Elements

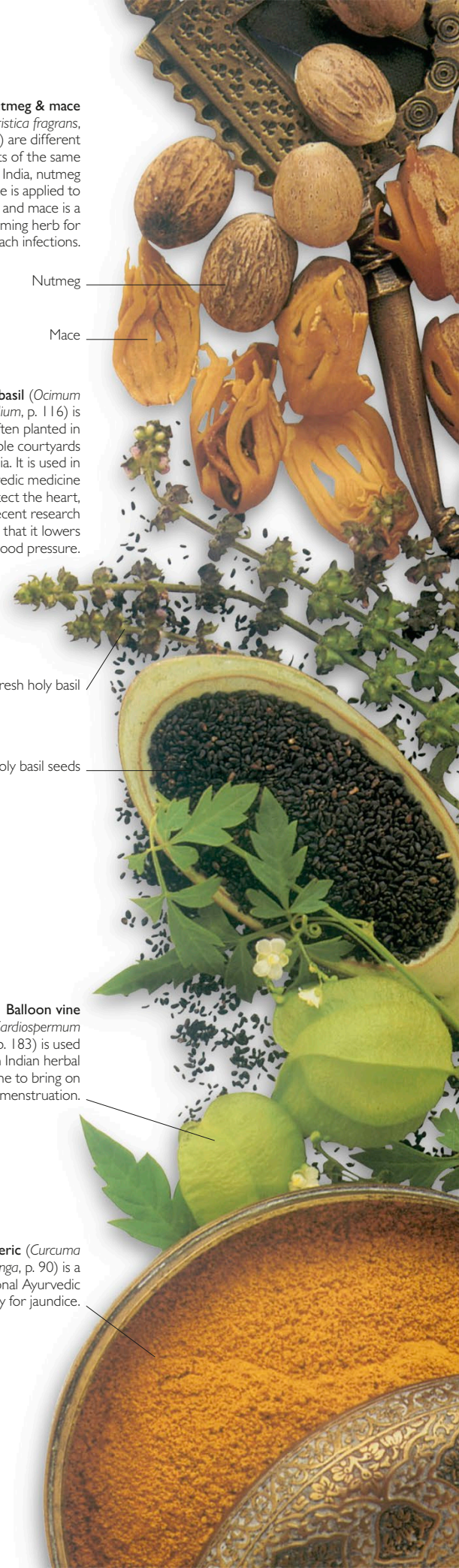
Ayurveda is a unique holistic system, based on the interaction of body, mind and spirit. In Ayurveda, the origin of all aspects of existence is pure intellect or consciousness. Energy and matter are one. Energy is manifested in five elements – ether, air, fire, water and earth – which together form the basis of all matter. In the body, ether is present in the cavities of the mouth, abdomen, digestive tract, thorax and lungs. Air is manifested in the movements of the muscles, pulsations of the heart, expansion and contraction of the lungs, and the workings of the digestive tract and the nervous system. Fire is manifested in the digestive system, metabolism, body temperature, vision and intelligence. Water is present in the digestive juices, salivary glands, mucous membranes, blood and cytoplasm. Earth exists in the nails, skin and hair, as well as in the elements that hold the body together: bones, cartilage, muscles and tendons.

The five elements manifest in the functioning of the five senses, and they are closely related to our ability to perceive and interact with the environment in which we live. In Ayurveda, ether, air, fire, water and earth correspond to hearing, touch, vision, taste and smell respectively.

The Doshas & Health

The five elements combine to form three basic forces, known as the *tridoshas*, which exist in everything in the universe, and influence all mental and physical processes. From ether and air, the air principle *vata* is created; fire and water yield the fire principle *pitta*; and earth and water produce the water principle *kapha*. The principles correspond closely to the three humours of Tibetan medicine and somewhat resemble Galen's theory of the four humours (*see* p. 32).

According to Ayurveda, we are all born with a particular balance of *doshas*. The proportions are largely determined by the balance of *doshas* in our parents at the time of our conception. Our body type,



Nutmeg & mace (*Myristica fragrans*, p. 115) are different parts of the same tree. In India, nutmeg paste is applied to eczema, and mace is a warming herb for stomach infections.

Holy basil (*Ocimum tenuifolium*, p. 116) is often planted in temple courtyards in India. It is used in Ayurvedic medicine to protect the heart, and recent research shows that it lowers blood pressure.

Balloon vine (*Cardiospermum* spp., p. 183) is used in Indian herbal medicine to bring on delayed menstruation.

Turmeric (*Curcuma longa*, p. 90) is a traditional Ayurvedic remedy for jaundice.

Asafoetida (*Ferula assa-foetida*, p. 210) helps to strengthen the gastro-intestinal tract. It is often taken to treat indigestion.

Lemon (*Citrus limon*, p. 82). Lemon helps stave off colds by improving resistance to infection. It is thought to be native to India.

Dried lemon

Cardamom (*Elettaria cardamomum*, p. 93) has been used in India for thousands of years as a digestive remedy.

Fresh cardamom leaves

Cardamom seed

Cinnamon (*Cinnamomum* spp., p. 81) is a tonic herb taken to stimulate the circulation.

Cinnamon sticks

Cinnamon powder

Ashwagandha (*Withania somnifera*, p. 152) has been called "Indian ginseng", and, much like ginseng, it is used to restore vitality and treat nervous exhaustion.

Jequirity (*Abrus precatorius*, p. 158). The seeds have been used in Asia as a contraceptive and abortifacient.

Soya (*Glycine max*, p. 217) is a highly nutritious bean that has become a staple crop around the world. The beans benefit the circulatory system.

Soya beans

Soya beanpods

temperament, and susceptibility to illnesses are largely governed by the predominant *dosha*. In this way we inherit our basic constitution, called the *prakruti*, which remains unaltered throughout our lives.

The first requirement for health in Ayurveda is a proper balance of the *doshas*. If the balance is upset, illness, *ryadhi*, results. The disruption may be manifested in physical discomfort and pain, or in mental and emotional suffering, including jealousy, anger, fear and sorrow. While our balance of *doshas* influences vulnerability to certain kinds of illness, the principles do not work in a vacuum.

The effect our lifestyle has on our *prakruti – vakruti* – has a strong effect upon overall health, and it may easily disrupt *dosha* balance.

Illness may also result if the flow of energy, *prana*, around the body is interrupted. The flow is relayed via the seven *chakras* (psychic energy centres), which are situated at various points along the spinal column, from the crown of the head to the tailbone. If the energy flowing between these centres is blocked, the likelihood of ill health increases.

Visiting an Ayurvedic Practitioner

An Ayurvedic practitioner first carefully assesses *prakruti* and *vakruti* – constitution and lifestyle. This involves taking a detailed case history and carefully examining the body, paying attention to the build, the lines in the face and hands, and skin and hair type – all of which point to more profound aspects of the patient's condition. However, the main foundations on which diagnosis rests are the appearance of the tongue, and the pulse rate. In these respects, Ayurveda has much in common with Chinese and Tibetan medicine, in which these two indicators are also of the greatest importance. A very complex technique for taking the patient's pulse has been developed by Ayurvedic practitioners, requiring many years' experience.

When a *dosha* imbalance has been diagnosed, medical treatment and lifestyle advice are provided. The first step is eliminating toxins and the main cleansing and rejuvenation programme, known as *panchakarma*, includes therapeutic vomiting, purging, enemas, nasal administration of medication and purification of the blood.

Attributes of Remedies

Subsequent treatments fall into three main categories: medicines from natural sources, dietary regimes, and behavioural modifications. Medicines, foods and lifestyle activities are all classified according to their effect on the three *doshas*. For instance, a health problem associated with an excess of *kapha*, the water principle, is characterized by catarrh, excess weight, fluid retention and lethargy. The practitioner would prescribe the consumption of warm, dry, light foods, because the quality of *kapha* is cool and damp. Avoidance of cold damp foods (such as wheat, sugar and milk products), which increase kapha, would also be advised. Herbal remedies would include warming spices such as ginger (*Zingiber officinale*, p. 155) and chilli (*Capsicum frutescens*, p. 74), as well as bitters such as turmeric (*Curcuma longa*, p. 90).

The specific choice of herbal remedy depends on its "quality" or "energy", which Ayurveda determines according to twenty attributes (*vimshati guna*) such as hot, cold, wet, dry, heavy or light. Ayurveda also classifies remedies according to six tastes – sweet, sour, salty, bitter, pungent and astringent. Sweet, sour and salty substances increase water

Ayurvedic market doctor. *Practitioners prescribe herbal remedies on the basis of their attributes – "warm" and "cool" are but two of them. The Ayurvedic practitioner's aim is to balance the patient's* doshas*, the principles that regulate sickness and health.*

(*kapha*) and decrease air (*vata*); bitter, pungent and astringent remedies increase air and decrease water; and sour, salty and pungent herbs increase fire (*pitta*).

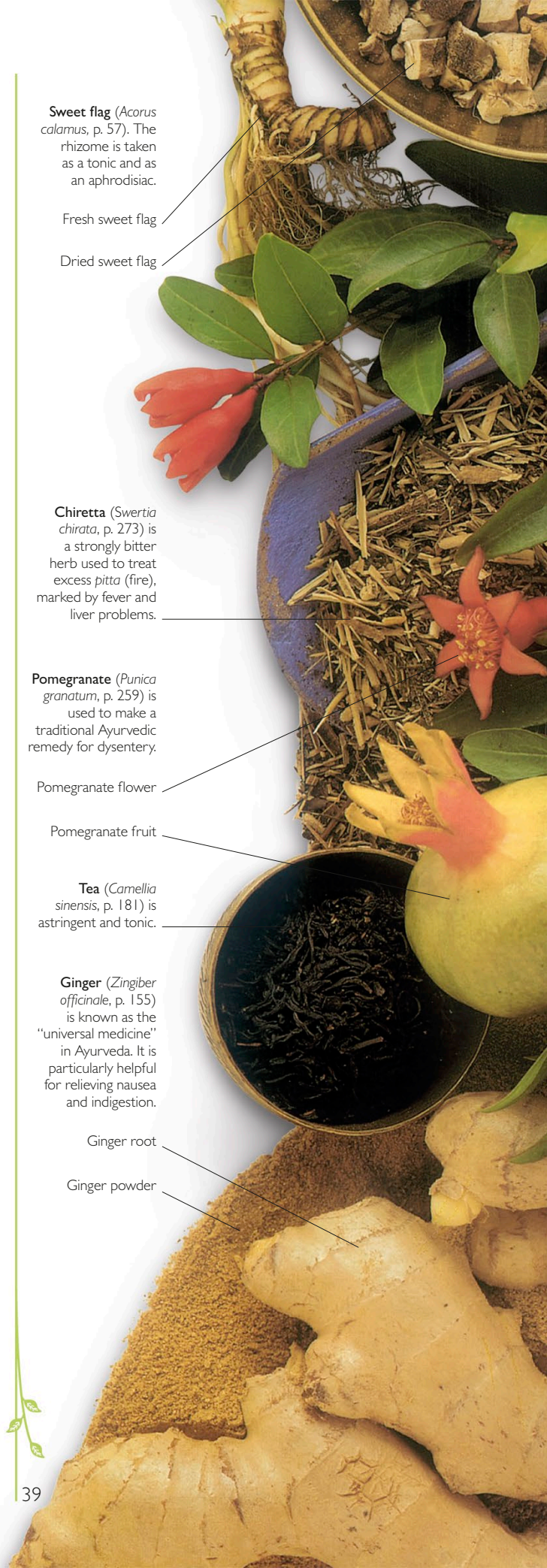
Preparations & Treatments

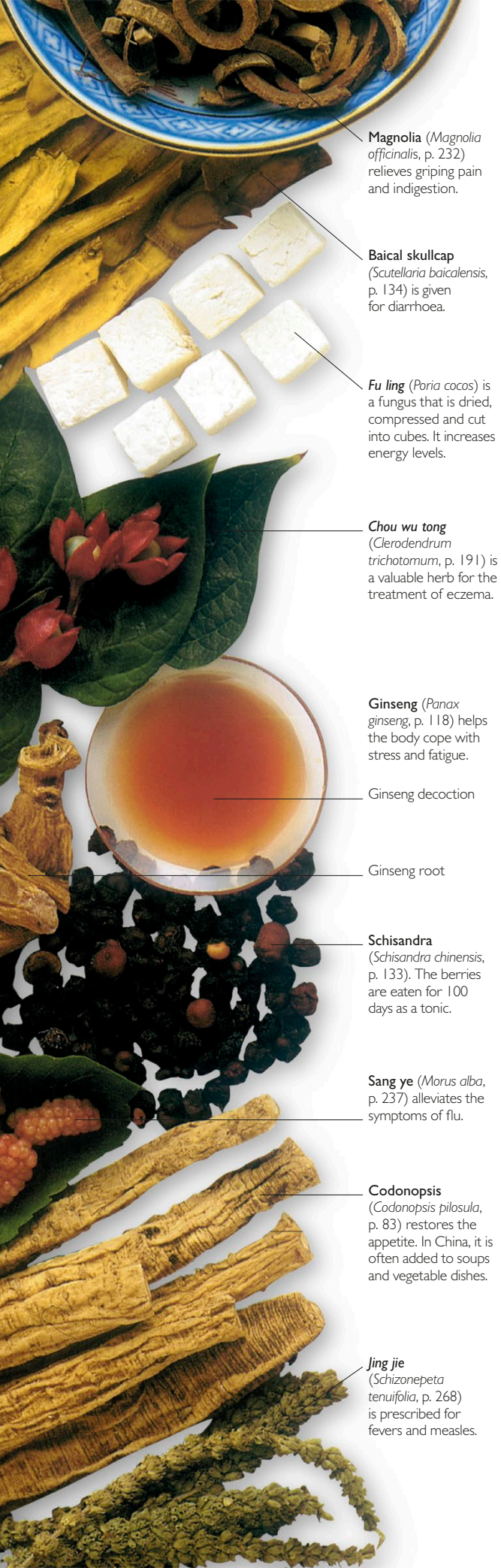
In addition to plant extracts, Ayurvedic medicines include honey and dairy produce, and sometimes minute doses of minerals such as salt are added. Remedies take the form of pills, powders, balms and infusions, and most contain several different ingredients, all carefully balanced to individual needs. Treatment might include washes and enemas or the application of poultices as well as massage with warm herbal oil, burning incense, the use of precious stones and metals, and ritual purification for imbalanced mind and emotions. The chanting of mantras (incantations based on sacred texts), breathing and meditation exercises may be advised, due to the power of sound and the effect of vibration and meditation on the body, mind and spirit.

Herbal Medicine in India Today

In the 19th century, the British dismissed Ayurveda as mere superstition and in 1833 they closed all Ayurvedic schools and banned the practice. Great centres of Indian learning thus fell apart, and Ayurvedic knowledge retreated into villages and temples. At the turn of the century, however, some Indian physicians and enlightened Englishmen began to re-evaluate Ayurveda, and by the time of India's independence in 1947 it had regained its reputation as a valid medical system. Today, Ayurveda flourishes side by side with Unani Tibb and Western conventional medicine and is actively encouraged by the Indian government as an inexpensive alternative to Western drugs. In recent years, Ayurveda has attracted increasing attention from medical scientists in the West and in Japan, and the World Health Organization has resolved to promote its practice in developing countries.

Ayurveda's value lies in the fact that it is not a medical science dealing solely with treatment of disease. Instead, it offers practical guidelines that apply to every facet of daily existence. It also seeks to reconcile health and lifestyle with universal aspects of existence, and to enhance well-being and promote longevity.





China, Japan and South-East Asia

China's ancient herbal tradition has survived intact into the 21st century and in China it is now accorded equal status with Western conventional medicine. Today, many Chinese universities teach and research herbal medicine, a factor of crucial importance in the re-emergence of herbalism worldwide.

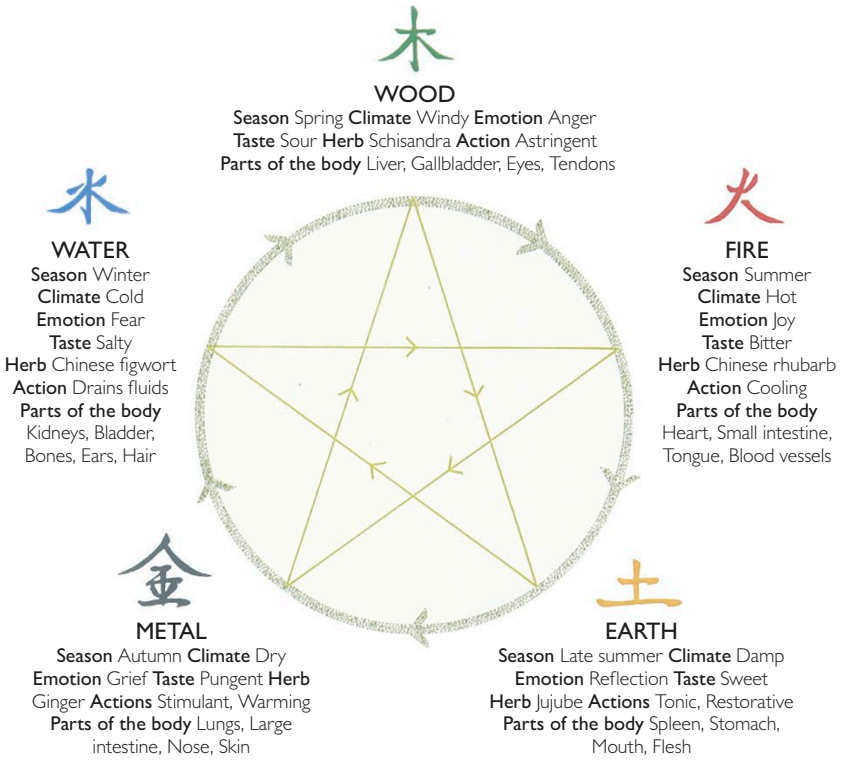
Traditional Chinese medicine (TCM) and the herbal tradition that is part of it developed separately from Chinese folk medicine. It arose from ideas recorded between 200 BCE and 100 CE in the *Yellow Emperor's Classic of Internal Medicine (Huang Di Nei Jing)*. This text is based on detailed observations of nature and a deep understanding of the way that all life is subject to natural laws. It contains concepts that are fundamental to TCM, including *yin* and *yang*; the five elements (*wu xing*); and the theory of the effect of nature upon health.

In TCM, living in harmony with these principles is the key to good health and longevity. According to the *Yellow Emperor's Classic*, members of previous generations lived for a hundred years, and had constitutions so strong that illness was cured by incantations alone. Only later, as human vitality, or *qi*, declined and people became "overactive…going against the joy of life", did herbal medicine, acupuncture and other branches of TCM become necessary.

Key Theories

Unlike other herbal traditions that have a unified theory for making sense of illness and disease (for example, the European theory of the four humours), TCM has two quite different systems – the *yin* and *yang* theory and the five elements. They developed quite separately in China and the five elements system was only accepted and fully incorporated into Chinese

On the streets of Hong Kong *herbal chemists are a familiar sight. Prescriptions are formulated during a consultation with a herbalist and the patient then obtains the appropriate herbs.*



***The ancient five elements theory** is used by the Chinese when writing prescriptions. It associates herbs with the natural world, including elements, seasons and parts of the body. In the circular movement, each element gives rise to the next (for example, winter gives rise to spring). The five-angled movement is a controlling one, in which each element restrains another.*

medicine during the Song dynasty (960–1279 CE). To this day, differences between these theories are reflected in practitioners' approaches to diagnosis and treatment.

In Chinese thought, everything in the universe is composed of *yin* and *yang* – words that were first used to denote the dark and light side of a valley. Everything has *yin* and *yang* aspects, or complementary opposites – such as day and night, up and down, wet and dry. Every *yin* or *yang* category can itself also be subdivided – so that while the front of the body is *yin* relative to the back, which is *yang*, the abdomen is *yin* relative to the chest, which is *yang*.

The five elements theory associates constituents of the natural world – wood, fire, earth, metal and water – with other fundamentals such as seasons, emotions and parts of the body. Each element gives rise to the next in a perpetual fashion (see diagram above). For this reason, the system might be more accurately described as the five phases, representing the process of continual movement in life. The five elements have a central role in Chinese herbal medicine, especially in the grouping of tastes of herbs and parts of the body.

Diagnosis & Treatment

Instead of looking for causes of illness, Chinese practitioners seek patterns of disharmony, which are expressions of imbalance between *yin* and *yang*. Particular attention is given to reading the pulse and tongue, both of which are very important for an accurate diagnosis. Ill health results from a deficiency or excess of either *yin* or *yang*. A cold, for example, is not just the result of a virus (though this clearly is a cause), but a sign that the body is not adapting to external factors such as "wind-heat", "wind-cold" or "summer-heat". A high temperature denotes too much *yang* and shivering

Goji berry (*Lycium chinense*, p. 111) is used in China as a blood tonic.

Hong hua (*Carthamus tinctorius*, p. 184). Known as safflower in the West, *hong hua* is used in China to induce menstruation and to help heal wounds.

White peony (*Paeonia lactiflora*, p. 117) helps menstrual complaints. In China, women who take the root regularly are thought to become as beautiful as the flower itself.

Huo xiang (*Agastache rugosa*, p. 161) stimulates and warms the digestive tract.

Ephedra (*Ephedra sinica*, p. 95) contains ephedrine, used in Western medicine to treat asthma.

Chinese rhubarb (*Rheum palmatum*, p. 126) is laxative in large doses and constipating in small ones.

is the result of an excess of *yin*. The art of the Chinese herbal practitioner is to restore harmony between *yin* and *yang* both within the patient's body and between the patient and the world at large.

Chinese Herbs

Over the centuries, the number of medicinal herbs has grown and the 1977 *Encyclopedia of Traditional Chinese Medicinal Substances* has 5,757 entries, the majority of which are herbs. The Communist Revolution in 1949 helped swell the number of plants used in TCM, because herbs that had previously only been employed in folk medicine were incorporated into the tradition.

As the herbal tradition developed within TCM, the taste and other characteristics of herbs became closely linked with their therapeutic uses. The *Divine Husbandman's Classic (Shen'nong Bencaojing*, 1st century CE) lists 252 herbal medicines specifying their tastes and "temperatures", and today, Chinese herbalists still relate the taste and temperature of a herb directly to its therapeutic use. Sweet-tasting herbs such as ginseng (*Panax ginseng*, p. 118) are prescribed to tone, harmonize and moisten, while bitter-tasting herbs such as *dan shen* (*Salvia miltiorrhiza*, p. 130) are employed to drain and dry excess "dampness". Hot-tasting herbs are used for treating "cold" conditions and vice versa. Together, a herb's taste and temperature link it to specific types of illness. For example, Baical skullcap (*Scutellaria baicalensis*, p. 134), which is bitter-tasting and "cold", is a drying, cooling herb for conditions such as fever and irritability, brought on by patterns of excess heat.

Many herbal preparations *are available to Chinese practitioners.*

Taking Medicines

The Chinese tradition relies heavily on formulae, which are set mixtures of herbs that have proven effectiveness as tonics or remedies for specific illnesses. Many are available over the counter and are used by millions of people every day in China and around the world. Chinese herbalists often take a formula as a starting point and then add other herbs to the mixture. There are hundreds of formulae, one of the most famous being "Four Things Soup", a tonic given to regulate the menstrual cycle and tone the reproductive system. It consists of Chinese angelica (*Angelica sinensis*, p. 63), rehmannia (*Rehmannia glutinosa*, p. 125), *chuang xiong* (*Ligusticum wallachii*) and white peony (*Paeonia lactiflora*, p. 117).

Chinese herbal medicine uses tinctures or alcoholic extracts of herbs, but only infrequently. Generally, patients are given mixtures of roots and bark to take as decoctions two or three times a day.

The Chinese Influence in Japan & Korea

Japan and Korea have been strongly influenced by Chinese medical ideas and practices. *Kampoh*, traditional Japanese medicine, traces its origins back to the 5th century CE, when Buddhist monks from Korea introduced their healing arts, largely derived from Chinese medicine, into Japan. In the following century, the Empress Suiko (592–628 CE)

sent envoys to China to study that country's culture and medicine. Direct Chinese influence on Japanese medicine, which was practised for the most part by the monks, continued for 1,000 years. In the 16th century, Japan started to assert its cultural identity and *kampoh* developed its own characteristic traits, emphasizing the Japanese ideals of simplicity and naturalness. However, certain Chinese concepts, such as *yin* and *yang* and *ki* (*qi*), continued to have a central role.

The tai chi symbol *(in the centre of the silk material) illustrates the harmony of yin and yang. An imbalance of these principles leads to illness.*

In 1868, the Japanese embraced Western conventional medicine. Formal training in *kampoh* officially ceased in 1885, but a few committed practitioners passed their knowledge on to younger generations, keeping the tradition alive. In the last 40 years the number of medical practitioners who use *kampoh* within their practice has greatly increased. Many Japanese medical schools now include training in *kampoh* as part of the curriculum.

Korean herbal medicine is very similar to mainstream Chinese herbal medicine, and almost all the Chinese herbs are used in Korea. Ginseng (*Panax ginseng*, p. 118) has been cultivated in Korea for home use and export since 1300.

Importance of Chinese Herbal Medicine

Since 1949 when the Communists gained control, the herbal tradition has flourished in China (see p. 29) and today it is recognized as a valid medical system, available to the Chinese on an equal footing with conventional Western medicine. As is often the case elsewhere, herbs seem to be used mainly for chronic conditions, while Western medicine is more frequently employed for serious acute illness.

Chinese herbal medicine, however, is not just of significance in China and the surrounding regions, but is practised by trained practitioners in every continent and, in some countries, now has official government recognition. For example, there has been a traditional Chinese medicine hospital in Paris since 1996 and, in 2013 the French government agreed to open three new traditional Chinese medicine hospital centres. Herbal medicine is now taught in 34 Chinese universities. This development (and the massive input of resources involved) has helped revitalize herbal medicine around the world over the last 30 to 40 years.

The impact of these developments has not been confined solely to those taking herbal medicines – whether in China or elsewhere. In 2015 Dr Tu Youyou, a researcher trained in traditional Chinese medicine and conventional medicine, was awarded the Nobel Prize for medicine for her life-long study of sweet wormwood (*Artemisia annua*, p. 67) and its key active constituent artemisinin. From her base at the Academy of Traditional Chinese Medicine in Beijing, she proved that the herb (and its active constituent) had unusually potent antimalarial activity. Artemisinin has now become the standard treatment for acute malaria.

Calumba (*Jateorhiza palmata*, p. 224) is a bitter herb that is used as a digestive remedy and as a means to improve the appetite.

Buchu (*Barosma betulina*, p. 71) has a diuretic and tonic effect within the urinary tract. It is infused in oil to make perfume.

Coffee (*Coffea arabica*, p. 192). According to legend, an Islamic mullah discovered the stimulating effect of coffee by observing the frisky behaviour of goats who had grazed on the beans. Coffee is used medicinally to treat headaches.

Visnaga (*Ammi visnaga*, p. 62) is mentioned in an Egyptian medical text of *c.*1500 BCE as a herb that relieves kidney stones. Visnaga seeds were used to clean the teeth.

Visnaga seeds

Visnaga leaves

Myrrh (*Commiphora molmol*, p. 85) exudes an astringent resin that is used to treat sore throats.

Devil's claw (*Harpagophytum procumbens*, p. 103) is anti-inflammatory, and is now widely used in the West.

Devil's claw rhizome

Devil's claw chopped rhizome

Africa

In Africa there is a greater variety of herbal traditions than in any other continent. During the colonial period, native herbal practices were largely suppressed, but today, in a marked turnaround, practitioners of conventional medicine often work closely with traditional healers.

The therapeutic use of medicinal plants in Africa dates back to the earliest times. Ancient Egyptian writings confirm that herbal medicines have been valued in North Africa for millennia. The Ebers papyrus (*c.* 1500 BCE), one of the oldest surviving medical texts, includes over 870 prescriptions and formulae, 700 medicinal herbs – including gentian (*Gentiana lutea*, p. 99), aloe (*Aloe vera*, p. 60) and opium poppy (*Papaver somniferum*, p. 244) – and covers conditions ranging from chest complaints to crocodile bite. The medicinal arts put forward in this and other Egyptian texts formed the intellectual foundation of classical medical practice in Greece, Rome and the Arabic world.

Trade & the Arabian Influence

Herbal medicines have been traded between the Middle East, India and north-eastern Africa for at least 3,000 years. Herbs widely used in the Middle East, such as myrrh (*Commiphora molmol*, p. 85), originally came from Somalia and the Horn of Africa. From the 5th century CE to the 13th century, Arab physicians were at the forefront of medical advancement and in the 8th century, the spread of Arabic culture across northern Africa had an influence on North African medicine that lasts to this day. In the mid-13th century, the botanist Ibn El Beitar published a *Materia Medica* that considerably increased the range of North African plant medicines in common use.

Ancient Beliefs & Indigenous Herbs

In the more remote areas of Africa, nomadic peoples, such as the Berber of Morocco and the Topnaar of Namibia, have herbal traditions that remain largely unaffected by changes in medicine in the world at large. For these peoples, healing is linked to a magical world in which spirits influence illness and death. In Berber culture, possession by a *djinn* (spirit) is a major cause of sickness, and herbs with "magical" properties are given to restore health. If the patient fails to recover, their condition is likely to be attributed to a curse or to the "evil eye".

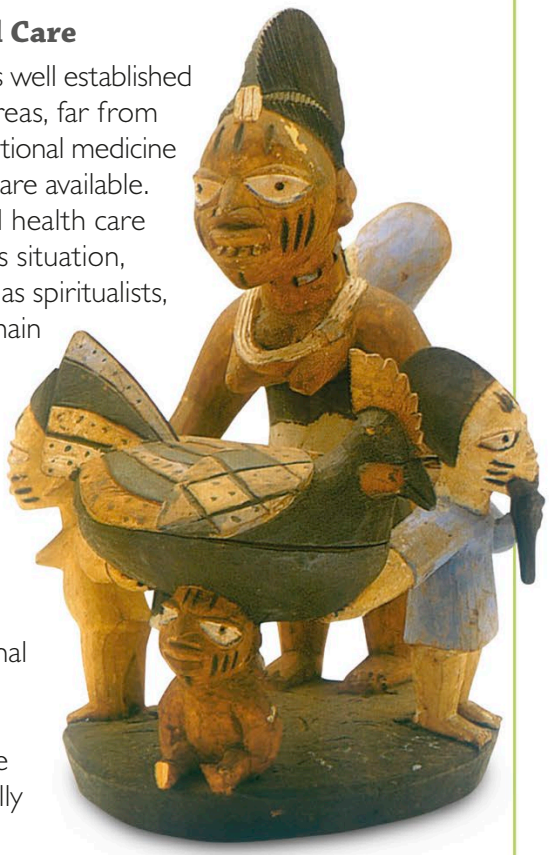
The Topnaar formerly depended completely on their environment for medicines, using the few medicinal plants that grow in such harsh and arid conditions. Although they are now heavily influenced by the Western way of life and have lost much of their plant lore, they continue to employ many indigenous plants medicinally. The stem of the seaweed *Ecklonia maxima*, for example, is roasted, mixed with petroleum jelly and rubbed into wounds and burns, while *Hoodia currori*, a low-lying cactus, is stripped of its thorns and outer skin and eaten raw to treat coughs and colds.

Throughout Africa, thousands of different wild and locally grown medicinal plants are sold in the markets. Some are prescribed as medicines for home use. Others, such as kanna (*Membryanthemum* spp.) and iboga

(*Tabernanthe iboga*), are chewed to combat fatigue, and are taken as intoxicants in religious ceremonies. According to local accounts in the Congo and Gabon, iboga's stimulant effect was discovered when observers saw wild boars and gorillas dig up and eat the roots, and subsequently become frenzied.

Traditional & Conventional Care

Conventional Western medicine is well established throughout Africa, but in rural areas, far from medical and hospital services, traditional medicine remains the only form of health care available. Even in urban areas conventional health care services can be limited and in this situation, traditional providers of care such as spiritualists, herbalists and midwives are the main source of treatment available for the majority of the population. The World Health Organization aims to achieve a level of health care that will permit all people to lead socially and economically productive lives. In an attempt to meet this, African countries have pioneered the training of traditional medicine practitioners in simple medical techniques and basic hygiene procedures. In one centre in Mampong, Ghana, conventionally trained medical staff work hand-in-hand with traditional herbal practitioners, encouraging the safer use of herbal medicines and researching them in detail. In nearby Kumasi, the university now runs a BSc degree in herbal medicine. This represents a remarkable change in attitude. In the 19th and much of the 20th centuries, colonial governments and Christian missionaries viewed traditional herbalists as witch-doctors, whose practices were best suppressed.



This Nigerian divination bowl *was used by traditional healers in the diagnosis of illness via the interpretation of magical signs.*

The Discovery of New Herbal Cures

Along with encouraging the safer use of herbal medicines, medical centres are researching their use in detail. The benefits of pygeum (*Pygeum africanum*, p. 260) have been conclusively established. This tree is traditionally used in central and southern Africa to treat urinary problems. Today, it is regularly prescribed in conventional French and Italian medicine for prostate problems. Of the plants under investigation in Africa, Kigelia (*Kigelia pinnata*, p. 225) – a sub-Saharan tree, and Sutherlandia (*Sutherlandia frutescens*) – a small South African shrub, are of particular interest. Kigelia has a marked ability to prevent and heal skin lesions, including psoriasis, while Sutherlandia is an adaptogen with anti-cancer activity.

The re-evaluation of traditional herbal medicine in Africa may result in the acceptance of additional plant-based medicines. Today, the opportunity exists to combine the best of traditional practice with conventional medical knowledge, for mutual gain.

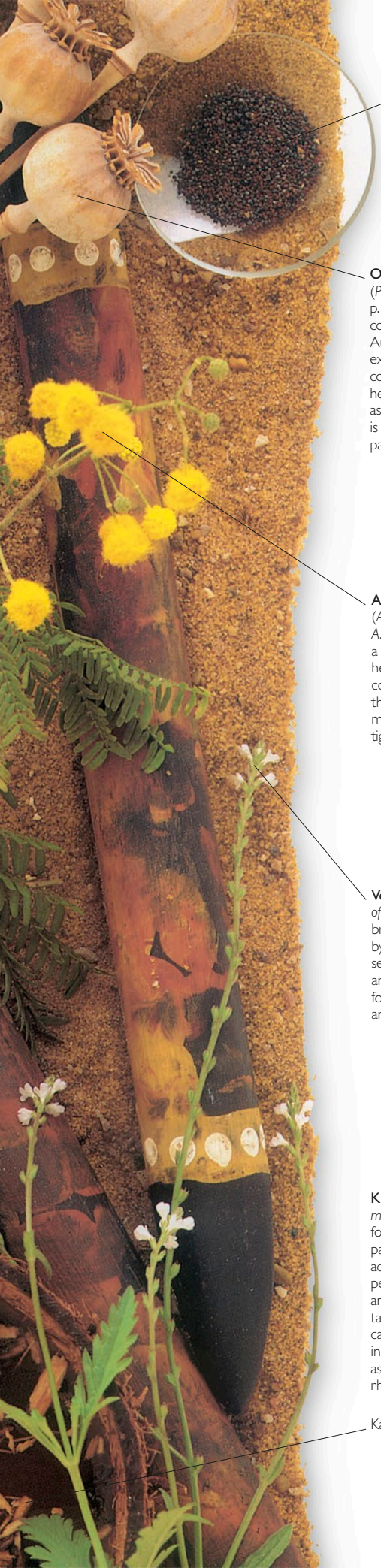
Kola nut (*Cola acuminata*, p. 192) is taken in western and central Africa to relieve headaches.

Grains of paradise (*Aframomum melegueta*) are used as a condiment in Africa and are taken medicinally as a warming remedy for nausea.

Pellitory (*Anacyclus pyrethrum*, p. 166) has an acrid, irritant root that stimulates the circulation when applied to the skin.

Senna (*Cassia senna*, p. 75) contains anthraquinones – constituents that cause the bowel to contract – hence the plant's laxative effect. The plant's first recorded medicinal use was in Arabia in the 9th century.

Aloe vera (*Aloe vera*, p. 60) contains two medicinal substances, each with a markedly different use. The clear gel from the centre of the leaf speeds the healing of wounds. Juice from the base of the leaf, known as "bitter aloes", has laxative properties.



Opium poppy seeds

Opium poppy (*Papaver somniferum*, p. 244) is cultivated commercially in Australia. It is used extensively in both conventional and herbal medicine as a sedative and is a very potent painkiller.

Australian wattle (*Acacia decurrens*, see *A. nilotica*, p. 159) is a strongly antiseptic herb used to treat conditions where the skin or mucous membranes need tightening or protecting.

Vervain (*Verbena officinalis*, p. 149) was brought to Australia by early British settlers. It is a tonic and restorative for the nerves and digestion.

Kava (*Piper methysticum*, p. 122) forms an important part of ceremonial activities amongst the peoples of Melanesia and Polynesia. It is taken for herbal calming, urinary infections, and is used as a wash to treat rheumatic pain.

Kava root

Australia and New Zealand

Regrettably, much of the herbal knowledge of the Australian Aborigines was lost after the arrival of the Europeans. The predominant strains of Australian herbalism today derive from the West, China and, increasingly, from other countries on the Pacific Rim.

The cradle of the oldest continuous culture on earth, Australia is also the home of an ancient herbal tradition. The Aborigines, believed to have settled in Australia over 60,000 years ago, developed a sophisticated empirical understanding of indigenous plants, many of which, such as eucalyptus (*Eucalpytus globulus*, p. 96), are unique to Australia. While much of this knowledge has vanished with its keepers, there is currently a high level of interest in native herbal traditions.

Aboriginal Herbal Medicine

The Aborigines probably had a more robust health than the early European settlers who displaced them. They had very different ideas of health, disease and illness, in which the influence of the spirit world played a major role. In common with other hunter-gatherer societies, the Aborigines devoted much time to ritual, which reinforced the sense of place and purpose in the lives of each individual. They used healing plants and the laying on of hands in a complex weave of culture and medicine.

The influx of Europeans in the 18th century was disastrous for the Aborigines. They were exploited and driven off the land, and their population was decimated by killings and infectious Western diseases. Not only did the Europeans fail to discern any value in native customs but much of the orally-based herbal tradition was lost through death of the elders and the dispersal of tribal groupings.

Nevertheless, a little is known of Aboriginal medicine. Aromatic herbs, such as eucalpytus, were crushed and inhaled to treat many common illnesses, including respiratory diseases such as flu. Without metal technology, water could not be boiled, but decoctions were made by heating water with hot stones. These were drunk or applied externally. Skin eruptions, such as boils and scabies, were common and were treated with acacia (*Acacia* spp., p. 158), while acute diarrhoea was treated with eucalyptus or kino (*Pterocarpus marsupium*, p. 258). In Queensland, fever bark (*Alstonia* spp., p. 165) was used to treat fevers.

Indigenous & Foreign Herbs

Over the last 200 years, many native Australian plants have become popular around the world. Research into fever bark resulted in the discovery of the alkaloid reserpine, which markedly lowers blood pressure. The substance is now prescribed by herbalists and conventional practitioners alike. Eucalyptus and tea tree (*Melaleuca alternifolia*, p. 112) yield essential oils that are employed worldwide as antiseptics. Other native Australian plants are now used in Australian herbalism because of their medicinal use elsewhere, for

Red river gum (*Eucalyptus camaldulensis*) *has aromatic, astringent leaves. When it is taken internally, generally to treat diarrhoea, it turns the saliva red.*

example gotu kola (*Centella asiatica*, p. 76) and visnaga (*Ammi visnaga*, p. 62), which have a long history of medicinal use in India and the Middle East. Early British settlers imported European medicinal plants, such as vervain (*Verbena officinalis*, p. 149), hawthorn (*Crataegus oxycantha,* p. 87), mullein (*Verbascum thapsus*, p. 281) and dandelion (*Taraxacum officinale*, p. 141), which have now all become naturalized. Native American plants have also found their way to Australia, including prickly pear (*Opuntia ficus-indica*, p. 242) and Canadian fleabane (*Conyza canadensis*, p. 194). As Australian herbalists generally follow the Anglo-American herbal tradition, these plants are often employed in local practice.

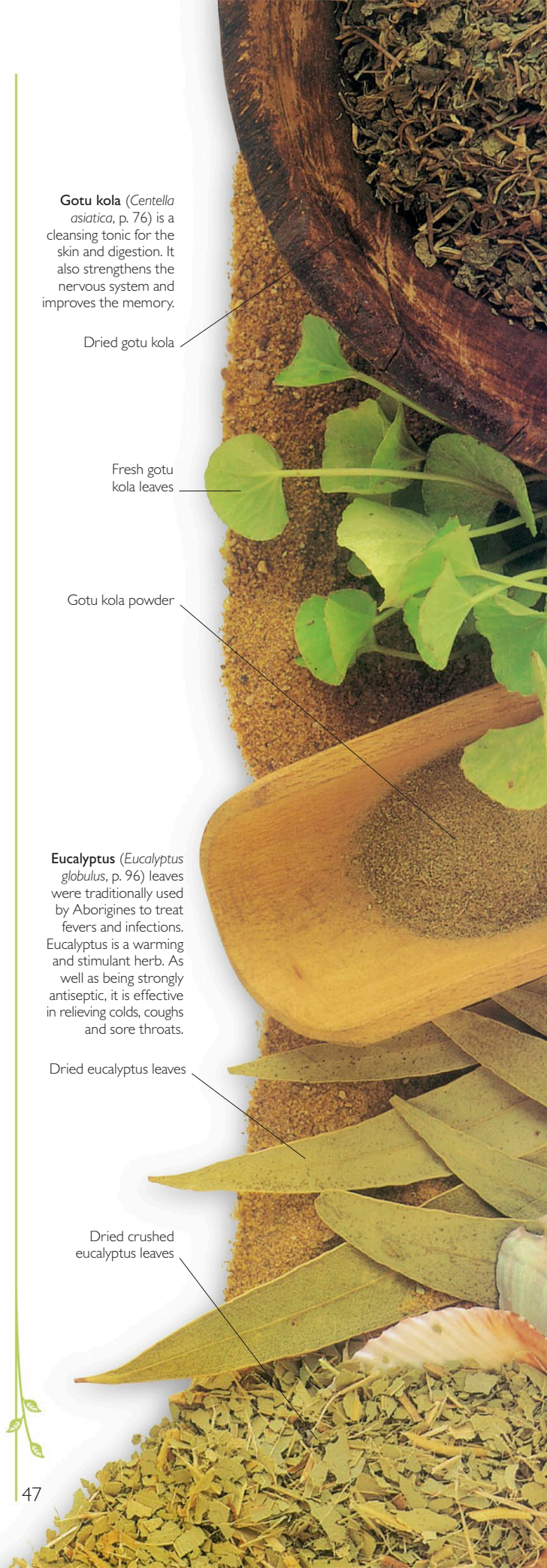
Chinese Influence

Traditional Chinese medicine has substantially influenced herbalism in Australia. Following the arrival of Chinese immigrants in the 19th century, herbal formulae gained a reputation for effectiveness and Chinese medicine maintained a small but loyal following in all the major cities. During the 1980s, a renaissance in all branches of herbal medicine began, and today Australia has three colleges of traditional Chinese medicine. In 2012, traditional Chinese medicine became a nationally regulated form of medicine, with practitioners required to register with the Chinese Medicine Board of Australia. Naturopathy and Western herbal medicine are yet to achieve this status.

The Future

With the passing of enlightened legislation – the Therapeutic Goods Act – in 1989, herbal medicine became a dynamic growth industry in Australia. This process is likely to continue as Australia and New Zealand are due to harmonize their medicines legislation. Quality standards for over-the-counter herbal medicines have been raised and many new herbal products developed. There is increased commercial cultivation of medicinal plants, notably tea tree (*Melaleuca alternifolia*, p. 112), and university training and herbal research has been expanded. In this environment, Australians are becoming increasingly sophisticated in their use of natural medicines.

With its ancient culture, ties to Western herbalism and location on the Pacific Rim, Australia is host to many herbal traditions. The next 20 years will doubtless see further exciting developments.



North America

Many ancient herbal traditions in North and Central America not only withstood the influx of European settlers but helped to reinvigorate Western herbalism. In parts of Central America herbal medicine is widely practised, and in the US and Canada it is again enormously popular.

Stretching from the Arctic wilds of Canada and Alaska to the tropical regions of Panama, North and Central America covers diverse geographical regions and harbours an immense variety of medicinal plants. Most of them are indigenous, but others – such as nutmeg, ginger and tamarind – were introduced from the Old World from the 16th century onwards. Likewise, native American medicinal plants – such as corn, cocoa, cayenne and sunflower – were introduced to Europe, Asia and Africa. This trade of species was an important part of the interplay between the Old and New World's herbal traditions.

Herbal Traditions in Central America

Herbal medicine is commonly practised in rural areas of Central America, especially in Guatemala and Mexico. In the Mexican tradition, loss of "balance" between hot and cold elements within the body is thought to be the underlying cause of illness, and the healer's art is to restore balance and vitality.

Mexican herbal medicine is not a static tradition, but has evolved from a shifting blend of Aztec, Mayan and Spanish influences. Long before Hernando Cortez and his conquistadors came ashore in 1519, the Mayan and Aztec cultures had a well-developed understanding of plant medicines. The *Badianus Manuscript*, the first American herbal (written by an Aztec, Martin de la Cruz, in 1552), lists the medicinal uses of 251 Mexican species. They include damiana (*Turnera diffusa*, p. 144), taken by the Maya as an aphrodisiac, and mesquite (*Prosopis juliflora*), used by the Aztecs as an eye lotion. Both species are still used medicinally, alongside European herbs such as pennyroyal (*Mentha pulegium*, p. 235) and thyme (*Thymus vulgaris*, p. 143). It is thought that approximately 65 per cent of the plants used today by traditional Mexican herbalists originated in Europe.

In other Central American countries efforts are being made to encourage people to use herbal medicine as the first line of treatment for illness. Projects in the Dominican Republic and Nicaragua, for example, are teaching women how to use local herbs within their communities, while in Cuba doctors routinely prescribe medicinal herbs to make up for the scarcity of conventional medicines.

Caribbean Herbal Medicine

Throughout the Caribbean, domestic herbal medicine remains popular. Some of the widely used herbs include fever grass or lemon grass (*Cymbopogon citratus*, p. 198), which, as its name suggests, is used to treat fevers, and kerala (*Momordica charantia*, p. 236), a creeping vine that is prized as a "cure-all" on many of the islands. Kerala has been shown to have an ability to lower blood sugar levels and may help to slow down the

onset of diabetes, a relatively common illness among Afro-Caribbeans. The medical and religious customs on each Caribbean island vary, but on many they reflect the African traditions of transported slaves, especially of the Yoruba people shipped from West Africa, who carried on the practices of their homelands. In some of these traditions, herbs are valued for their magical power as well as for their medicinal properties. Tobacco (*Nicotiana tabacum*, p. 240) for example, is used for divination in many American cultures, including in Santeria and Voodoo religious rituals, as are other herbs, including garlic (*Allium sativum*, p. 59) and chilli (*Capsicum frutescens*, p. 74).

A Native American medicine man *performing a healing ritual intended to drive out evil spirits, as depicted by the 19th-century artist George Catlin.*

Shamanism

Moving north, Native American herbal medicine in what is now the United States was and is primarily shamanistic in nature, involving herbal lore, ritual and magic. Shamanistic societies from Siberia to the Amazon believe that, in serious illness, the soul of the sick person has been taken over by malign forces. The shaman's role is to heal both the physical *and* the spiritual dimension of the illness. The patient cannot be truly cured until his or her soul has been freed from evil spirits. Shamanistic ceremonies and rites to heal the sick person's spirit include dancing, chanting, drumming, playing games, and the stirring of ashes or sprinkling of water. By taking hallucinogens such as peyote (*Lophophora williamsii*, p. 230), the shaman is able to reach out to the spirit world and heal both the individual and the community as a whole.

Power of Herbs

In all Native American cultures from Canada to Chile, herbs are thought to have spiritual energy and many of them are invested with great magical power. The Iroquois believe that cardinal lobelia (*Lobelia cardinalis*, see *L. inflata*, p. 110) and morning glory (*Ipomoea pandurata*) have the ability to heal or harm, and should be picked, stored and used with great care. Morning glory is considered so powerful that even touching it could cause harm. The Iroquois use the plant as a remedy for coughs, tuberculosis and other ailments, and also take it as a decoction with sunflower seeds (*Helianthus annuus*) as a sacrament in spring and autumn rituals.

Tobacco, now considered an addictive drug, was a sacred shamanistic herb for most Native American peoples. It was smoked in pipes and "thrown into fires as an offering, cast into the wind and water to abate storms, scattered about a fish weir to improve the catch and offered to the air in thanksgiving for escape from danger", according to Virgil Vogel's *American Indian Medicine* (1970).

European Settlers

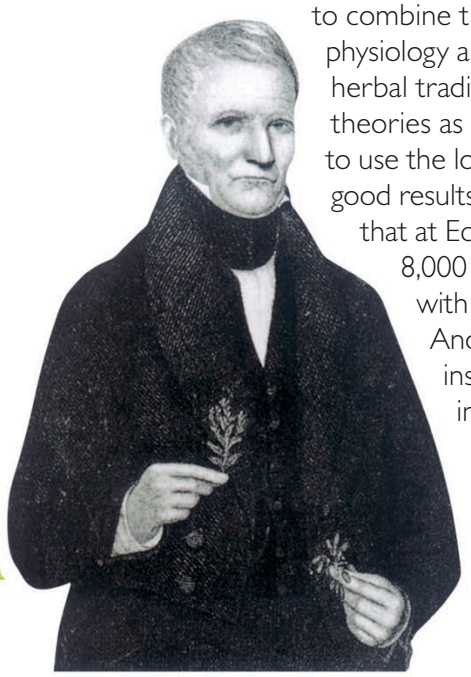
The first European settlers in North America, arriving in the early 17th century, tended to dismiss Native American medical practices as nothing more than primitive savagery. The settlers relied largely on imported herbal medicines, or on European plants hardy enough to grow in eastern North America.

As time went by, however, the settlers' increased contact with indigenous peoples in the frontier regions fostered a healthy respect for their healing skills. Sometimes settlers adopted not just the plants but the harvesting and therapeutic methods as well. Joseph Doddridge, in *Notes on the Settlement and Indian Wars* (1876), relates that butternut bark (*Juglans cinerea*, p. 224) was peeled downwards if it was to be used as a purgative (acting "downwards" by purging the bowels), and upwards for use as an emetic (acting "upwards" by provoking vomiting).

The types of healing regimes practised by Native Americans eventually gained widespread popularity. Towards the end of the 18th century, Samuel Thomson (1769–1843) developed a simple therapeutic regime based on Native American herbal practice. Thomson never acknowledged the debt, but it is clearly evident – from the use of emetics, purgatives and stimulants, to the central role of sweating and vapour baths (based in part on Native American sweat lodges), to the deep knowledge of American medicinal plants. Thomson considered that "all disease is caused by cold" and his system worked well for those with a robust health struck down by infection or injury. The two main herbs in his system – cayenne, a stimulating herb, and lobelia, an emetic, relaxant and stimulant – act to raise body temperature and dilate the blood vessels. Taking these plants helps to increase resistance to infection and speeds the healing of wounds.

Eclecticism & Its Influence

The fertile marriage between Native American and Western herbal medicine led to the establishment of more sophisticated herbal systems, such as Eclecticism, founded by Dr Wooster Beech (1794–1868) in the 1830s. Beech studied both herbal and conventional medicine and tried to combine the new scientific knowledge of physiology and pathology with the best of the herbal tradition. Beech rejected Thomson's theories as being over-simplistic, and aimed to use the lowest dosages possible to achieve good results. His approach was so successful that at Eclecticism's height in 1909, over 8,000 members were in practice, all with recognized medical qualifications. Another significant medical movement, inspired by Thomson's regime and influenced by the Eclectics, was Physiomedicalism. Using many herbs, these practitioners sought



Samuel Thomson, *who inspired the 19th-century Physiomedicalists, advocated Native American remedies.*

Wild yam *is found growing in Mexico. Its rhizome relaxes smooth muscle and it is used as an antispasmodic.*

to harmonize "the organic tissues with the vital force", with the aim of restoring equilibrium within the body. Believing the stomach was the source of disease, Physiomedicalists used herbs that induced vomiting, such as poke root (*Phytolacca americana,* p. 247), to cleanse the organ. Other herbs, such as echinacea (*Echinacea* spp., p. 92), now recognized as an effective immune modulator, and goldenseal (*Hydrastis canadensis*, p. 105) a tonic and anti-inflammatory, were then prescribed to aid recovery.

The second half of the 19th century was an extraordinary time for American natural medicine. In addition to engendering osteopathy and chiropractic at the turn of the century, it also re-invigorated herbal medicine in Britain to such a degree that Physiomedicalism became an Anglo-American herbal tradition. To this day, British herbalists still use a far wider variety of North American medicinal herbs than do their European counterparts.

North American Herbal Medicine Today

In the US, herbal medicine went into steep decline after 1907 because of the government's decision to limit financial support for herbal medical training at conventional medical schools. Since that time, herbal medicine in both the US and Canada has existed mostly on the fringes of conventional health care. In some US states, it is illegal to practise herbal medicine without medical qualifications, but courses in herbalism are not offered at medical schools.

With the passing of liberal legislation in 1994, use of herbal medicine in the US exploded and sales of St John's wort (*Hypericum perforatum*, p. 106) – the most extreme example – are thought to have increased by 3,900 per cent between 1995 and 1997. Such growth could not be sustained, and led to lower quality herbal products being sold over the counter. The American Botanical Council has been at the forefront of the campaign to raise quality standards of herbal medicines and many bona fide herbal manufacturers have signed up to their Botanical Adulterants programme. At the same time, greater resources are being put into researching herbal medicines, for example through the US National Center for Complementary and Integrative Health, which has so far funded over 15 clinical trials into herbs such as garlic (*Allium sativum*, p. 59) and saw palmetto (*Serenoa repens*, p. 136).

Over the last 20 years, North Americans have become increasingly savvy about herbal medicines and their role in maintaining well-being and treating ill health. Best-selling herbs include turmeric (*Curcuma longa*, p. 90) and elderberry (*Sambucus nigra*, p. 132), and their use fits well with the American tradition of self-reliance.

Turmeric

South America

Herbal medicine is a part of the struggle for survival for the indigenous peoples of South America, as they seek to protect their culture and natural habitats. As the great rainforests disappear we are losing thousands of plant species, some of which may have had great medicinal value.

Cinchona (*Cinchona* spp., p. 80) contains quinine, which is a powerful antimalarial.

Nasturtium (*Tropaeolum majus*, p. 278) is a traditional Andean remedy for wounds and chest infections. It is strongly antibiotic.

Arrowroot (*Maranta arundinacea*, p. 233) is used to treat diarrhoea, skin conditions and to heal wounds.

Lemon verbena (*Lippia citriodora*, p. 228) has sedative qualities and is taken as a calming infusion.

Fresh lemon verbena leaves

Dried lemon verbena leaves

Boldo (*Peumus boldo*, p. 246) is a liver tonic.

Fresh boldo leaves

Dried boldo leaves

Herbal medicine in South America conjures up images of shamanistic rituals and a collection of thousands of as yet unclassified plants under the thick canopy of the rainforest. But these are only two facets of the continent's herbal tradition – those of the Amazon and Orinoco regions. Distinctly different plants and practices are found in other areas, for example on the Bolivian Andes plateau, on the humid plains of Paraguay and in cities such as Rio de Janeiro.

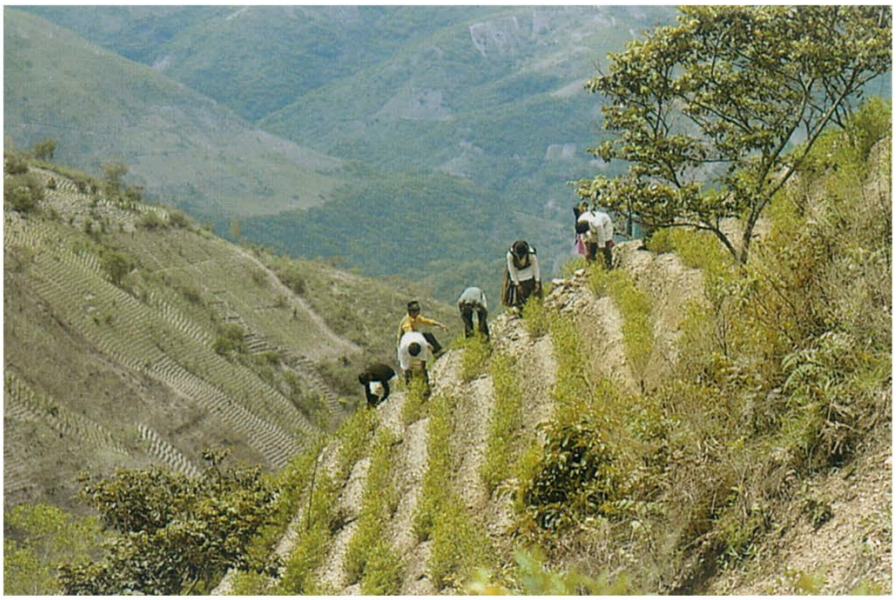
Wealth of Native Plants

Ever since the Spanish conquest in the early 16th century, European writers have remarked on the huge variety of plant medicines used by native peoples. The most important of these was cinchona (*Cinchona* spp., p. 80), a traditional Andean fever remedy, which the Spaniards first discovered around 1630. Quinine, produced from this plant, became the most effective treatment for malaria for nearly 300 years and is still widely used as a tonic, bitter and muscle relaxant. Other important plants originating in South America include the potato (*Solanum tuberosum*, p. 271), which was cultivated in over 60 different varieties by the Inca. Its uses are wide-ranging, but it is particularly effective as a poultice for skin conditions. Ipecacuanha (*Cephaelis ipecacuanha*, p. 186) – now commonly found in over-the-counter cough preparations – was taken by Brazilian native peoples to treat amoebic dysentery. Maté (*Ilex paraguariensis*, p. 222), which grows in southern regions of the continent, makes a stimulating beverage that is prepared and drunk like tea. Maté has become so popular it is now cultivated in Spain and Portugal as well as in South America.

Since the 1950s, specialist ethnobotanists have lived within native communities, particularly in the Amazon region, where most tribes have a highly developed herbal lore. Their work has resulted in a wealth of knowledge about Amazonian species. Pareira (*Chondrodendron tomentosum*, p. 189), a climbing vine of the rainforest, for example, yields the poison curare used in hunting, and is taken medicinally to treat water retention, bruising and insanity. Sadly, however, the herbal medicine of many indigenous groups is now under threat as the rainforests, and their culture, disappear.

Mind-altering Remedies

Notorious in the West as the source of cocaine, coca (*Erythroxylum coca*, p. 206) is an important medicine in South America for nausea and vomiting, toothache and asthma. It is also completely interwoven into the culture of indigenous Amazonian and Andean peoples and serves as a precise example of the unique



Coca harvest in Bolivia. *The leaves are picked when they begin to curl. They have been used as a stimulant for centuries by the indigenous peoples of the Andes.*

relationship that traditional peoples have with the plant world. Many different myths confirm coca's sacred and ancient origins in South America, and great ritual and significance is attached to the leaves, which, when mixed with lime and chewed, reduce appetite and increase endurance.

Many hallucinogenic plants are used within South American shamanistic societies, notably ayahuasca (*Banisteriopsis caapi*, p. 176). This powerful "medicine" enables the shaman (priest) to communicate with the spirit world and cure the patient's ill health.

The European Influence

In more westernized areas of South America, herbal medicine is often a blend of both Spanish and local traditions (as is also the case in Central America, *see* p. 48). Large herb markets exist in some cities, such as La Paz and Quito, which provide an astonishing variety of indigenous and European herbs. In Ecuadorian markets, for example, anise (*Pimpinella anisum*, p. 248), a digestive remedy for colic and griping that originally came from the Mediterranean, is sold alongside unusual native medicines such as arquitecta (*Culcitium reflexum*), a diuretic and detoxifying herb traditionally used to treat toxicity and infections, including syphilis.

Research & New Hopes

Research into native herbs has led to the use of certain plants in conventional medicine. Brazilian investigation into Pau d'arco (*Tabebuia impetiginosa*, p. 139) indicates significant therapeutic potential for fungal infections, inflammation of the cervix, HIV and cancer. While Pau d'arco's effectiveness in treating cancer is controversial, it is currently prescribed both by local doctors and in hospitals.

Research into herbal medicine is expanding, with hospital-based studies taking place in centres such as Belem in north-eastern Brazil and Bogotá in Colombia. Such studies are important for the world as a whole. The locally based researchers, unlike most multinational drug companies, are willing to develop medicines based on simple extracts, which may ultimately prove more effective than the isolated constituents often used in conventional drugs.

Pau d'arco (*Tabebuia* spp., p. 139) is used as an anti-cancer remedy. It has long been used by indigenous Peruvian peoples to lower fever and reduce inflammation.

Pau d'arco tincture

Guarana (*Paullinia cupana*, p. 245) contains a natural stimulant with properties similar to caffeine. Roasted and ground guarana seeds are now widely used in the health food industry.

Soap bark (*Quillaja saponaria*, p. 260) is a traditional expectorant in Peru and Chile.

Pineapple (*Ananas comosus*, p. 167) is rich in vitamin C, and contains an enzyme that aids digestion. The juice is employed as a digestive tonic and a diuretic.

KEY MEDICINAL PLANTS

Of the estimated 500,000 plants on our planet, it is thought that around 10,000 are used regularly for medicinal purposes. The index of Key Medicinal Plants features 100 of the best-known medicinal plants in Latin name order. Many are commonly available and widely used in different herbal traditions around the world, for example German chamomile (*Chamomilla recutita*, p. 77) and ginger (*Zingiber officinale*, p. 155). Others such as neem (*Azadirachta indica*, p. 70), from Asia, are key herbs within their native region. A significant proportion of these herbs have been well researched and most are excellent for home use.

PLANT NAMES
The Latin name given is the one by which the plant is most generally known in medical herbalism. If the plant has a Latin synonym this is provided. The first part of the Latin name designates the plant's genus (sub-family). The second part specifies the species name. In brackets after the Latin name(s) comes the plant's family name, the broader class to which the genus belongs. The plant's common name(s) are beneath the family name. If more than one common name is in popular use, they are listed in order of importance. Where appropriate, the origins of common names are given in brackets.

HABITAT & CULTIVATION
Gives information on where the plant is indigenous, its current distribution, how it is cultivated and harvested, and any preferred growing conditions.

RELATED SPECIES
Provides cross-references and information on related species that are used medicinally or are well-known.

KEY CONSTITUENTS & KEY ACTIONS
Lists the key active constituents and the key medicinal actions of the plant on the body in order of importance. *Note* For more information on plant constituents and their actions, see pp. 10–16.

RESEARCH
Provides details of scientific research conducted into the plant, its constituents and its extracts, including results of any clinical trials. If appropriate, includes herbal practitioners' observations of the plant's known actions and potential new medicinal uses for the herb.

TRADITIONAL & CURRENT USES
Reveals how the plant was used medicinally in the past and how it is used today in different herbal traditions. Examines differences between traditional and current uses, and shows how scientific research is sometimes confirming the validity of the traditional use and sometimes uncovering completely new applications for the herb. *Note* See *Glossary* p. 321 for unfamiliar terms.

PARTS USED
Illustrates the parts of the plant used medicinally.

KEY PREPARATIONS & THEIR USES
Features key preparations with details of how they are taken or applied. Gives cautions about using the herb as a medicine and about the plant in general. States if the plant, its constituents or its extracts are legally restricted. *Note* A self-help use is provided for many preparations. Before attempting any self-help use it is essential to read the cautions and the information on pp. 290 & 298–299.

CAUTIONS
Gives cautions about using the herb medicinally and about the plant in general. States if the plant, its constituents or its extracts are legally restricted.

Considered safe as a medicine but potentially harmful if used inappropriately. Particular safety issues are listed. Where a plant is listed as 'Take on ly under professional supervision' it is not suitable for home use.

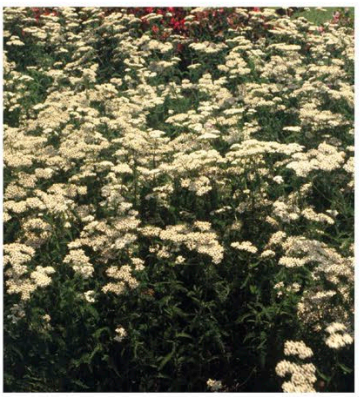
*Known to be toxic or unsafe as a medicine. Do **not** self-medicate with these plants. Some plants with this symbol may be safely prescribed by experienced healthcare practitioners within a very narrow dosage range. At a higher dose such plants will be poisonous.*

SELF-HELP USES
Cross-refers to self-help treatments in *Remedies for Common Ailments*. *Note* Always read the cautions in *Key Preparations & Their Uses* and the information on pp. 290 & 298–299 before using any herb.

Achillea millefolium (Asteraceae)

Yarrow, Milfoil

Yarrow is a native European plant, with a long history as a wound healer. In classical times, it was known as *herba militaris*, being used to staunch war wounds. It has long been taken as a strengthening bitter tonic and all kinds of bitter drinks have been made from it. Yarrow helps recovery from colds and flu and is beneficial for hay fever. It is also helpful for menstrual problems and circulatory disorders.



***Yarrow** was once known as "nosebleed" because its leaves were used to staunch blood.*

Habitat & Cultivation

Native to Europe and western Asia, yarrow can be found growing wild in temperate regions throughout the world, in meadows and along verges. The herb spreads via its roots, and the aerial parts are picked in summer when in flower.

Key Constituents

- Volatile oil with variable content (linalool, camphor, sabinene, azulene)
- Sesquiterpene lactones
- Flavonoids
- Alkaloids (achilleine)
- Triterpenes
- Phytosterols
- Tannins

Key Actions

- Antispasmodic
- Astringent
- Bitter tonic
- Increases sweating
- Lowers blood pressure
- Reduces fever
- Mild diuretic and urinary antiseptic
- Stops internal bleeding
- Promotes menstruation
- Anti-inflammatory

Research

Despite its many uses and similarity to German chamomile (*Chamomilla recutita*, p. 77), yarrow has been poorly researched. The herb and its volatile oil have been shown to be anti-inflammatory; the azulenes are also anti-allergenic. The sesquiterpene lactones are bitter and have anti-tumour activity. Achilleine and the flavonoids help arrest internal and external bleeding; the flavonoids may be responsible for yarrow's antispasmodic action. Laboratory studies indicate that yarrow dilates blood vessels, thereby lowering blood pressure. It works, in part, like conventional medicines known as ACE inhibitors, which are commonly prescribed for high blood pressure.

Traditional & Current Uses

- **Healing wounds** Achilles reputedly used yarrow to heal wounds – hence its botanical name. It has been used for this purpose for centuries, and in Scotland a traditional wound ointment was made from yarrow.
- **Gynaecological herb** Yarrow helps regulate the menstrual cycle, reduces heavy menstrual bleeding and eases period pain.
- **Other uses** Combined with other herbs, yarrow helps colds and flu. Its bitter tonic properties make it useful for weak digestion and colic. It also helps hay fever, lowers high blood pressure, improves venous circulation and tones varicose veins.

Yarrow
A creeping perennial, growing to 1 m (3 ft), with white flowerheads and finely divided leaves.

Parts Used

Aerial parts contain flavonoids, which are thought to give yarrow its antispasmodic properties.

Key Preparations & Their Uses

Cautions May cause allergic reaction in rare cases. Use the essential oil only under professional supervision. Do not take during pregnancy.

Remedy For colds, mix equal parts of yarrow, peppermint and elderflower. Infuse 1 tsp with 150 ml of water for 10 minutes (see p. 291). Take 3 times a day.

Tincture (to make, p. 292). For indigestion, take 20 drops 3 times a day.

Essential oil extracted from the flowers is used by herbalists to treat catarrh.

Poultice (to make, p. 295). Apply to grazes, cuts and bruises.

Self-help Uses

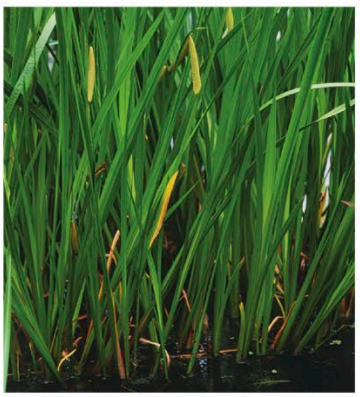
- **Cleansing wounds**, p. 304.
- **Colds & flu**, p. 311.
- **Digestive infections**, p. 305.
- **Fever**, p. 311.
- **Varicose veins**, p. 302.

Acorus calamus (Araceae)

Sweet Flag, Sweet Sedge, Calamus, Bacc (Hindi)

Sweet flag
A herbaceous, aquatic reed-like plant with tall, sword-shaped leaves. It grows to 1 m (3 ft).

Sweet flag has a long-standing reputation as a tonic and stimulant. An important herb in Ayurvedic medicine, it is also widely used in Europe and the US. The rhizome is a valuable remedy for the digestion, and is a tonic for the nervous system. It stimulates the appetite and soothes the digestion, relieving wind and calming indigestion and colic. Sweet flag has a strongly aromatic, bitter taste.



Sweet flag *is an aquatic plant, similar in appearance to the iris. It has yellow flowers in summer.*

Habitat & Cultivation

Sweet flag, believed to originate from India, now grows in many parts of the world. It prefers wet soil and is found in ditches, beside lakes and rivers, and in marshy places. Propagation is carried out in autumn or early spring by dividing the clumps of rhizomes and replanting them in shallow water. The rhizomes are harvested as needed.

Related Species

A. gramineus (*shi chang pu*) is a Chinese herb and a close relative that is used medicinally for much the same range of conditions as *A. calamus*.

Key Constituents

- Volatile oil – sesquiterpenes (*A. calamus* var. *americanus* only); asarone (except *A. calamus* var. *americanus*)
- Saponins
- Bitter principle (acorin)
- Mucilage

Key Actions

- Carminative
- Relieves muscle spasm
- Antioxidant
- Anti-inflammatory
- Tonic

Research

- **Beta-asarone** Research attention has focused on the constituent beta-asarone in the volatile oil, which has a carcinogenic action when isolated. The American variety of sweet flag (*A. calamus* var. *americanus*), commonly available in Europe, does not contain beta-asarone, and only preparations made from this should be used.
- **Whole herb** In India, sweet flag powder has been taken for thousands of years with no reports of cancer arising from its use. This suggests that use of the whole herb may be safe, but more research is needed.

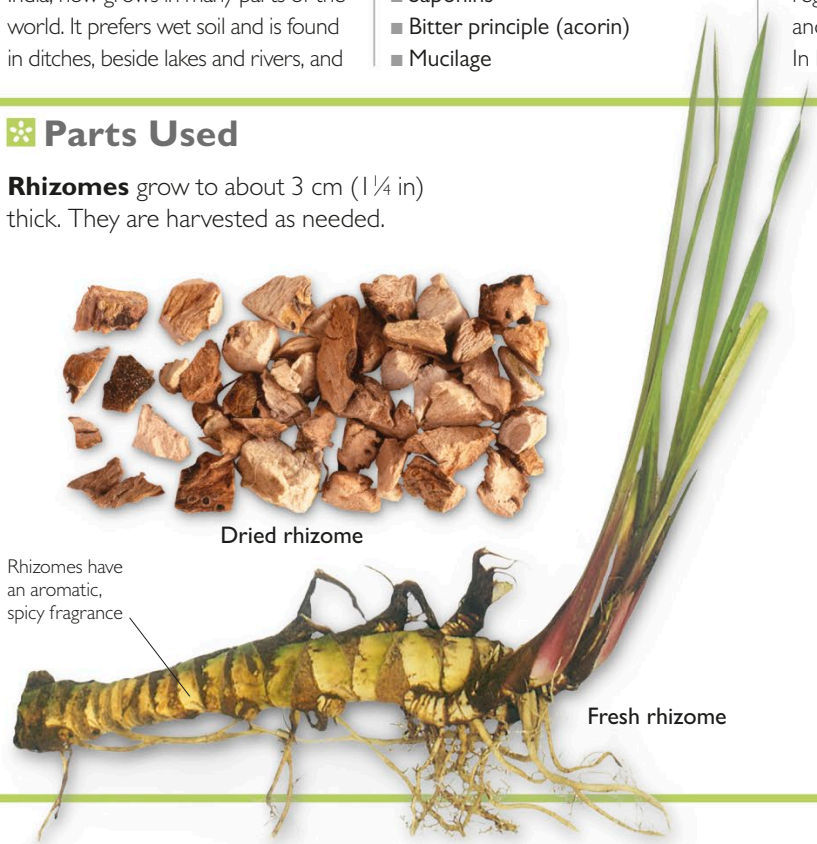
Traditional & Current Uses

- **Early uses** Sweet flag has been regarded as an aphrodisiac in India and Egypt for at least 2,500 years. In Europe, it was valued as a stimulant, bitter herb for the appetite (if not for the appetites) and as an aid to the digestion. In North America, the decoction was used for fevers, stomach cramps and colic; the rhizome was chewed for toothache and powdered rhizome was inhaled for catarrh.
- **Ayurvedic medicine** Sweet flag is an important herb in Ayurvedic medicine, and is valued as a "rejuvenator" for the brain and nervous system, and as a remedy for digestive disorders.
- **Western herbalism** In Western herbal medicine, the herb is chiefly used for digestive problems such as bloating, wind, colic and poor digestive function. Sweet flag, particularly *A. calamus* var. *americanus*, which is the most effective antispasmodic, relieves spasm of the intestines. It helps uncomfortable and distended stomachs, and headaches associated with weak digestion. Small amounts are thought to reduce stomach acidity, while larger doses increase deficient acid production – a good example of how different doses of the same herb can produce different results.

Parts Used

Rhizomes grow to about 3 cm (1¼ in) thick. They are harvested as needed.

Dried rhizome



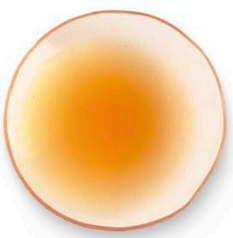
Rhizomes have an aromatic, spicy fragrance

Fresh rhizome

Key Preparations & Their Uses

Cautions Take only under professional supervision. Do not take for more than 1 month. Restricted in some countries.

Decoction is given to relieve indigestion and wind and to increase the appetite.



Tincture is prescribed by herbalists and doctors for digestive ailments.

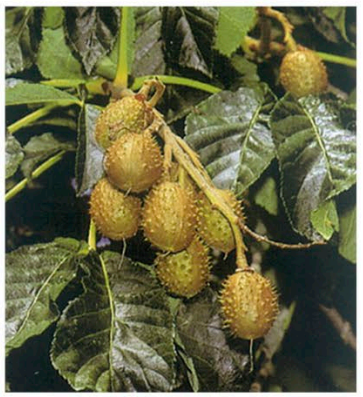
Powder is taken as a tonic in Ayurvedic medicine.

Aesculus hippocastanum (Sapindaceae)

Horse Chestnut

Horse chestnut
A deciduous tree with divided leaves, white and pink flowers, and spiny green fruit. It grows to 25 m (80 ft).

Extracts of horsechestnut seed – the familiar shiny brown conkers collected by children in autumn – have a scientifically established ability to relieve the symptoms of varicose veins, and promote their repair. Taken by mouth, or applied as a lotion, horse chestnut will help to tighten up the tissues and reduce the pain and swelling of varicose veins. It is also useful in helping to reduce fluid retention.



***Horse chestnut** seeds are the main herbal medicine for venous disorders.*

Habitat & Cultivation

Native to mountain woods from the Balkans through western Asia to the Himalayas, horse chestnut is now cultivated as an ornamental and shade tree in temperate regions around the world, especially in northern and western Europe. It is propagated from seed in autumn or spring. Leaves are harvested in summer, the bark and seeds in autumn.

Related Species

Several other *Aesculus* species have similar medicinal activity.

Key Constituents

- Triterpenoid saponins, including about 5% aescin, a complex mixture of glycosides
- Polysaccharides (about 50%)
- Coumarins, including aesculin
- Flavonoids
- Tannins, including proanthocyanidins
- Fixed oil (2–3%)

Key Actions

- Venous tonic
- Astringent
- Anti-inflammatory
- Antioxidant
- Reduces fluid retention

Research

■ **Clinical trials** Numerous trials have confirmed horse chestnut's value as a medicine in venous problems such as varicose veins, venous ulcers, haemorrhoids and frostbite. In one London-based study, published in 1996, horsechestnut extract was shown to be as effective in treating varicose veins as compression stockings. In Germany, horsechestnut extracts and aescin are now routinely used to treat varicose veins.

■ **Poor absorption** A 2006 review of clinical trials by the Cochrane Database assessed the use of horse chestnut extract for chronic venous insufficiency – a condition that includes leg swelling, and thread and varicose veins. The review concluded that horse chestnut extract was a safe and effective short-term treatment for this problem.

Traditional & Current Uses

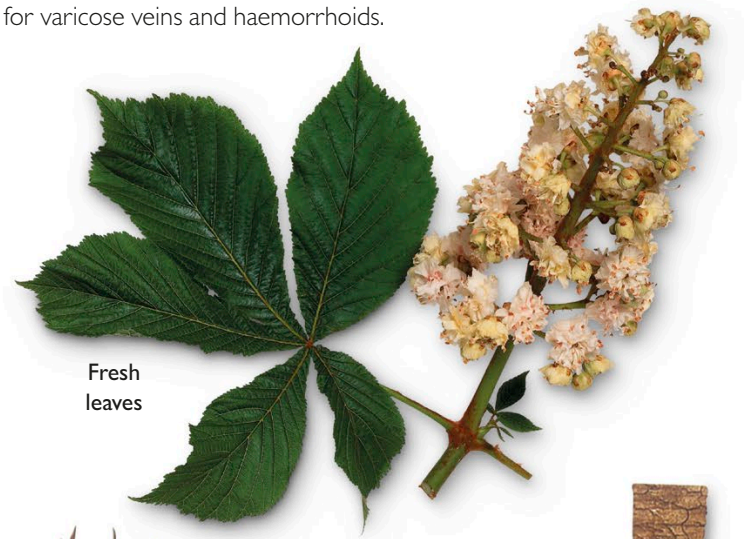
■ **Circulatory system** Although horse chestnut has a beneficial effect on the heart and arteries, it is primarily a remedy for the veins. It helps improve the tone of the vein walls, which when slack or distended result in varicose veins, piles, and similar problems. It also reduces oedema (fluid retention) caused by fluid leaking from distended veins, and increases the permeability of the capillaries, allowing excess fluid to drain back into the circulatory system. Horse chestnut is taken internally for leg ulcers, varicose veins, piles and frostbite, and applied locally as a lotion, gel or ointment. A decoction of the bark or leaf can be used as an astringent lotion for varicose veins.

■ **Rheumatism** In France, an oil extracted from the seeds has been used as a topical application for rheumatism.

■ **Chest remedy** Horse chestnut makes a serviceable chest remedy and in Turkey has been used to treat chest complaints in horses. In the US a decoction of the leaves has been considered useful for whooping cough.

Parts Used

Leaves can be used to make a lotion for varicose veins and haemorrhoids.



Fresh leaves

Seeds are an excellent remedy for varicose veins and associated fluid retention.

Fresh seeds

Bark is much more astringent than the seeds.

Key Preparations & Their Uses

Cautions Best taken with professional advice. Horse chestnut can cause gastro-intestinal upset at normal dosage (discontinue if symptoms develop) and is toxic at excess dosage. Not suitable for children. Do not apply to broken or ulcerated skin. May interact with blood-thinning drugs.

Tablets may have a higher aescin content than other preparations.

Lotion (to make, p. 296). Apply twice daily to varicose veins.

Capsules are convenient for long-term use.

Allium sativum (Liliaceae)

Garlic

Known for its pungent odour and taste, garlic is an ideal herbal medicine, being completely safe for home use and a powerful treatment for a host of health problems. It counters many infections, including those of the nose, throat and chest. It also reduces cholesterol, helps circulatory disorders, such as high blood pressure, and lowers blood sugar levels, making it a useful dietary addition in late-onset diabetes.

Garlic is widely cultivated commercially for use in cooking.

Habitat & Cultivation

Originally from central Asia, garlic is now grown worldwide. It is grown by dividing the bulb and is harvested late the following summer.

Related Species

Onion and ramsons (*A. cepa* and *A. ursinum*, p. 164) are both important medicinal herbs.

Key Constituents

- Volatile oil (alliin, alliinase, allicin)
- Scordinins
- Selenium
- Vitamins A, B, C and E

Key Actions

- Antibiotic
- Expectorant
- Increases sweating
- Lowers blood pressure
- Reduces blood clotting
- Anti-diabetic
- Expels worms

Research

- **Invaluable remedy** Well over 1,000 research papers have been published on the medicinal effects of garlic. They show that it helps to lower raised blood fat levels, including cholesterol, to keep the blood thin and protect against blood clots, to lower raised blood pressure, to lower raised blood sugar levels and to have antibiotic activity.
- **Unknown action** While it is understood that when the fresh clove is crushed, alliin is broken down by alliinase into allicin (which has strong antiseptic activity), authorities still disagree on precisely how garlic achieves its medicinal effects. Nevertheless, research indicates that it is best to crush garlic cloves, and then to wait 10 minutes before using it in food or as medicine. This allows sufficient time for allicin to form.

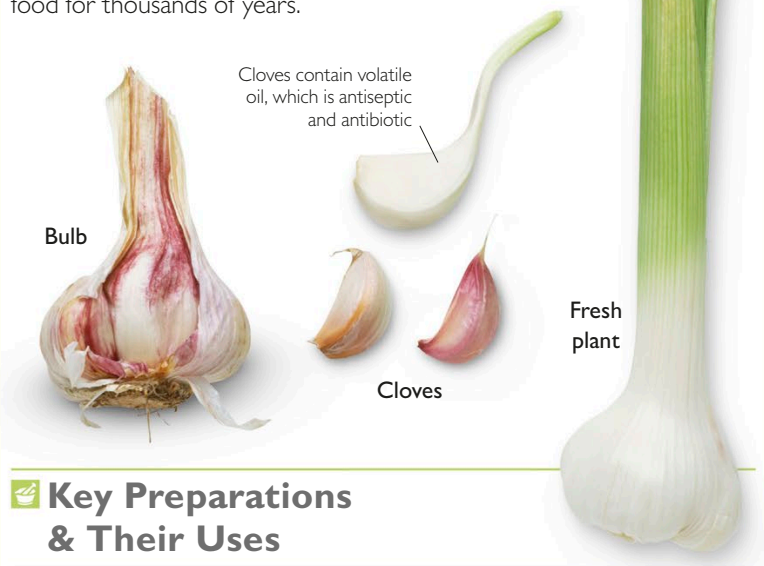
Traditional & Current Uses

- **Traditional remedy** Garlic has always been esteemed for its healing powers, and before the development of antibiotics it was a treatment for all manner of infections, from tuberculosis to typhoid. It was also used to dress wounds in the First World War.
- **Bronchial infections** Garlic is an excellent remedy for all types of chest infections. It is good for colds, flu and ear infections, and it helps to reduce catarrh.
- **Digestive tract** Digestive infections respond well to garlic. The herb can also rid the body of intestinal parasites.
- **Circulatory remedy** Garlic prevents circulatory problems and strokes by keeping the blood thin. It lowers cholesterol levels and blood pressure.
- **Other uses** Garlic has been used to treat diverse health problems, from hay fever and asthma to an enlarged prostate and osteoarthritis. It is useful when taken alongside conventional antibiotics to help prevent side-effects such as diarrhoea. Strongly antifungal, garlic can be an effective treatment in fungal skin conditions, taken internally and applied to the skin. It has anti-cancer activity and helps to protect against stomach and colon cancer.

Garlic
A bulbous perennial growing to 30 cm–1 m (1–3 ft), with pale pink or green-white flowers.

Parts Used

Garlic whole, chopped or crushed, has been used as a medicine and as a tonic food for thousands of years.



Key Preparations & Their Uses

Caution Consult a professional practitioner before giving garlic as a medicine to children under 12. Take on professional advice if taking blood-thinning medication.

Pearls contain garlic oil. Take to increase resistance to infections.

Garlic syrup (to make, p. 293). For coughs, take 1 tsp every 3 hours.

Chopped cloves Use regularly in cooking to help reduce cholesterol levels and boost the immune system.

Capsules (to make, p. 292). For bronchitis, take 2 × 100 mg capsules 3 times a day.

Tablets Take for high blood pressure and bronchitis.

Self-help Uses

- **Acne & boils**, p. 305.
- **Athlete's foot**, p. 304.
- **Colds & flu**, p. 311.
- **Cold sores**, p. 304.
- **Coughs & bronchitis**, p. 310.
- **Digestive infections**, p. 305.
- **Earache**, p. 312.
- **Fungal infections**, p. 314.
- **High blood pressure**, p. 301.
- **Old age tonic**, p. 319.
- **Tonsillitis**, p. 311.
- **Urinary infections**, p. 314.

Aloe vera syn. *A. barbadensis* (Xanthorrhoeaceae)

Aloe Vera, Aloes

Aloe vera
A perennial with succulent leaves 60 cm (2 ft) long and a spike of yellow or orange flowers.

Native to Africa, aloe vera is commonly cultivated as a pot plant and has two distinct types of medicinal use. The clear gel contained in the leaf is a remarkably effective healer of wounds and burns, speeding up the rate of healing and reducing the risk of infection. The yellow sap from the base of the leaf when dried is known as "bitter aloes". It is a strong laxative, useful for short-term constipation.

Aloe vera *has prickly, grey-green, succulent leaves that yield effective medicinal substances.*

Habitat & Cultivation

Native to eastern and southern Africa, aloe vera grows wild in the tropics and is cultivated extensively worldwide. (Aloe vera plants grown as pot plants have a low anthraquinone content.) Aloe vera is propagated by breaking off small rooted plantlets. To collect the gel and bitter liquid, the leaves are cut and drained as required.

Related Species

Cape aloes (*A. ferox*) is used in herbal medicine as an irritant laxative. Many other *Aloe* species are also useful medicinally.

Key Constituents

- Anthraquinones (aloin, aloe-emodin)
- Resins
- Tannins
- Polysaccharides
- Aloectin B

Key Actions

- Heals wounds
- Emollient
- Stimulates secretions of bile
- Laxative

Research

- **Healing properties** Extensive research since the 1930s in the US and Russia has shown that the clear gel has a dramatic ability to heal wounds, ulcers and burns, putting a protective coat on the affected area and speeding up the rate of healing. This action is in part due to the presence of aloectin B, which stimulates the immune system.

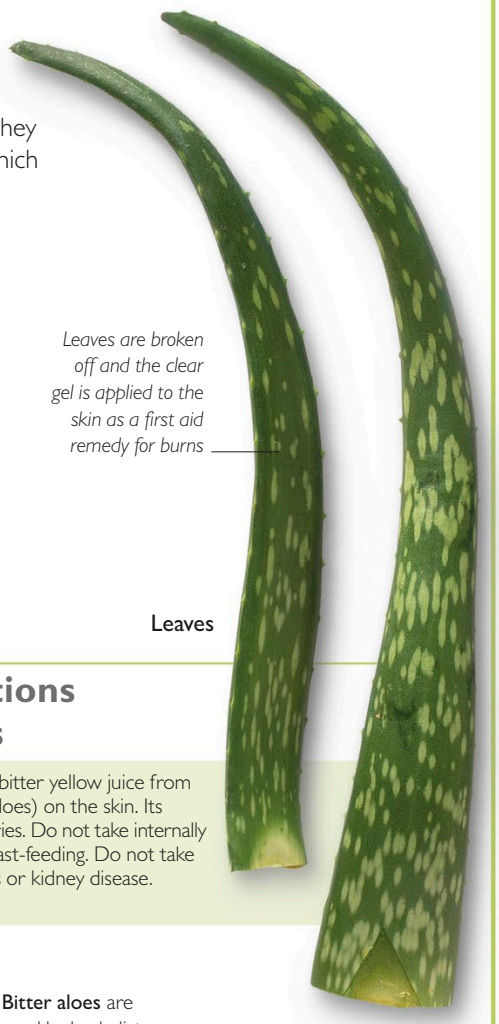
Traditional & Current Uses

- **Beauty treatment** Aloe vera has a long history as a skin lotion – Cleopatra is said to have attributed her beauty to it.
- **Western remedy** In the West, aloe vera first became popular in the 1950s when its ability to heal burns, in particular radiation burns, was discovered.
- **First aid** Aloe vera is an excellent first aid remedy for burns, grazes, scalds and sunburn. A leaf, broken off, releases soothing gel, which may be applied to the affected part.
- **Skin conditions** The gel is useful for almost any skin condition that needs soothing and astringing, and will help varicose veins to some degree.
- **Ulcers** The protective and healing effect of aloe vera also works internally, and the gel can be used for peptic ulcers and irritable bowel syndrome.
- **Laxative** The bitter yellow liquid in the leaves (bitter aloes) contains anthraquinones, which are strongly laxative. They cause the colon to contract, generally producing a bowel movement 8–12 hours after consumption. At low doses, the bitter properties of the herb stimulate the digestion. At higher doses, bitter aloes are laxative and purgative.

Parts Used

Leaves exude a bitter liquid, which is dried and known as "bitter aloes". They also contain a clear gel, which is a soothing skin remedy.

Chopped leaves



Leaves are broken off and the clear gel is applied to the skin as a first aid remedy for burns

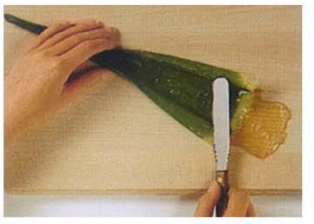
Leaves

Key Preparations & Their Uses

Cautions Do not use the bitter yellow juice from the base of the leaves (bitter aloes) on the skin. Its use is restricted in some countries. Do not take internally during pregnancy or while breast-feeding. Do not take if suffering from haemorrhoids or kidney disease.

Bitter aloes are used by herbalists to treat constipation.

Juice is made commercially from the gel. For peptic ulcers, take 50 ml 3 times a day.



Leaves Break off a leaf and split open to collect the gel. For burns and eczema, apply liberally twice a day.

Tincture made from bitter aloes (see p. 292). To stimulate the appetite, take 3 drops with water before meals.

Self-help Uses

- **Minor burns & sunburn**, p. 303.
- **Stretch marks**, p. 317.
- **Warts**, p. 304.
- **Weeping skin**, p. 303.
- **Wounds**, p. 304.

Alpinia officinarum (Zingiberaceae)

Galangal (Hindi), Gao Liang Jiang (Chinese)

Galangal
A perennial aromatic plant growing to 2 m (6½ ft), with white, red-lipped flowers and lance-shaped leaves.

Like other members of the ginger family, galangal is warming and comforting to the digestion. It has a pleasantly aromatic and mildly spicy taste, and is suitable for all conditions where the central areas of the body need greater warmth. It was introduced into Europe in about the 9th century. The German mystic Hildegard of Bingen regarded it literally as the "spice of life", given by God to ward off ill-health.

Parts Used

Key Preparations & Their Uses

Chopping root for a decoction (to make, p. 291). For travel sickness, slowly sip up to 150 ml.

Tincture (to make, p. 292) is suitable for long-term use. To improve the digestion, take 20 drops diluted with 100 ml hot water 3 times a day.

Powder For nausea, take a 250 mg capsule (to make, p. 292) twice a day.

Galangal *is an important spice in Thai cooking and is reportedly fed to Arabian horses to "fire them up" in parts of Asia.*

Habitat & Cultivation

Native to grassland areas of southern China, and South-East Asia in general, galangal is now cultivated as a spice and as a medicine throughout much of tropical Asia. It is propagated by dividing and replanting the rhizomes in spring, and it requires well-drained soil and a shady position. The rhizomes are harvested from 4- to 6-year-old plants at the end of the growing season and may be used fresh or dried.

Related Species

Greater galangal, also known as Siamese ginger (*A. galanga*), though a close relative of galangal, has a much inferior taste and volatile oil content. It appears to have an anti-ulcer action. Two other *Alpinia* species, *cao dou cou* (*A. katsumadai*) and *yi zhi ren* (*A. oxyphylla*), are used in a broadly similar way to galangal in traditional Chinese medicine.

Key Constituents

- Volatile oil (about 1%) containing alpha-pinene, cineole, linalool
- Sesquiterpene lactones (galangol, galangin)
- Diterpenes
- Flavonoids

Key Actions

- Warming digestive tonic
- Carminative
- Anti-inflammatory
- Anti-emetic
- Antibacterial
- Antifungal
- Anti-tumour

Research

- **Antibacterial** Research indicates that galangal has antibacterial activity, notably against *Staphylococcus aureus*, responsible for many ear, nose and throat infections.
- **Antifungal** Galangal has shown pronounced activity against fungi in laboratory research, especially against *Candida albicans*.
- **Osteoarthritis** A 2001 clinical trial found that a concentrated extract of ginger (*Zingiber officinalis*, p. 155) and galangal was effective in relieving osteoarthritis symptoms in the knee.

Traditional & Current Uses

- **Chinese medicine** In traditional Chinese herbal medicine, galangal is a warming herb used for abdominal pain, vomiting and hiccups, as well as for diarrhoea due to internal cold. When used for hiccups, it is combined with codonopsis (*Codonopsis pilosula*, p. 83) and *fu ling* (*Poria cocos*).
- **Indian tradition** In India and south-western Asia, galangal is considered stomachic, anti-inflammatory, expectorant and a nervine tonic. It is used in the treatment of hiccups, dyspepsia, stomach pain, rheumatoid arthritis and intermittent fever.
- **Western herbalism** Galangal was introduced into Europe by Arabian physicians over 1,000 years ago. It is mainly used in the West for wind, indigestion, vomiting and stomach pain. An infusion can be used to alleviate mouth ulcers and sore gums. Galangal has long been recommended as a treatment for seasickness, which is not surprising given the well-established ability of its relative, ginger (*Zingiber officinale*, p. 155) to relieve travel sickness.
- **Candidiasis** Galangal can be used with other antifungal herbs as part of a regime to treat intestinal candidiasis.
- **Dosage** At a moderate dosage, galangal is a warming and gently stimulating herb for a weakened digestive system, but at a higher dosage it can be an irritant.

Self-help Use

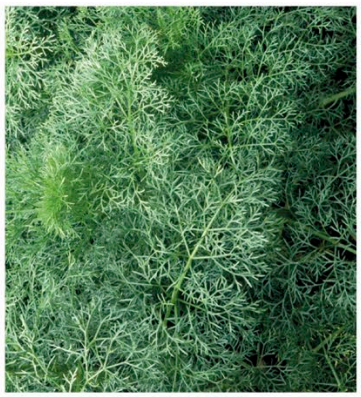
- **Nausea & travel sickness**, p. 306.

Ammi visnaga syn. *Daucus visnaga* (Apiaceae)

Visnaga, Khella

Visnaga
An erect annual growing to 1 m (3 ft), with leaves divided into wisps and clusters of small white flowers.

Visnaga, with its aromatic, bitter scent and flavour, has greater medicinal than culinary value. It is an effective muscle relaxant and has been used for many centuries to alleviate the excruciating pain of kidney stones. Scientific research has confirmed the validity of this traditional use. Visnaga contains khellin, from which particularly safe pharmaceutical drugs for the treatment of asthma have been derived.



Visnaga is a member of the carrot family and has the characteristic delicate, wispy leaves.

Habitat & Cultivation

Native to North Africa, visnaga grows wild in the Middle East and around the Mediterranean. It is naturalized in Australia and South America. Grown from seed, visnaga is widely cultivated. The tiny fruits containing the seeds are picked in late summer before they have fully ripened.

Related Species

Bishop's weed (*A. majus*, p. 166) is a close relative. This plant has been used to treat asthma but is mainly taken as a diuretic and to treat psoriasis.

Key Constituents

- Furochromones including khellin (1%) and visnagin
- Coumarins
- Flavonoids
- Volatile oil
- Phytosterols

Key Actions

- Antispasmodic
- Anti-asthmatic
- Relaxant

Research

- **Strong antispasmodic** Research by a pharmacologist working in Egypt in 1946 revealed that visnaga (in particular its constituents khellin and visnagin) has a powerful antispasmodic action on the smaller bronchial muscles, the coronary arteries that supply blood to the heart, and on the urinary tubules. Visnaga's ability to relax the small bronchi lasts for up to 6 hours, and the plant has practically no side-effects.
- **Khellin** Intal, an asthma drug widely used in conventional medicine, is derived chemically from khellin.

Traditional & Current Uses

- **Kidney stones** Visnaga is a traditional Egyptian remedy for kidney stones. It was mentioned in the Ebers papyrus of Egypt (*c.* 1500 BCE) and is still used there to relieve kidney stones. By relaxing the muscles of the ureter, visnaga reduces the pain caused by the trapped stone and helps ease the stone down into the bladder.
- **Asthma remedy** Following research into its antispasmodic properties, visnaga is now given for asthma, and is safe even for children to take. Although it does not always relieve acute asthma attacks, it does help to prevent their recurrence.
- **Other respiratory conditions** Visnaga is an effective remedy for various respiratory problems, including bronchitis, emphysema and whooping cough.
- **Circulatory herb** By relaxing the coronary arteries, visnaga helps to improve blood supply to the heart muscle and thereby eases angina. Visnaga does not, however, reduce blood pressure.
- **Dental hygiene** In Andalusia in Spain, the largest and best-quality visnaga seeds were employed to clean the teeth. The high value given to the herb in general was reflected in the saying: "Oro, plata, visnaga o nada!" (Gold, silver, visnaga or nothing!).

Parts Used

Seeds from the fruit of the fresh plant are collected in late summer and dried for use in infusions and powders.

Key Preparations & Their Uses

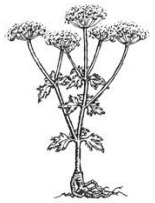
Cautions Take only under professional supervision. Long-term use produces symptoms such as nausea, headaches and insomnia. Subject to legal restrictions in some countries.

Infusion alleviates asthma, bronchitis and kidney stones.

Powder is prescribed by doctors and medical herbalists to relieve angina.

Angelica sinensis syn. *A. polymorpha* (Apiaceae)

Chinese Angelica, Dang Gui (Chinese)



Chinese angelica
A stout, erect perennial growing to 2 m (6½ ft), with large bright green leaves and hollow stems.

In China, Chinese angelica is the main tonic herb for conditions suffered by women. It is taken on a daily basis by millions of women as an invigorating tonic, helping to regulate menstruation and tonify the blood. It also improves the circulation. Chinese angelica has a sweet, pungent aroma that is very distinctive, and in China it is often used in cooking, which is the best way to take it as a blood tonic.

Chinese angelica has attractive clusters of white flowers in summer.

Habitat & Cultivation

Chinese angelica is native to China and Japan, where it is now cultivated. The best rhizomes are in Gansu province in China. Seed is sown in spring and the rhizomes are lifted in autumn.

Related Species

American angelica (*A. atropurpurea*) has similar properties, though it is less aromatic. European angelica (*A. archangelica*, p. 168) is a warming tonic herb for the digestion and circulation, but does not have the same tonic action as Chinese angelica.

Key Constituents

- Volatile oil (ligustilide, sesquiterpenes, carvacrol)
- Coumarins
- Phytosterols
- Polyacetylenes
- Ferulic acid

Key Actions

- Tonic
- Anti-inflammatory
- Antispasmodic
- Thins blood
- Promotes menstrual flow

Research

- **Gynaecology** Research in China from the 1970s has shown that the herb helps to regulate uterine contractions, which may explain its benefit for period pain.
- **Circulation** The root can help to normalize heart function and has been shown to thin the blood. It may therefore interact with anticoagulant medicines.

Traditional & Current Uses

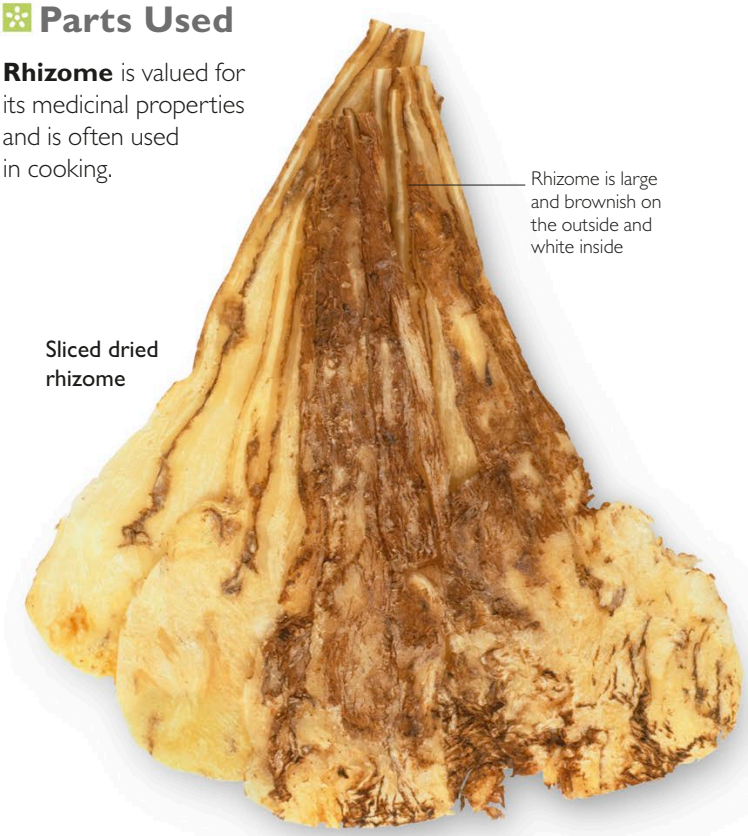
- **Blood tonic** Famous in China as a tonic, Chinese angelica is taken for "deficient blood" conditions, anaemia and for the symptoms of anaemia due to blood loss – a pale complexion, palpitations and lowered vitality.
- **Women's health** Chinese angelica regulates the menstrual cycle, relieves period pain and cramps, and is an ideal tonic for women with heavy menstruation who risk becoming anaemic. However, as it stimulates menstrual bleeding, other tonic herbs such as nettle (*Urtica dioica*, p. 146) are best taken during menstruation if the flow is heavy. It is also a uterine tonic, and helps infertility.
- **Circulation** Chinese angelica is a "warming" herb, improving the circulation to the abdomen and to the hands and feet. It strengthens the digestion and is also useful in the treatment of abscesses and boils.

Self-help Uses

- **Aiding conception**, p. 316.
- **Menstrual problems**, p. 315.

Parts Used

Rhizome is valued for its medicinal properties and is often used in cooking.



Rhizome is large and brownish on the outside and white inside

Sliced dried rhizome

Key Preparations & Their Uses

Cautions Do not take during pregnancy or while breast-feeding. Should not be used for heavy menstrual bleeding, bleeding disorders and diarrhoea. May interact with prescribed blood-thinning medication.

Tonic wine Make with Chinese angelica and other tonic or bitter herbs (see p. 293). To improve vitality, drink 150 ml once a day.

Chopped rhizome is commonly added to soups in China.

Tincture (to make, p. 292). For period pain, take ½ tsp with water up to 4 times a day.

Infusion For poor circulation, infuse 1 tsp with 150 ml water (see p. 291). Drink 150–300 ml a day.

Decoction (to make, p. 291). For anaemia, take 150 ml 2–3 times a day.

Tablets Take as a general woman's tonic.

Apium graveolens (Apiaceae)

Celery, Smallage

More familiar as a vegetable than as a medicine, celery stems and seeds have long been taken for urinary, rheumatic and arthritic problems. Celery is a good cleansing, diuretic herb, and the seeds are used specifically for arthritic complaints where there is an accumulation of waste products. The seeds also have a reputation as a carminative with a mild tranquillizing effect. The stems are less significant medicinally.

Celery
A biennial with a ridged shiny stem, glossy leaves and small flowers, growing to about 50 cm (20 in).

Parts Used

Stems are eaten as a nourishing vegetable and made into juice.

Chopped stem

Divided toothed leaves are aromatic

Seeds contain volatile oil and are the main part used medicinally.

Seeds

Stem

Key Preparations & Their Uses

Cautions Do not take celery seed during pregnancy or if suffering from kidney disease. Do not use seeds sold for cultivation in medicinal preparations. Do not take the essential oil internally except under professional supervision.

Remedy As a cleansing drink, take 150 ml of organic carrot and celery juice a day.

Infusion of seeds (to make, p. 291). For gout and arthritis, take 150 ml daily.

Tincture of seeds (to make, p. 292). For rheumatism, take 30 drops 3 times a day.

Powder of seeds. For arthritis, mix 1 tsp with food each day.

Celery is an important medicinal herb as well as a vegetable.

Habitat & Cultivation

Native to Britain and other European countries, celery is found growing wild along the English and Welsh coasts, and in marshlands. Widely grown as a vegetable, cultivated celery is less fragrant than the wild variety. It is propagated from seed in spring and harvested from midsummer to autumn.

Related Species

Celeriac (*A. graveolens* var. *rapaceum*) is a "turnip-rooted" variety of celery. A medicinal food, it has some of the same qualities as celery.

Key Constituents

- Volatile oil (1.5–3%) containing limonene (60–70%), phthalides and beta-selinene
- Coumarins
- Furanocoumarins (bergapten)
- Flavonoids (apiin)

Key Actions

- Antirheumatic
- Carminative
- Antispasmodic
- Diuretic
- Lowers blood pressure
- Urinary antiseptic
- Anti-inflammatory

Research

- **Volatile oil** Research in the 1970s and 1980s showed that the volatile oil has a calming effect on the central nervous system.
- **Other research** A 1995 study in India found the seeds to have marked liver protective activity. Extracts of the seeds may also lower blood fat levels. Iranian laboratory research from 2013 found that celery seed had a marked effect in lowering high blood pressure.

Traditional & Current Uses

- **Ancient herb** Records show that celery has been cultivated for at least 3,000 years, notably in pharaonic Egypt, and it was known in China in the 5th century BCE. Throughout history, celery has been used as a food, and at various times both the whole plant and the seeds have been taken medicinally.
- **Cleansing properties** Today, the seeds are used for treating rheumatic conditions and gout. They help the kidneys dispose of urates and other waste products, and work to reduce acidity in the body as a whole. The seeds are useful in arthritis, helping to detoxify the body and improve the circulation of blood to the muscles and joints.
- **Diuretic** Celery seeds have a mildly diuretic and significantly antiseptic action. They are an effective treatment for cystitis, helping to disinfect the bladder and urinary tubules.
- **Nutritious drink** Celery and organic carrot juice make a nutritious, cleansing drink that is good for many chronic illnesses.
- **Other uses** Celery seeds are beneficial for chest problems such as asthma and bronchitis, and, in combination with other herbs, can help to reduce blood pressure.

Self-help Uses

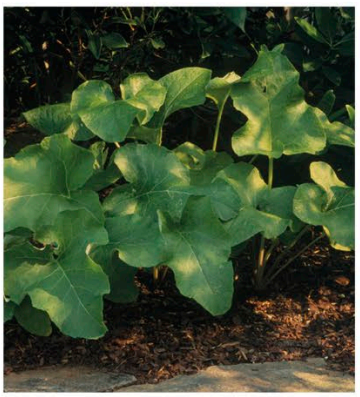
- **Arthritis**, p. 313.
- **Gout**, p. 313.

Arctium lappa (Asteraceae)

Burdock, Niu Bang Zi (Chinese)

Burdock
A biennial, with stems that grow to 1.5 m (5 ft), reddish-purple flowerheads and hooked bracts.

Burdock is one of the foremost detoxifying herbs in both Western and Chinese herbal medicine. It is used to treat conditions caused by an "overload" of toxins, such as throat and other infections, boils and rashes, and chronic skin problems. The root and the seeds help to cleanse the body of waste products, and the root is thought to be particularly good at helping to eliminate heavy metals.



Burdock in its first year produces a rosette of large leaves.

Habitat & Cultivation

Native to Europe and Asia, burdock now grows in temperate regions throughout the world, including the US. Burdock is also cultivated in Europe and China and is propagated from seed in spring. The seeds are harvested in summer and the whole plant is unearthed in high summer.

Related Species

A. minus and *A. tomentosum* are related species that are used in a similar way to burdock.

Key Constituents

- Bitter glycosides (arctiopicrin)
- Flavonoids (arctiin)
- Tannins
- Polyacetylenes
- Volatile oil
- Inulin (up to 45%)
- Lignans

Key Actions

- Detoxifying
- Mild diuretic
- Antibiotic
- Antiseptic
- Anti-inflammatory

Research

- **Antibiotic** Studies in Germany (1967) and Japan (1986) showed that the polyacetylenes, especially within the fresh root, have an antibiotic effect.
- **Other research** Burdock has antibacterial and antifungal properties, and diuretic and hypoglycaemic (lowering blood sugar levels) effects. It also seems to have an anti-tumour action. Recent studies suggest the seeds are anti-inflammatory, antioxidant and hepatoprotective.

Traditional & Current Uses

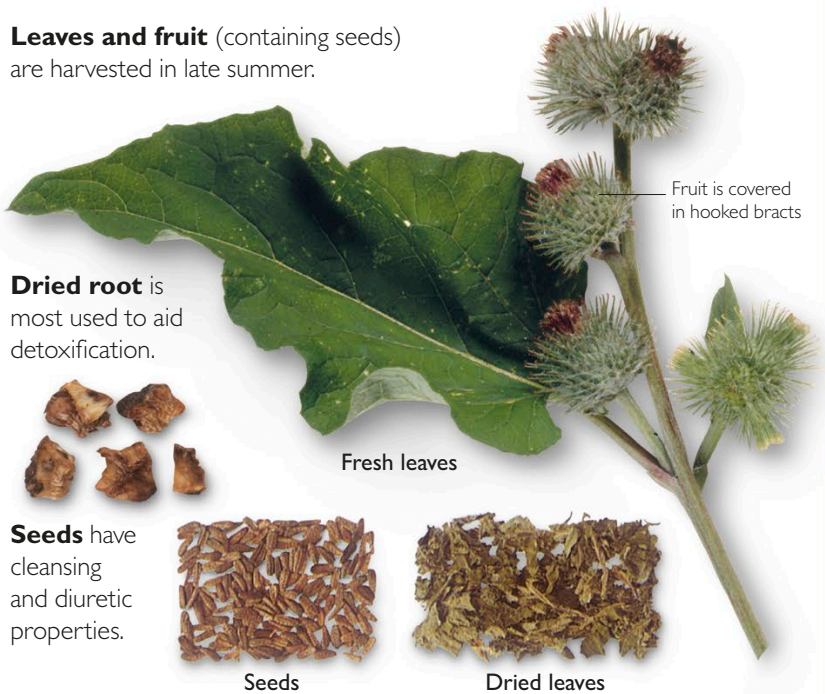
- **History** Burdock was a traditional remedy for gout, fevers and kidney stones. In the 17th century, Culpeper wrote "The seed is much commended to break the stone and cause it to be expelled by urine."
- **Cleansing herb** Burdock is used in both Western and Chinese herbal medicine as a detoxifying herb. The seeds are used to remove toxins in fevers and infections such as mumps and measles, and the root helps the body to eliminate waste products in chronic skin and arthritic conditions.
- **Skin problems** Burdock's diuretic, antibiotic and mildly bitter actions make it helpful for skin disorders, especially where toxicity is a key factor, such as in acne, abscesses, local skin infections, eczema and psoriasis.
- **Combination remedies** Burdock is rarely used on its own in remedies. It is generally mixed with herbs such as dandelion (*Taraxacum officinale*, p. 141) or yellow dock (*Rumex crispus*, p. 264). These help the body to remove accumulated waste products drawn out of tissues by burdock's detoxifying action. Use of burdock alone can cause a flare up of skin conditions such as eczema.

Self-help Uses

- **Acne & boils**, p. 305.
- **Skin rashes**, p. 303.

Parts Used

Leaves and fruit (containing seeds) are harvested in late summer.



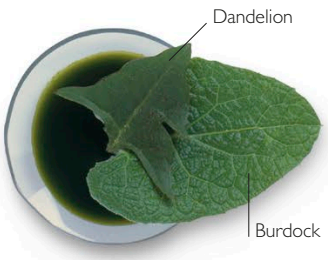
Dried root is most used to aid detoxification.

Seeds have cleansing and diuretic properties.

Key Preparations & Their Uses

Cautions Very rarely can cause contact dermatitis.

Remedy For spots, make a decoction (see p. 291) with 2 tsp burdock root and 5 tsp dandelion root. Drink 150 ml twice a day.



Tincture of root (to make, p. 292). For arthritis and skin disorders, take 20 drops diluted with water 2–3 times a day for up to 4 weeks.

Decoction of root (to make, p. 291) is an alternative to tincture for arthritis and skin disorders. Drink 35 ml once a day for up to 4 weeks.

Infusion of seeds (to make, p. 291). Use as a wash for acne and boils.

Poultice of leaves (to make, p. 295). Apply to abscesses and boils.

Artemisia absinthium (Asteraceae)

Wormwood

One of the truly bitter plants – *absinthium* means "without sweetness" – wormwood has a strong tonic effect on the digestive system, especially on the stomach and gallbladder. It is taken in small doses and sipped, the intensely bitter taste playing an important part in its therapeutic effect. In the past, wormwood was one of the main flavourings of vermouth (whose name derives from the German for wormwood).

Wormwood
A perennial reaching 1 m (3 ft), with grey-green stems and feathery leaves, both covered in fine hairs.

Parts Used

Aerial parts contain bitter substances and have a wide range of medicinal uses.

Key Preparations & Their Uses

Cautions Take only under professional supervision. Take only in small doses, generally for no more than 4–5 weeks at a time. Do not take during pregnancy.

Infusion made from wormwood can be taken in small doses to stimulate appetite.

Tincture is used to treat chronic digestive infections.

Wormwood is strongly aromatic and was used to flavour many alcoholic drinks.

Habitat & Cultivation

Wormwood is a wayside plant, native to Europe. It now grows wild in central Asia and in eastern parts of the US. It is also cultivated in temperate regions worldwide. Wormwood is propagated from seed in spring or by dividing the roots in autumn. The aerial parts are harvested in late summer.

Related Species

Artemisia species with a medicinal use include: *A. abrotanum* (p. 172); *A. annua* (p. 67); *A. anomala*; *A. capillaris* and *A. cina* (p. 172); *A. vulgaris* and *A. dracunculus* (p. 173).

Key Constituents

- Volatile oil containing sesquiterpene lactones (artabsin, anabsinthin); thujone; azulenes
- Flavonoids
- Polyphenols
- Lignans

Key Actions

- Aromatic bitter
- Stimulates secretion of bile
- Anti-inflammatory
- Eases stomach pain
- Mild antidepressant
- Antimicrobial
- Antiparasitic

Research

- **Bitter herb** Research into wormwood, mostly during the 1970s, has established that a range of the constituents within the plant contributes to its medicinal activity. Many are very bitter, affecting the bitter taste receptors on the tongue which sets off a reflex action, stimulating stomach and other digestive secretions.
- **Gut inflammation** A German clinical trial in 2007 found that wormwood helped in treating Crohn's disease (an inflammatory bowel disorder). Wormwood prevented the return of symptoms in 90% of those taking it, and reduced required dosage of powerful steroid drugs taken to control inflammation. Patients also experienced lower levels of depression.
- **Other research** Constituents within wormwood, notably the essential oil, are thought to have wide-ranging therapeutic effects, including neuroprotective, antidepressant, antibacterial, antifungal and antimalarial activity.

Traditional & Current Uses

- **Absinthe** Wormwood is the source of *absinthe*, an addictive drink favoured in 19th-century France. Flavoured with wormwood essential oil, *absinthe* was toxic due to its high level of thujone. This is a nerve stimulant that is safe at low dosage but is toxic in excess.
- **Digestive stimulant** Wormwood is an extremely useful medicine for those with weak and underactive digestions. It increases stomach acid and bile production and therefore improves digestion and the absorption of nutrients, making it helpful for many conditions, including anaemia. Wormwood also eases wind and bloating and, if the tincture is taken regularly, it slowly strengthens the digestion and helps the body return to full vitality after a prolonged illness.
- **Worms** Wormwood is commonly used by herbalists and naturopaths to treat parasitic infections of the gut, such as worm infestation, amoebic dysentery and *Shigella* infection.
- **Traditional insect repellent** Wormwood is a good insecticide and insect repellent.
- **Other uses** The anti-inflammatory action of wormwood makes it useful for infections and it has occasionally been given as an antidepressant.

Self-help Uses

- **Anaemia**, p. 301.
- **High fever**, p. 311.

Artemisia annua (Asteraceae)

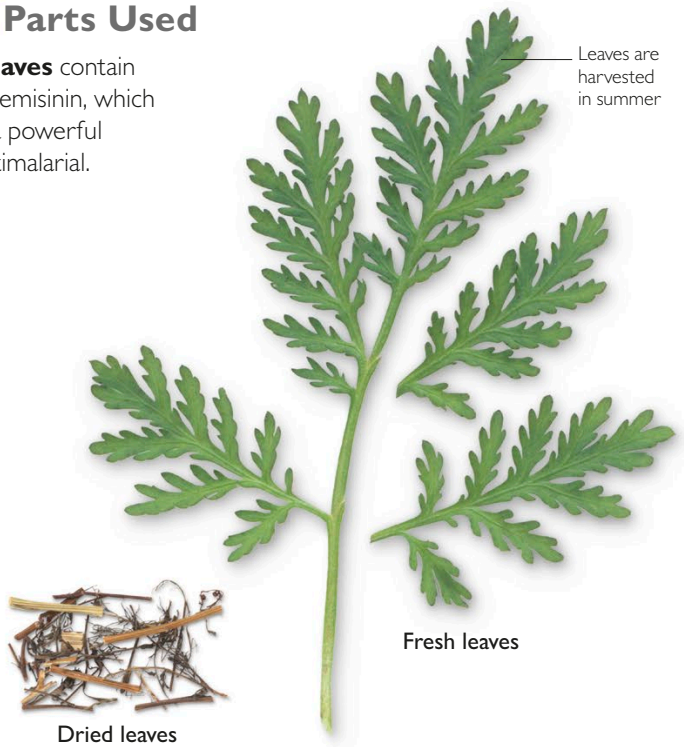
Sweet Wormwood, Qing Hao

Sweet wormwood
A perennial growing to about 1 m (3 ft), with green feathery leaves covered in fine hairs.

Until the 1970s, sweet wormwood was regarded as just another *Artemisia*, though one used in traditional Chinese medicine for treating malaria. After extensive research, sweet wormwood and its key constituent artemisinin were shown to have powerful antimalarial activity and few side effects. Artemisinin rapidly became the key treatment for severe malaria worldwide, and is still the treatment of choice in many acute cases of the illness.

Parts Used

Leaves contain artemisinin, which is a powerful antimalarial.



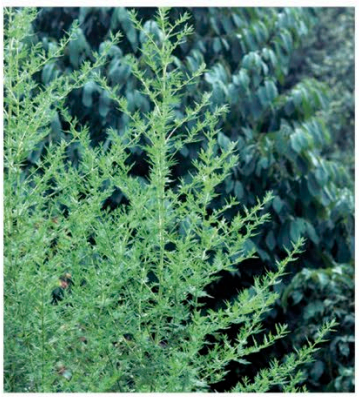
Key Preparations & Their Uses

Cautions Only take sweet wormwood under professional supervision. Do not take during pregnancy.

Tincture is prescribed to prevent malaria. It is also used to treat the illness itself.

Infusion is strongly bitter. Herbalists use it to treat headaches and fever.

Tablets containing artemisinin, which is extracted from the herb, are taken for malaria throughout the tropics.



***Sweet wormwood** has bright green, saw-toothed leaves. It is used widely around the world as an effective antimalarial.*

Habitat & Cultivation

Sweet wormwood grows in grasslands and on wasteground in Vietnam, Japan, China, Russia and North America. It is cultivated in eastern China. The herb is propagated from seed in spring or by dividing the rootstock in autumn. It is harvested in summer before flowering.

Related Species

The related *A. apiacea* is used interchangeably with sweet wormwood in China and is employed as a general tonic in Vietnam. Many other *Artemisia* species are used medicinally: *A. abrotanum* (p. 172); *A. absinthium* (p. 66); *A. capillaris* and *A. cina* (p. 172); *A. dracunculus* and *A. vulgaris* (p. 173).

Key Constituents

- Artemisinin (sesquiterpene lactone)
- Essential oil (abrotamine, beta-bourbonene)
- Flavonoids
- Polyphenols

Key Actions

- Bitter
- Reduces fever
- Antimalarial
- Antiparasitic
- Anti-cancer

Research

- **Chinese research** Sweet wormwood was extensively researched in China in the 1980s, and studies have demonstrated that its key active constituent is an effective antimalarial, having a powerful action against the malaria parasite *Plasmodium*, a protozoon introduced into the body by the mosquito.
- **Artemisinin** Clinical trials, notably in Thailand, show that it can provide vital treatment in the acute stages of malaria, proving up to 90% effective in countering the infection. Artemisinin has a lesser role to play in chronic malaria and prevention of the disease.
- **Anti-cancer potential** Laboratory studies suggest that sweet wormwood has marked anti-cancer activity, promoting programmed cell death and inhibiting blood vessel growth. No clinical trials have so far been undertaken, but sweet wormwood is claimed to be useful particularly in breast cancer and leukaemia. Synthetic molecules modelled on artemisinin are also being researched as potential anti-cancer drugs.

Traditional & Current Uses

- **History** The first mention of sweet wormwood was in a Chinese text of 168 BCE. Traditionally, it was seen as a herb that helped "to clear and relieve summer heat".
- **Cooling properties** Sweet wormwood has a cool, bitter taste and is used for conditions brought on by heat, especially with symptoms such as fever, headaches, dizziness and a tight-chested sensation. It is used to treat chronic fevers, night fevers and morning chills and is a traditional remedy for nosebleeds associated with heat.
- **Antimalarial** Sweet wormwood has been used to treat the fevers and chills of malaria for thousands of years and artemisinin is now used in many countries as an antimalarial. Artemisinin reduces the risk of developing malaria and aids a quick recovery, though drug-resistance to it is now being seen. The whole plant may also be used to treat malaria and act as a preventative, though large doses are required.

Astragalus membranaceus (Fabaceae)

Astragalus, Milk Vetch, Huang Qi (Chinese)

Astragalus
A perennial growing to 40 cm (16 in) with hairy stems and leaves divided into 12–18 pairs of leaflets.

Despite the fact that astragalus is one of the most popular tonic herbs in China, it is not that well known in the West. In China, the root, known as *huang qi*, has been used for thousands of years. It has a sweet taste and is a warming tonic particularly suited to young, active people, increasing stamina and endurance, and improving resistance to the cold. It is often combined with other herbs as a blood tonic.

***Astragalus** is a typical member of the pea family and is closely related to liquorice.*

Habitat & Cultivation

Astragalus is native to Mongolia and northern and eastern China. It is grown from seed in spring or autumn and thrives in sandy, well-drained soil, with plenty of sun. The roots of four-year-old plants are harvested in autumn.

Key Constituents

- Triterpene saponins (astragolosides)
- Isoflavonoids (formonentin)
- Polysaccharides
- Phytosterols

Key Actions

- Adaptogenic
- Immune stimulant
- Diuretic
- Vasodilator
- Antiviral

Research

- **Chinese investigations** Investigations in China indicate that astragalus is diuretic and that it lowers blood pressure and increases endurance. A 2012 clinical trial found that 5 g a day of astragalus root helped to stabilize kidney function in patients with chronic kidney disease, delaying the need for dialysis.
- **Western research** Recent American research has focused on the ability of astragalus to restore normal immune function in cancer patients. Clinical evidence suggests that, as with a number of other herbs, cancer patients undergoing chemotherapy or radiotherapy recover faster and live longer if given astragalus concurrently.

Traditional & Current Uses

- **Tonic & endurance remedy** Astragalus is a classic energy tonic, perhaps even superior to ginseng (*Panax ginseng*, p. 118) for young people. In China, it is believed to warm and tone the *wei qi* (a protective energy that circulates just beneath the skin), helping the body to adapt to external influences, especially to the cold. Astragalus raises immune resistance and manifestly improves physical endurance.
- **Control of fluids** Though a vasodilator (encouraging blood to flow to the surface), astragalus is used for excessive sweating, including night sweats. It is also helpful in both relieving fluid retention and reducing thirstiness. It supports normal kidney function and is thought to protect the kidneys from damage.
- **Immune stimulant** Not a herb for acute illness, astragalus is nonetheless a very useful medicine for viral infections such as the common cold.

Parts Used

Root is a traditional tonic remedy in China, improving energy levels and helping the body to resist cold.

Dried root

Key Preparations & Their Uses

Cautions Do not take astragalus if suffering from skin disorders, or during acute illness.

Decoction For anaemia, make a decoction (see p. 291) with 12 g root and 12 g Chinese angelica. Take 300 ml daily.

Dry-fried root As a stimulant tonic, each day fry 5–10 g root by itself or with 1 tsp of honey and eat with meals.

Remedy For cold and numbness, make a decoction (see p. 291) with 20 g root and 5 g cinnamon. Drink 150 ml twice a day.

Tincture (to make, p. 292). For night sweats, take 1 tsp with water 1–2 times daily.

- **Other uses** Astragalus is used to treat prolapsed organs, especially the uterus, and it is beneficial for uterine bleeding. Astragalus is often used in combination with Chinese angelica (*Angelica sinensis*, p. 63) in order to act as a blood tonic for treating anaemia.

Atropa belladonna (Solanaceae)

Deadly Nightshade, Belladonna

Although deadly nightshade conjures up images of poison and death, like many plants it is an important and beneficial remedy when used correctly. Some of its constituents are employed in conventional medicine, for example to dilate the pupils for eye examinations and as an anaesthetic. In herbal medicine, deadly nightshade is mainly prescribed to relieve intestinal colic and to treat peptic ulcers.

Deadly nightshade *produces unmistakable cherry-sized, glossy black berries in autumn.*

Habitat & Cultivation

Deadly nightshade is native to Europe, western Asia and northern Africa, and is now cultivated worldwide. It thrives in chalky soils, in woods and on wasteground. The leaves are harvested in summer, and the root is collected from the first year onwards in autumn.

Related Species

Many of the Solanaceae family are powerful medicines, including aubergine (*Solanum melongena*, p. 270), tobacco (*Nicotiana tabacum*, p. 240) and henbane (*Hyoscyamus niger*, p. 220).

Key Constituents

- Tropane alkaloids (up to 0.6%), including hyoscyamine and atropine
- Flavonoids
- Coumarins
- Volatile bases (nicotine)

Key Actions

- Smooth muscle antispasmodic
- Narcotic
- Reduces sweating
- Sedative

Research

- **Tropane alkaloids** The action of the tropane alkaloids is well understood. They inhibit the parasympathetic nervous system, which controls involuntary bodily activities. This reduces saliva; gastric, intestinal and bronchial secretions; as well as the activity of the urinary tubules, bladder and intestines. Tropane alkaloids also increase heart rate and dilate the pupils.

Traditional & Current Uses

- **Folklore** Deadly nightshade was believed to help witches fly. Its other name "belladonna" (beautiful woman) is thought to refer to its use by Italian women to dilate the pupils of their eyes, making them more attractive.
- **Relaxant** Deadly nightshade has been used in the same way throughout history. It is prescribed to relax distended organs, especially the stomach and intestines, relieving intestinal colic and pain. It helps peptic ulcers by reducing gastric acid production, and it relaxes spasms of the urinary tubules.
- **Parkinson's disease** The herb can be used to treat the symptoms of Parkinson's disease, reducing tremors and rigidity, and improving speech and mobility.
- **Anaesthetic** Muscle relaxant properties of deadly nightshade make it useful in conventional medicine as an anaesthetic, particularly when digestive or bronchial secretions need to be kept to a minimum.

Deadly nightshade
A perennial with large leaves and black berries, growing to 1.5 m (5 ft).

Parts Used

Leaves are harvested in early summer. They have a weaker action than the root, and are more commonly used.

Dried leaves

Leaves, like the root, have relaxant properties.

Fresh leaves

Fresh root

Root is collected in autumn.

Dried root

Key Preparations & Their Uses

Cautions Take only if prescribed by a medical herbalist or doctor. Deadly nightshade can be fatal if taken at the wrong dosage.

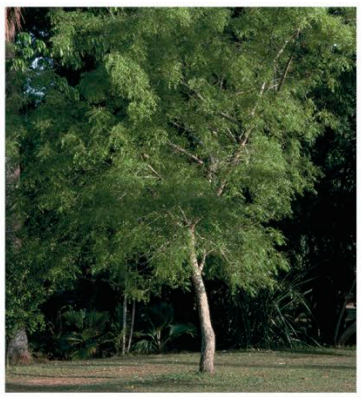
Tincture, made from the leaves or the root, is a strong relaxant. It is prescribed by herbal practitioners to relieve colic and to treat Parkinson's disease.

Azadirachta indica (Meliaceae)

Neem, Margosa Tree

Neem
An evergreen tree, growing to 16 m (52 ft), with compound leaves and white flowers.

Neem is one of the most valued herbs in Indian and Ayurvedic medicine. Extracts of the leaves are used to treat conditions such as asthma, eczema, diabetes and rheumatism, while neem oil has been applied as a hair lotion, to treat headlice and to calm angry skin rashes. Research indicates that neem may prove useful as an insecticide and a contraceptive. The tree itself is said to purify the air and is widely planted in India.



Neem has so many medicinal uses that the tree is considered a "natural pharmacy".

Habitat & Cultivation

Native to Iran, Pakistan, India and Sri Lanka, neem is found throughout the sub-continent in forests and woods, often being planted on roads to provide shade. It is now naturalized in other tropical regions, including Malaysia, Indonesia, Australia and West Africa. It is grown from seed. Leaves and seed are harvested throughout the year.

Related Species

Melia azedarach, also an Indian plant, is a very close relative with particular value in treating intestinal worms. It is often used as a substitute for neem.

Key Constituents

- Meliacins
- Liminoids
- Triterpenoid bitters
- Sterols
- Tannins
- Flavonoids

Key Actions

- Anti-inflammatory
- Lowers fever
- Antimicrobial
- Promotes wound healing
- Antiparasitic
- Antimalarial

Research

- **Recent research** This indicates that neem oil is both anti-inflammatory and antibacterial, and to some degree reduces fever and lowers blood sugar levels.
- **Insecticide** Extensive research shows that liminoid azadirachtins are insecticidal and inhibit feeding and growth – making neem an inexpensive and ecologically sound insecticidal agent. The azadirachtins are also linked to the tree's antimalarial activity.
- **Diabetes** Research indicates that neem leaf and oil act to stabilize blood sugar levels and may be helpful in treating or delaying late-onset diabetes.

Traditional & Current Uses

- **Medicine chest** Thought of in India as almost a pharmacy in its own right, all parts of the neem tree may be used medicinally. The bark is bitter and astringent and a decoction is used for haemorrhoids. The leaves are taken as an infusion for malaria, peptic ulcers and intestinal worms, and may be applied locally as a juice, infusion or ointment to skin problems including ulcers, wounds, boils and eczema. The juice of the leaves is also applied to the eyes to treat night blindness and conjunctivitis. The twigs are used as a tooth cleanser, firming up the gums and preventing gum disease.
- **Neem oil and sap** Neem oil, expressed from the seeds, is commonly used as a hair dressing and is strongly antifungal and antiviral, preventing scabies and ringworm, among other things. It can be made into a useful and easily applied treatment for headlice. The oil is also used to treat skin conditions such as eczema, psoriasis and even leprosy, and as a vehicle for other active ingredients. Neem oil should be avoided when attempting to conceive a child as it can reduce fertiliy in both women and men.

Parts Used

Leaves can be infused and applied as a lotion to many skin rashes, including acne, eczema and psoriasis.

Twigs are used as toothpicks to improve oral hygiene.

Fresh leaves

Seeds contain neem oil, which can be expressed and used to treat headlice in adults and children.

Fresh seeds

Key Preparations & Their Uses

Cautions Do not take during pregnancy, while breast-feeding or during fertility treatment. In children, use topically only. Long term high-dose treatment is not advisable.

Oil from the seeds is used to prevent and treat infestations of headlice. Apply daily to the scalp.

Cream (to make, p. 296) is used to treat many skin disorders, including eczema. Apply as required.

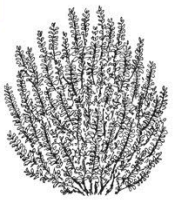
Tincture (to make, p. 292) is bitter and can be used to treat fevers.

Infusion of the leaves (to make, p. 291) can be used for conjuctivitis.

Decoction of the bark (to make, p. 291) is strongly bitter and astringent.

Barosma betulina syn. *Agathosma betulina* (Rutaceae)

Buchu



Buchu
A bushy shrub growing to 2 m (6½ ft), with stemless, slightly leathery leaves dotted with oil glands.

A traditional South African remedy, buchu is taken as a stimulant, a diuretic and to relieve digestive complaints. In Western herbal medicine, it is valued as a urinary antiseptic and diuretic, and is used specifically to treat cystitis and other infections of the urinary tract. Buchu has a strongly distinctive aroma and taste, reminiscent of blackcurrant but described by some as a mixture between rosemary and peppermint.

Buchu is grown commercially and used to enhance the blackcurrant flavour of cassis.

Habitat & Cultivation

Buchu is native to South Africa, where is it widely cultivated on hillsides. It is also grown in parts of South America. The herb is grown from cuttings in late summer and requires well-drained soil and plenty of sun. The leaves are harvested when the plant is flowering or fruiting in summer.

Related Species

Two closely related species, *B. crenulata* and *B. serratifolia*, are used in a similar way to buchu, but contain less volatile oil and are not so effective.

Key Constituents

- Volatile oil (1.5–2.5%), including pulegone, menthone, diosphenol
- Sulphur compounds
- Flavonoids (diosmin, rutin)
- Mucilage

Key Actions

- Urinary antiseptic
- Diuretic
- Stimulant
- Uterine stimulant

Traditional & Current Uses

- **Traditional remedy** Buchu is a traditional remedy of the Khoisan people of South Africa. It is used as a general stimulant and a diuretic. Strongly aromatic, it is taken as a carminative, helping to relieve wind and bloating.
- **Early Western uses** The herb was first exported to Britain in 1790 and became an official medicine in 1821, being listed in the *British Pharmacopoeia* as an effective remedy for "cystitis, urethritis, nephritis and catarrh of the bladder".
- **Modern urinary treatment** Broadly speaking, buchu is used today in Western herbal medicine for the same type of urinary complaints as in the 19th century. It is commonly prescribed for urinary tract infections, often proving effective in curing acute cystitis when combined with other herbs such as cornsilk (*Zea mays*, p. 154) and juniper (*Juniperus communis*, p. 224). Taken regularly, it can help to prevent recurrent attacks of chronic cystitis or urethritis. It is also taken for prostatitis and irritable bladder, often in combination with herbs such as uva-ursi (*Arctostaphylos uva-ursi*, p. 170) and cornsilk. The key active constituent diosphenol has a diuretic action, and may partly account for the herb's antiseptic effect on the urinary system.
- **Gynaecological uses** Buchu infusion or tincture is useful in treatments for cystitis and urethritis, especially when they are related to a pre-existing *Candida* problem, such as vaginal thrush. The infusion is generally preferable to the tincture, particularly when the onset of infection is sudden. The infusion is also used as a douche for leucorrhoea (white vaginal discharge), and occasionally for vaginal thrush. The herb is a uterine stimulant and contains pulegone, which is also present in large quantities in pennyroyal (*Mentha pulegium*, p. 235). Pulegone is an abortifacient and a powerful emmenagogue (stimulates menstrual flow). Buchu should not, therefore, be taken during pregnancy.

Self-help Use

- **Urinary infections**, p. 314.

Parts Used

Leaves are harvested in summer and used in preparations for urinary infections.

Key Preparations & Their Uses

Cautions During pregnancy take only on advice of your health care practitioner. Potentially toxic at excessive dosage.

Infusion (to make, p. 291). For prostatitis, drink 150 ml twice a day.

Tincture (to make, p. 292). For chronic urinary infections, take 40 drops with water 3 times a day.

Capsules (to make, p. 292). For cystitis, take a 500 mg capsule twice daily.

Bupleurum chinense syn. *B. scorzoneraefolium* (Apiaceae)

Bupleurum, Hare's Ear Root, Chai Hu (Chinese)

Bupleurum
A perennial growing to 1 m (3 ft) high, with sickle-shaped leaves and clusters of small yellow flowers.

First mentioned in texts from the 1st century BCE, bupleurum is one of China's "harmony" herbs, balancing different organs and energies within the body. It is used as a tonic, strengthening the action of the digestive tract, improving liver function and helping to push blood to the surface of the body. Recent research in Japan has endorsed traditional use, showing that bupleurum protects the liver.

Bupleurum is commonly on sale in medicinal herb shops in China. It is widely taken as a liver tonic.

Habitat & Cultivation

Bupleurum grows in China and is cultivated throughout the central and eastern parts of that country. It is also found in other parts of Asia and in Europe. Bupleurum is propagated from seed in spring or by root division in autumn and requires well-drained soil and plenty of sun. The root is unearthed in spring and autumn.

Key Constituents

- Triterpenoid saponins – saikosides (saikosaponins)
- Flavonoids
- Polysaccharides

Key Actions

- Protects liver
- Anti-inflammatory
- Tonic
- Induces sweating

Research

■ **Saikosides** Research in Japan from the 1960s onwards into the *Bupleurum* genus has revealed that the saikosides are potent medicines. They appear to protect the liver from toxicity, and strengthen liver function, even in people with immune system disorders. Following this discovery, clinical trials during the 1980s in Japan showed that the root is effective in the treatment of hepatitis and other chronic liver problems. Saikosides also have anti-tumour activity.

■ **Anti-inflammatory** The saikosides stimulate the body's production of corticosteroids as well as increasing their anti-inflammatory effect.

Traditional & Current Uses

■ **Ancient Chinese remedy** Bupleurum has been taken in China for over 2,000 years as a liver tonic. It is traditionally believed to strengthen liver *qi* and to have a tonic action on the spleen and stomach. In Chinese medicine, bupleurum is used to treat "disharmony" between the liver and the spleen, a condition that manifests itself in problems of the digestive system such as abdominal pain, bloating, nausea and indigestion.

■ **Liver problems** In common with milk thistle (*Carduus marianus*, p. 75) and members of the *Glycyrrhiza* genus, for example liquorice (*G. glabra*, p. 103), bupleurum is an excellent remedy for a poorly functioning or compromised liver. Its anti-inflammatory action may contribute to its overall use in the treatment of liver disease.

■ **Fever** In China, bupleurum is taken to treat fevers, flu and colds, especially where accompanied by a bitter taste in the mouth, irritability, and either vomiting and abdominal pain, or dizziness and vertigo.

■ **Modern Japanese remedy** The traditional uses of bupleurum and scientific research accord so well that many Japanese doctors practising conventional Western medicine now use extracts of bupleurum root to treat patients with liver problems.

■ **Other uses** Bupleurum is sometimes useful in the treatment of haemorrhoids, and of prolapsed tissue in the pelvis, such as a prolapse of the uterus.

Parts Used

Root is harvested in spring and autumn, when it contains the most nutrients. It is used to make a valuable liver tonic.

Key Preparations & Their Uses

Cautions Do not exceed the dose. Can occasionally cause nausea or vomiting.

Decoction (to make, p. 291). To stimulate sweating and so reduce fever, drink 150 ml 3 times a day.

Remedy To improve liver function, decoct 15 g bupleurum, 5 g liquorice and 750 ml water (see p. 291). Take in 3 doses during a 24-hour period.

Calendula officinalis (Asteraceae)

Marigold, Pot Marigold

Marigold
An annual growing to 60 cm (2 ft), with vivid orange flowerheads similar in structure to daisies.

Marigold is one of the most well known and versatile herbs in Western herbal medicine. The bright orange petals are an excellent remedy for inflamed and angry skin, their antiseptic and healing properties helping to prevent the spread of infection and speed up the rate of repair. Marigold is also a cleansing and detoxifying herb, and the infusion and tincture are used to treat chronic infections.

***Marigold's** colourful flowers were thought to lift the spirits and encourage cheerfulness.*

Habitat & Cultivation

Marigold, native to southern Europe, is cultivated in temperate regions around the world. Easily propagated from seed, it flourishes in almost all soils. The flowers are harvested as they open in early summer, and are dried in the shade.

Related Species

C. arvense, a wild species, seems to have similar therapeutic properties to marigold.

Key Constituents

- Triterpenes
- Resins
- Bitter glycosides
- Volatile oil
- Phytosterols
- Flavonoids
- Mucilage
- Carotenes

Key Actions

- Anti-inflammatory
- Relieves muscle spasms
- Astringent
- Prevents haemorrhaging
- Heals wounds
- Antimicrobial
- Detoxifying
- Mildly oestrogenic

Traditional & Current Uses

■ **Therapeutic properties** Marigold is antiseptic. Some constituents are antifungal (particularly the resins), antibacterial and antiviral, and have shown significant activity against *Candida albicans*. The herb also astringes the capillaries, an action that explains its effectiveness for cuts, wounds, varicose veins and various inflammatory conditions.

■ **Skin remedy** Marigold is above all a remedy for the skin, providing effective treatment for most minor skin problems. It is used for cuts, grazes and wounds; for red and inflamed skin, including minor burns and sunburn; for acne and many rashes; and for fungal conditions such as ringworm, athlete's foot and thrush. It is very helpful for nappy rash and cradle cap, and soothes nipples that are sore from breast-feeding.

■ **Digestive disorders** Taken internally, marigold infusion or tincture helps inflammatory problems of the digestive system such as gastritis, peptic ulcers, regional ileitis and colitis.

■ **Detoxifying** Marigold has long been considered a detoxifying herb, and helps treat the toxicity that underlies many fevers and infections, and systemic skin disorders, such as eczema and acne. The herb is also considered cleansing for the liver and gallbladder and can be used to treat problems affecting these organs.

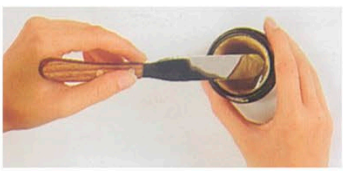
Parts Used

Flowers are harvested in summer. Flowerheads and petals are removed for use in a wide range of preparations.

Key Preparations & Their Uses

Caution May cause allergic reaction in rare cases.

Infusion (to make, p. 291). For chronic fungal infections, such as ringworm or thrush, drink 150 ml 3 times a day.



Cream is easy to make (see p. 296). Apply to cuts and grazes.

Ointment (to make, p. 295). For minor burns, apply up to 3 times a day.

Infused oil (to make, p. 294). For inflamed dry skin, rub into the area 2–3 times a day.

Tincture (to make, p. 292). For eczema, take 30 drops with water 3 times a day.

■ **Gynaecological uses** Marigold has a mild oestrogenic action and is often used to help reduce pain during menstruation and to regulate menstrual bleeding. The infusion makes an effective douche for vaginal thrush.

Self-help Uses

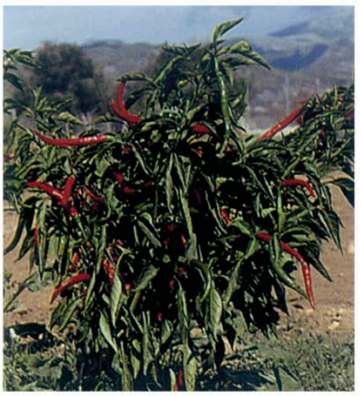
- **Acne & boils**, p. 305.
- **Athlete's foot**, p. 304.
- **Bites & stings**, p. 303.
- **Breast tenderness & sore nipples**, p. 315.
- **Digestive infections**, p. 305.
- **Inflamed skin rashes**, p. 303.
- **Nappy rash**, p. 318.
- **Nettle rash**, p. 303.
- **Varicose veins**, p. 302.
- **Wounds & bruises**, p. 304.

Capsicum annuum & *C. frutescens* (Solanaceae)

Chilli, Cayenne

Chilli
A perennial, spiky shrub growing to 1 m (3 ft), with scarlet-red conical fruits filled with white seeds.

Originally from the tropical regions of the Americas, chilli was first introduced to Europe in the 16th century. In cookery, it is renowned for its hot, burning taste, and it is not surprising to learn that, medicinally, it is a powerful warming stimulant. It acts on the circulation and the digestion and is used to treat a wide range of complaints from arthritis and chilblains to colic and diarrhoea.



Chilli is so popular in Mexico where it originates that it is even used to flavour ice cream.

Habitat & Cultivation

Chilli is native to the tropical Americas, and is now cultivated throughout the tropics, especially in Africa and India. It is grown from seed in early spring and flourishes in hot, moist conditions. The fruit is harvested when ripe in summer and is dried in the shade.

Related Species

Many closely related species and varieties of *C. frutescens* exist, all with different grades of pungency. Paprika, or Hungarian pepper (one of the mildest peppers), and the large green and red peppers that are eaten as vegetables are both varieties of *C. annuum* and are important medicinal foods.

Key Constituents

- Capsaicin (0.1–1.5%)
- Carotenoids
- Flavonoids
- Volatile oil
- Steroidal saponins (capsicidins – in seeds only)

Key Actions

- Stimulant
- Tonic
- Carminative
- Relieves muscle spasms
- Antiseptic
- Increases sweating
- Increases blood flow to the skin
- Analgesic

Research

■ **Capsaicin** Extensive clinical research shows that capsaicin, the compound in chilli mostly responsible for its hot, pungent taste, has strong, local analgesic activity in certain types of nerve pain. Applied to the skin, capsaicin desensitizes nerve endings and acts as a counter-irritant. It is now standardly prescribed for relief of neuralgic pain. It may also provide effective pain relief in conditions such as arthritis and headache.

Traditional & Current Uses

■ **Warming stimulant** The herb's heating qualities make it a valuable remedy for poor circulation. It improves blood flow to the hands and feet and to the central organs.

■ **Antimicrobial** In Mayan herbal medicine chilli was used to counter microbial infections – different *Capsicum* species including chilli are now known to have significant antimicrobial activity. Adding Chilli to food reduces the chances of developing gastric or intestinal infection, and the herb is frequently used by herbalists to treat gastro-enteritis and dysentery.

■ **External uses** Applied locally to the skin, chilli is mildly analgesic. It is also rubefacient, increasing blood flow to the affected part, and this helps to stimulate the circulation in "cold" rheumatic and arthritic conditions, aiding the removal of waste products and increasing the flow of nutrients to the tissues. Chilli may also be applied to unbroken chilblains.

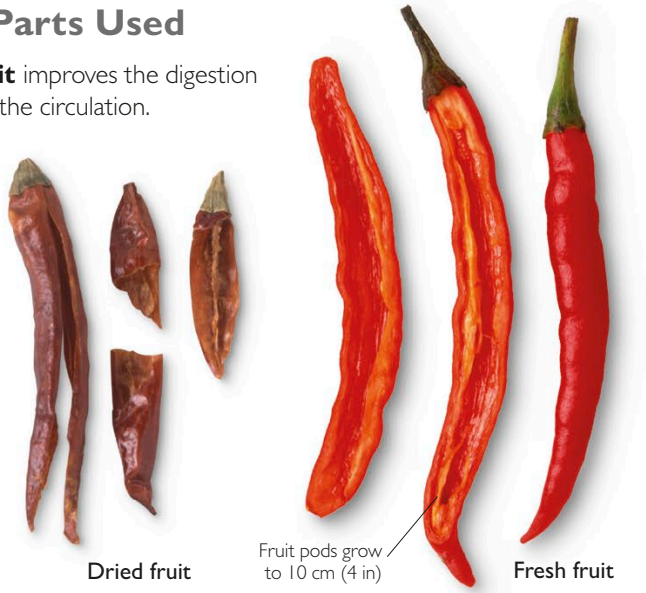
■ **Internal uses** Chilli is taken to relieve gas and colic and to stimulate the secretion of digestive juices. It may be taken in frequent, small doses for a weak or failing heart. A pinch of chilli is excellent when used in gargles for sore throats. Chilli is also helpful in relieving acute diarrhoea.

Self-help Uses

- **High fever**, p. 311.
- **Poor circulation**, p. 302.

Parts Used

Fruit improves the digestion and the circulation.



Key Preparations & Their Uses

Cautions Non-toxic at normal doses, although caution required when eating or handling hot chilli products. Can cause intense pain and burning, and contact dermatitis.

Powder For sore throats, add a pinch to 25 ml lemon juice. Dilute with hot water, add honey and use as a gargle.

Infused oil Add 100 g chopped chilli to 500 ml oil and simmer (see p. 294). Gently massage into rheumatic limbs.

Tincture (to make, p. 292). For arthritis, combine 20 drops with 100 ml willow bark tincture. Take 1 tsp with water twice a day.

Tablets are convenient for long-term use. Take for poor circulation.

Ointment (to make, p. 295). Apply to chilblains (only if the skin is unbroken).

Cassia senna syn. *Senna alexandrina* (Fabaceae)

Senna, Alexandrian Senna

Senna
A small perennial shrub growing to 1 m (3 ft), with a straight woody stem and yellow flowers.

Almost everyone will have taken a preparation containing senna at some time in their lives. Senna is probably one of the best known herbal medicines, not least because it is still widely used in conventional medicine. It is a very efficient laxative and is a particularly useful remedy for the occasional bout of constipation. It has a slightly bitter, nauseating taste, and is therefore generally mixed with other herbs.

Senna shrubs have pairs of lance-shaped leaflets arranged either side of a central stem.

Habitat & Cultivation

Senna is native to tropical Africa and is now cultivated throughout that continent. It is grown from seed in spring or from cuttings in early summer and requires plenty of sun. The leaves may be picked before or while the plant is in flower and the pods are collected when they are ripe in autumn.

Related Species

There are over 400 species of *Cassia*. Tinnevelly senna (*C. angustifolia*) is grown in the Indian sub-continent and has the same therapeutic properties as *C. senna*. In Ayurvedic medicine, it is used for skin problems, jaundice, bronchitis and anaemia, as well as for constipation. *Jue ming zi* (*C. obtusifolia*) is used in traditional Chinese medicine for "liver fire" patterns, constipation and atherosclerosis.

Key Constituents

- Anthraquinone glycosides (sennosides)
- Naphthalene glycosides
- Mucilage
- Flavonoids
- Volatile oil

Key Actions

- Stimulant
- Laxative
- Cathartic

Research

- **Sennosides** Extensive research during the last 50 years has led to a clear understanding of senna's action. The sennosides irritate the lining of the large intestine, causing the muscles to contract strongly, resulting in a bowel movement about 10 hours after the dose is taken. The sennosides also stop fluid being absorbed from the large bowel, helping to keep the stool soft.

Traditional & Current Uses

- **Early records** The herb was first used medicinally by Arabian physicians in the 9th century CE.
- **Constipation** Senna has always been specifically used for constipation. It is particularly appropriate when a soft stool is required, for example in cases of anal fissure. Senna is a good short-term laxative but should not be taken for more than 10 days as this leads to weakening of the large bowel muscles.
- **Cathartic** As a cathartic (very strong laxative), senna can cause griping and colic, and is therefore normally taken with aromatic, carminative herbs that relax the intestinal muscles.

Self-help Use

- **Constipation**, p. 307.

Parts Used

Leaves are stronger in action than the pods and are not so commonly used.

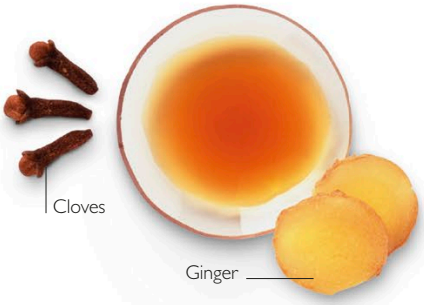
Pods are milder in effect than the leaves. They are made into tablets and other preparations.

Key Preparations & Their Uses

Cautions Do not give to children under 12. Do not take for more than 10 days at a time. Do not take if suffering from colitis. During pregnancy, take on advice of your health care practitioner.

Tablets are the standard senna preparation and are convenient. Take for occasional constipation.

Decoction For constipation, steep 3–6 senna pods and 1 g fresh ginger in 150 ml freshly boiled water for 6–12 hours. Strain and drink.



Infusion For mild constipation, infuse 1–2 senna pods, 1 g fresh ginger and 1–2 cloves in 150 ml freshly boiled water for 15 minutes. Strain and drink.

Tincture is prescribed by herbalists to treat short-term constipation.

Centella asiatica syn. *Hydrocotyle asiatica* (Apiaceae)

Gotu Kola (Hindi), Indian Pennywort

Gotu kola
A perennial, herbaceous creeper, growing to 50 cm (20 in), with fan-shaped leaves.

Gotu kola is an ancient Ayurvedic remedy that is now used extensively in the West. It is a useful tonic and cleansing herb for skin problems and digestive disorders. In India, it is used to treat a variety of conditions, including leprosy, but it is valued chiefly as a revitalizing herb that strengthens nervous function and memory. It has a bitter-sweet, acrid taste, and in India it is sometimes used in salads and as a vegetable.

Gotu kola is found growing wild throughout India.

Habitat & Cultivation

Gotu kola is native to India and the southern US. It also grows in tropical and sub-tropical parts of Australia, southern Africa and South America. It prefers marshy areas and riverbanks. Though usually gathered wild, gotu kola can be cultivated from seed in spring. The aerial parts are harvested throughout the year.

Related Species

Marsh pennywort (*Hydrocotyle vulgaris*) is a related European species, but, unlike gotu kola, has no known therapeutic uses.

Key Constituents

- Triterpenoid saponins (asiaticoside, brahmoside, thankuniside)
- Alkaloids (hydrocotyline)
- Bitter principles (vellarin)

Key Actions

- Wound healer
- Tonic
- Anti-inflammatory
- Sedative
- Peripheral vasodilator

Research

■ **Wound healing** Gotu kola has an established ability to promote wound healing and tissue repair, making it useful as a cosmetic agent, in skin disorders such as psoriasis, and in arthritis. Asiaticoside, in particular, has been shown to speed up collagen formation and the laying down of new blood vessels. This healing effect extends to the blood vessels, so that gotu kola extracts aid venous repair, notably in chronic venous insufficiency, a condition that includes symptoms such as leg swelling and varicose veins. Recent US research has investigated the effectiveness of high strength extracts to help in diabetic neuropathy (nerve pain due to poor circulation) with signs of positive benefit.

■ **Brain function** In the last 10 years, research has focused on gotu kola's ability to relieve anxiety and support healthy brain function. A Thai clinical trial in 2008 found that gotu kola extract improved attention, working memory, alertness and mood in 28 healthy volunteers with an average age of 65. Another small study found that gotu kola eased the symptoms of anxiety.

Traditional & Current Uses

■ **Wound healing** Gotu kola's main traditional use lies in treating wounds and skin problems. In Ayurveda, it is used as a specific to promote healing in skin ulcers and serious skin problems, as well as to prevent scarring. The herb may be applied directly to the skin, or taken internally, where it appears to promote tissue repair throughout the body. It supports peripheral circulation and can be taken to strengthen blood vessels, e.g. varicose veins. Many people swear by gotu kola's ability to prevent and relieve arthritis and rheumatic problems.

■ **Tonic** The herb has a long-standing reputation in India and southern Asia as a "rejuvenator", aiding concentration and memory, particularly in the elderly. In Western herbal medicine, it is understood to be an adaptogen and can be taken long term to help support healthy brain function, slow ageing and calm anxiety. It is also thought to have a tonic effect on the digestion.

Self-help Uses

- **Maintaining vitality**, p. 319.
- **Eczema**, p. 300.

Parts Used

Aerial parts have valuable tonic and cleansing properties.

Key Preparations & Their Uses

Cautions Can occasionally cause sensitivity to sunlight. Restricted herb in some countries. May cause allergic reactions in rare cases.

Powder is an important Ayurvedic remedy. Take 1–2 g a day with water as a general tonic.

Paste made from powder. Mix 2 tsp powder with 25 ml water and apply to patches of eczema.

Infusion (to make, p. 291). For rheumatism, take 35 ml twice a day.

Tincture (to make, p. 292). For poor memory and concentration, take 40 drops with water 3 times a day.

Chamomilla recutita syn. *Matricaria recutita* (Asteraceae)

German Chamomile

German chamomile A sweetly aromatic annual growing to 60 cm (2 ft), with finely cut leaves and white flowerheads.

German chamomile's aromatic, slightly bitter taste, reminiscent of apples, is familiar to herbal tea drinkers. The herb's varied medicinal uses, however, are not so well known. It is an excellent herb for many digestive disorders and for nervous tension and irritability. Externally, it is used for sore skin and eczema. Roman chamomile (*Chamaemelum nobile*, p. 187) is a close relation, used in a similar way.

German chamomile is a useful herb to cultivate for home use.

Habitat & Cultivation

German chamomile grows in much of Europe and other temperate regions. The seeds are sown in spring or autumn and the flowerheads are picked in full bloom, in summer.

Key Constituents

- Volatile oil (proazulenes, farnesine, alpha-bisabolol, spiroether)
- Flavonoids
- Bitter glycosides (anthemic acid)
- Coumarins

Key Actions

- Anti-inflammatory
- Anti-allergenic
- Antispasmodic
- Relaxant
- Carminative

Research

- **Trials in Germany** A cream made from German chamomile was tested in 1987 for its ability to heal wounds. The results produced were very positive. In 1993, another trial using German chamomile and four other herbs showed them to be most effective at easing infantile colic.
- **Pre-menstrual syndrome** An Iranian clinical trial compared chamomile with mefenamic acid for relief of pre-menstrual syndrome symptoms. Both were found effective in relieving the physical symptoms of pre-menstrual syndrome, but chamomile proved better in relieving emotional symptoms.

Traditional & Current Uses

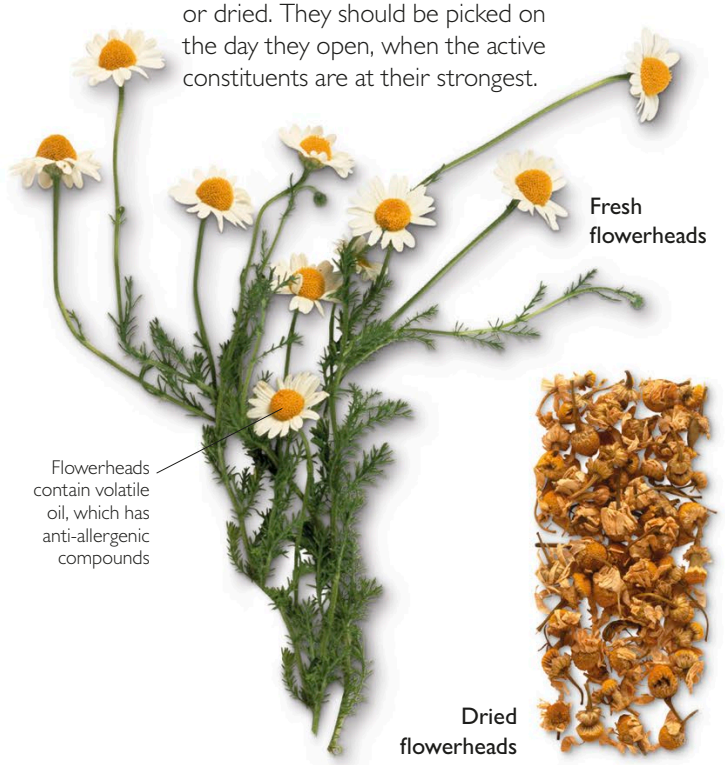
- **Digestive problems** German chamomile has been taken for digestive problems since at least the 1st century CE. Gentle and efficacious, it is very suitable for children. The herb is valuable for pain, indigestion, acidity, gastritis, wind, bloating and colic. It is also used for hiatus hernia, peptic ulcer, Crohn's disease and irritable bowel syndrome.
- **Relaxation** German chamomile, which contains spiroether, a strong antispasmodic, eases tense muscles and period pain. It is known that women in ancient Rome commonly took chamomile to relieve menstrual cramps. Chamomile flowers also reduce irritability and promote sleep – especially helpful for children.
- **Irritation** The herb is useful for hay fever and asthma. On steam distillation, the proazulenes produce chamazulene, which is markedly anti-allergenic. Externally, it can be applied to sore, itchy skin, sore nipples and eczema. It also relieves eyestrain. A poultice can be applied to sore breasts.

Self-help Uses

- **Bites & stings**, p. 303.
- **Catarrh & hay fever**, p. 312.
- **Colic**, p. 318.
- **Eczema**, p. 300.
- **Indigestion**, p. 307.
- **Insomnia**, p. 309.
- **Mild asthma**, p. 301.
- **Morning sickness**, p. 317.
- **Sore & tired eyes**, p. 310.
- **Sore nipples**, p. 315.
- **Stomach spasm**, p. 305.

Parts Used

Flowerheads may be used fresh or dried. They should be picked on the day they open, when the active constituents are at their strongest.



Key Preparations & Their Uses

Cautions The fresh plant can cause dermatitis. Do not take the essential oil internally except under professional supervision. Take only on professional advice if using blood-thinning medication. Do not use the oil externally during pregnancy.

Cream (to make, p. 296). Rub on to sore or itchy skin.

Essential oil For nappy rash, combine 5 drops with 20 ml carrier oil and apply.

Making infusion with flowerheads (see p. 291). For a good night's sleep, drink 150 ml last thing at night.

Infusion To relax fractious and over-tired children, infuse 4 tsp dried herb in 500 ml water (see p. 291) and strain into a bath.

Ointment (to make, p. 295). Rub on to sore or inflamed skin.

Tincture (to make, p. 292). For irritable bowel syndrome, take 1 tsp with 100 ml water 3 times a day.

Chrysanthemum x *morifolium* (Asteraceae)

Ju Hua (Chinese), Florists' Chrysanthemum

Ju hua
A perennial growing to about 1.5 m (5 ft), with flowerheads composed of yellow ray florets.

Ju hua is known in the West as florists' chrysanthemum and is valued for its ornamental qualities. In China, however, it is a popular medicinal herb and it is also commonly drunk as a refreshing tisane. *Ju hua* is used to improve vision and soothe sore eyes, to relieve headaches and to counter infections such as colds and flu. Furthermore, research has demonstrated that it is a valuable remedy for high blood pressure.

***Ju hua** flowers are colourful and have been used medicinally in China since the 1st century CE.*

Habitat & Cultivation

Ju hua is native to China. Today, it is mostly cultivated, and is propagated from cuttings in spring or early summer. The flowerheads are gathered in autumn when fully open. They are usually dried in the sun, which can take a long time.

Related Species

Wild chrysanthemum, *ye hu hua* (*C. indicum*), has a similar use in Chinese herbal medicine. Many other closely related species have an established therapeutic value, for example tansy (*Tanacetum vulgare*, p. 274) and feverfew (*T. parthenium*, p. 140).

Key Constituents

- Alkaloids, including stachydrine
- Volatile oil
- Sesquiterpene lactones
- Flavonoids, including apigenin
- Betaine & choline
- Vitamin B_1

Key Actions

- Increases sweating
- Antiseptic
- Lowers blood pressure
- Cooling
- Reduces fever

Research

- **Blood pressure** A number of Chinese and Japanese clinical trials during the 1970s showed that *ju hua* is most effective at lowering blood pressure and relieving associated symptoms such as headaches, dizziness and insomnia. In these trials, *ju hua* was mixed with *jin yin hua* (*Lonicera* spp., p. 229).
- **Other research** *Ju hua* has proved to be helpful in the treatment of angina, and to have an antibiotic effect against a range of pathogens. In laboratory studies, some of the flavonoids were found to have anti-HIV activity. Extracts of the flowers reduce inflammation.

Traditional & Current Uses

- **Long-standing remedy** *Ju hua* has been taken in China as a medicine and as a beverage for thousands of years. It was first categorized in the *Divine Husbandman's Classic* (*Shen'nong Bencaojing*), written in the 1st century CE.
- **Eye problems** In China, the infused flowerheads are popular as a remedy for red, sore eyes, especially after long periods of close work, such as reading or working at a computer. The warm flowerheads are placed on closed eyes and then replaced when cool. *Ju hua* infusion is taken in China as a remedy to improve the eyesight.
- **Cooling & antiseptic** *Ju hua* infusion is used to reduce fever, to counter infection and to detoxify the body. It relieves mild fevers and tension headaches, soothes a dry mouth or throat, and treats bad breath.
- **Skin complaints** The fresh leaves make an antiseptic poultice for acne, spots, boils and sores.
- **High blood pressure** Symptoms often associated with high blood pressure, such as dizziness, headaches and tinnitus, are treated with *ju hua*.

Self-help Use

- **Sore & tired eyes**, p. 310.

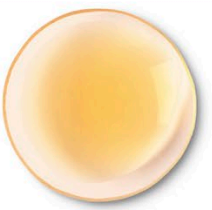
Parts Used

Flowerheads are gathered in late autumn. In China, they are steamed before drying to reduce bitterness.

Dried flowerheads

Key Preparations & Their Uses

Caution May cause allergic reactions in rare cases.



Infusion of flowerheads (p. 291). For tension headaches, drink 150 ml at hourly intervals.

Poultice (to make, p. 295). For eyestrain, steep flowerheads in hot water for 10 minutes and place them on closed eyes.

Powdered leaves For acne, mix 1 tsp with 2–3 tsp water and apply to spots.

Poultice of fresh leaves (to make, p. 295). For boils and spots, apply directly to the skin.

Cimicifuga racemosa syn. *Actaea racemosa* (Ranunculaceae)

Black Cohosh, Squaw Root

Black cohosh
A herbaceous perennial growing to about 2.5 m (8 ft), with creamy-white flower spikes.

The root of black cohosh is a Native American remedy. It has long been used for women's complaints, especially painful periods and problems associated with the menopause and was used by the Penobscot peoples for kidney troubles. It also benefits rheumatic problems, including rheumatoid arthritis, and nerve conditions such as tinnitus (ringing in the ears). The root has a bitter, acrid taste and a disagreeable odour.

***Black cohosh** was used by Native Americans to treat gynaecological problems and complaints such as rheumatism and headaches.*

Habitat & Cultivation

Black cohosh is native to Canada and eastern parts of the US, growing as far south as Florida. It prefers shady positions in woods and hedgerows. The herb is now grown in Europe and can be found in the wild, having self-seeded from cultivated plants. It is propagated from seed and the root is harvested in autumn.

Related Species

A number of *Cimicifuga* species are used in traditional Chinese medicine, including *sheng ma* (*C. dahurica*) and *C. foetida*. They are thought to "clear heat" and relieve toxicity, and are used to treat asthma, headaches and measles, among other conditions.

Key Constituents

- Triterpene glycosides (actein, cimicifugoside)
- Isoflavones (formononetin)
- Isoferulic acid

Key Actions

- Anti-inflammatory
- Sedative
- Antirheumatic
- Oestrogenic
- Expectorant

Research

- **Menopause** At least 10 clinical trials have found that black cohosh helps to relieve menopausal symptoms. A 1995 German study using black cohosh and St John's wort found that the combination was 78% effective in such cases.
- **Oestrogenic properties** It seems black cohosh does not contain oestrogen but has an oestrogenic action within the body due to specific hormonal effects within the brain. It is suggested that black cohosh may slow or prevent the development of osteoporosis, and it has potential in treating polycystic ovary disease.
- **Safety concerns** Research strongly suggests that black cohosh is a safe and valuable medicine. Concerns have been raised that it might cause liver damage or be unsuitable for women at risk of developing breast cancer. No effect on liver function was found during the clinical trials, and it is thought that it has some preventative activity against breast cancer.

Parts Used

Root is unearthed in autumn. Dried root is most commonly used in herbal medicine.

Key Preparations & Their Uses

Cautions Do not take in pregnancy or if breast-feeding. Larger doses can cause stomach upsets and headache.

Decoction (to make, p. 291). For rheumatism, take 75 ml twice a day.

Tincture (to make, p. 292). To relieve period pain, add 40 drops to 100 ml water and take 3 times a day.

Tablets are made from powdered herb. Take for menopausal symptoms, such as mood swings and hot flushes.

Traditional & Current Uses

- **Gynaecological uses** Black cohosh has long been used by Native Americans for women's problems, for which reason its folkname is "squaw root". It is used today for period pain, menstrual problems where oestrogen levels are too low, and for menopausal symptoms, especially hot flushes.
- **Inflammation** Black cohosh is useful for inflammatory arthritis, especially when it is associated with the menopause, and it also finds use as a remedy for rheumatic problems, including rheumatoid arthritis.
- **Sedative properties** Black cohosh's sedative action makes it valuable for treating many conditions including high blood pressure and tinnitus (ringing in the ears), whooping cough and asthma.

Self-help Uses

- **Arthritis**, p. 313.
- **Decreased oestrogen & progesterone levels**, p. 316.

Cinchona spp. (Rubiaceae)

Cinchona, Peruvian Bark

Cinchona is best known as the source of quinine, which for centuries was the most widely taken antimalarial remedy in the world. It was first documented in Peru by a Jesuit missionary in 1633. As well as being a remedy for malaria, the herb is also used for fevers and digestive problems. Various *Cinchona* species are used medicinally, including *C. calisaya*, *C. ledgeriana* and *C. officinalis*.

Cinchona
An evergreen tree reaching 25 m (80 ft), with reddish bark and leaves that grow to 50 cm (20 in).

Parts Used

Bark of the trunk, branches and root contains alkaloids, especially quinine. The bark of the trunk is most commonly used medicinally.

Dried bark

Fresh bark

Key Preparations & Their Uses

Cautions Take only under professional supervision. Do not take during pregnancy. Excessive use causes "cinchonism", which in extreme cases leads to coma and death. Restricted in some countries.

Powder is used to treat malaria.

Decoction is a well-known remedy for fevers. It is also used as a gargle for sore throats.

Tincture is strongly bitter and is prescribed to improve the digestion.

Cinchona bark has a bitter taste, and it, or its constituent quinine, is used to flavour tonic water.

Habitat & Cultivation

Native to mountainous tropical regions of South America, especially Peru, cinchona is now also grown in India, Java and parts of Africa and is cultivated intensively in plantations. The trees are propagated from cuttings in late spring, and the bark of the trunk, branches and root are removed from 6- to 8-year-old trees, and then dried in the sun. The annual production of cinchona bark has been estimated at about 8,200 ton(ne)s a year.

Key Constituents

- Alkaloids (up to 15%), mainly quinoline alkaloids (quinine, quinidine) and indole alkaloids (cinchonamine)
- Bitter triterpenic glycosides (quinovin)
- Tannins
- Quinic acid

Key Actions

- Bitter
- Reduces fever
- Antimalarial
- Tonic
- Stimulates the appetite
- Antispasmodic
- Astringent
- Antibacterial

Research

- **Pharmacology** Cinchona has been thoroughly researched and its pharmacological actions are well established.
- **Quinine** Quinine is both strongly antimalarial and antibacterial. Like the other alkaloids, it is antispasmodic.
- **Bitter** Cinchona contains bitter constituents including alkaloids and quinovin, which produce a reflex stimulation of the digestion as a whole, increasing stomach secretions.
- **Quinidine** Quinidine is a cardiac depressant and is known to reduce heart rate and improve irregularity of heart beat.

Traditional & Current Uses

- **Traditional remedy** The indigenous peoples of Peru have taken cinchona for many centuries, and it is still a well-used remedy for fevers, digestive problems and infections.
- **Homeopathic proving** Samuel Hahnemann, the founder of homeopathy, prepared the first homeopathic medicine, or proving, from cinchona in about 1790.
- **Antimalarial** Cinchona, and in particular quinine, were the principal remedies for malaria until the First World War. From the 1960s, resistance of the malarial parasite to the synthetic drug chloroquine led to quinine's use once again in preventing and treating malaria. Quinine is also used to treat other acute feverish conditions.
- **Digestive stimulant** As a bitter tonic, cinchona stimulates saliva, digestive secretions and the appetite, and improves weak digestive function.
- **Gargle** Cinchona is useful as a gargle for sore, infected throats.
- **Muscle spasms** The herb is used in herbal medicine for cramps, especially night cramps. It also relieves arthritis.
- **Indian remedy** In India, cinchona is used for various conditions, including sciatica, dysentery and problems with *kapha* (see p. 38).

Cinnamomum spp. (Lauraceae)

Cinnamon, Dalcini (Hindi), Rou Gui (Chinese)

Cinnamon
An evergreen tree growing to 8–18 m (26–59 ft), with soft, reddish-brown bark and yellow flowers.

One of the world's most important spices, cinnamon is an ancient medicine, first mentioned in the Jewish religious text, the Torah. The bark has a long history of use in India and South-East Asia, and is thought to have arrived in Egypt around 2000 BCE, reaching Europe around 500 BCE. Traditionally used to treat colds, flu and digestive problems, cinnamon is now commonly taken to help stabilize blood sugar levels.

Parts Used

Inner bark is used in preparations and is distilled for essential oil.

Twigs of closely related *C. cassia* are widely used in Chinese medicine to relieve "cold" conditions.

Key Preparations & Their Uses

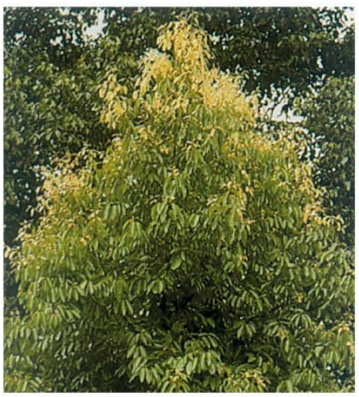
Cautions Occasionally causes allergic reaction; excessive doses may cause low blood sugar; do not take essential oil internally.

Infusion (to make, p. 291). For colds and flu, drink 75 ml 2–3 times a day.

Essential oil For wasp stings, dab on oil as often as required.

Tincture To make, infuse the herb in alcohol (see p. 292). For flatulence, take 20 drops with water up to 4 times a day.

Powder Take up to 3 tsps a day to support stable blood sugar levels.



Cinnamon is now widely cultivated as a spice and a medicine, but, traditionally, only bark from wild trees was used medicinally.

Habitat & Cultivation

Cinnamon (*C. zeylanicum*) is native to India and Sri Lanka, growing in tropical forests to an altitude of 500 m (1,600 ft). It is widely cultivated throughout tropical regions, especially in the Philippines and the Caribbean. The tree is propagated from cuttings and every second year, the young trees are cut back to just above ground level. The bark is stripped from the shoots that emerge the following year, and the inner layer is set out to dry in the sun, forming the characteristic quills.

Related Species

Several species are used besides "true" cinnamon (*C. zeylanicum* and *C. verum*). Cassia (*C. cassia*), native to China and Japan, is used as a *yang* tonic (see p. 40) in Chinese herbal medicine. Cassia is the most commonly used species in commerce.

Key Constituents

- Volatile oil up to 4% (cinnamaldehyde 65–80%, eugenol 5–10%)
- Phenolics (procyanidins)
- Coumarins (*C. cassia*)
- Mucilage

Key Actions

- Warming stimulant
- Carminative
- Anti-diabetic
- Antimicrobial
- Antifungal

Research

- **Metabolic syndrome** Research suggests the bark helps to prevent and treat type 2 (late-onset) diabetes, increasing cells' ability to respond to insulin and aiding the stabilization of blood sugar levels. It also helps to reduce high blood pressure and may slightly lower cholesterol, so could be key to treating metabolic syndrome.
- **Other uses** Similarities of the phenolic procyanidins to grape seed (*Vitis vinifera*, p. 283) and green tea (*Camellia sinensis*, p. 181) indicates cinnamon is strongly antioxidant and aids a healthy circulation. The essential oil is sedative, analgesic and has marked antimicrobial and antifungal activity. There are hints that cinnamon helps brain health.

Traditional & Current Uses

- **Ancient warming remedy** Cinnamon has always been used as a warming herb for "cold" conditions, often in combination with ginger (*Zingiber officinale*, p. 155). The bark stimulates circulation and blood flow to the extremities. It has long been used for flu symptoms, and makes an excellent mouthwash for conditions such as oral thrush.
- **Convalescence** Cinnamon is a gentle acting herb that helps to support both digestion and circulation. It is used specifically in the treatment of debility and in convalescence.
- **Gynaecological remedy** It can help relieve period cramps and might have a normalizing effect on menstrual bleeding – controlling heavy bleeding but stimulating flow where it is light. It is valuable in the treatment of PCOS (polycystic ovary syndrome) as it helps to reduce insulin levels and stabilize oestrogen levels.
- **Insulin resistance** It has a distinct role to play in promoting better blood glucose levels and in preventing insulin resistance – the impaired uptake of sugar by cells that is a warning sign of diabetes. One suggestion, as part of a wider regime for diabetes and metabolic syndrome, is to take 3 tsps of cinnamon powder a day for 4 months.
- **Gastro-intestinal problems** It has always been used as a warming and soothing remedy for digestion, aiding in nausea, indigestion and flatulence, as well as colic and diarrhoea. Its antifungal activity means that it can be of value in gut dysbiosis (disordered gut bacteria).

Self-help Use

- **Colds**, p. 311.

Citrus limon (Rutaceae)

Lemon

Lemon is one of the most important and versatile natural medicines for home use. A familiar food as well as a remedy, it has a high vitamin C content that helps improve resistance to infection, making it valuable for colds and flu. It is taken as a preventative for many conditions, including stomach infections, circulatory problems and arteriosclerosis (thickening of the arterial walls).

***Lemons** were a remedy for scurvy (caused by lack of vitamin C) long before vitamin C was identified.*

Habitat & Cultivation

Thought to be native to India, lemon trees were first grown in Europe in the 2nd century CE and are now cultivated in Mediterranean and sub-tropical climates worldwide. Propagated from seed in spring, they prefer well-drained soil and plenty of sun. The fruit is harvested in winter when the vitamin C content is at its highest.

Key Constituents

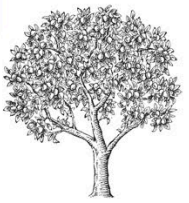
- Volatile oil (about 2.5% of the peel), limonene (up to 70%), alpha-terpinene, alpha-pinene, beta-pinene, citral
- Coumarins
- Bioflavonoids
- Vitamins A, B_1, B_2, B_3 and C (40–50 mg per 100 g of fruit)
- Mucilage

Key Actions

- Antiseptic
- Antirheumatic
- Antibacterial
- Antioxidant
- Reduces fever

Traditional & Current Uses

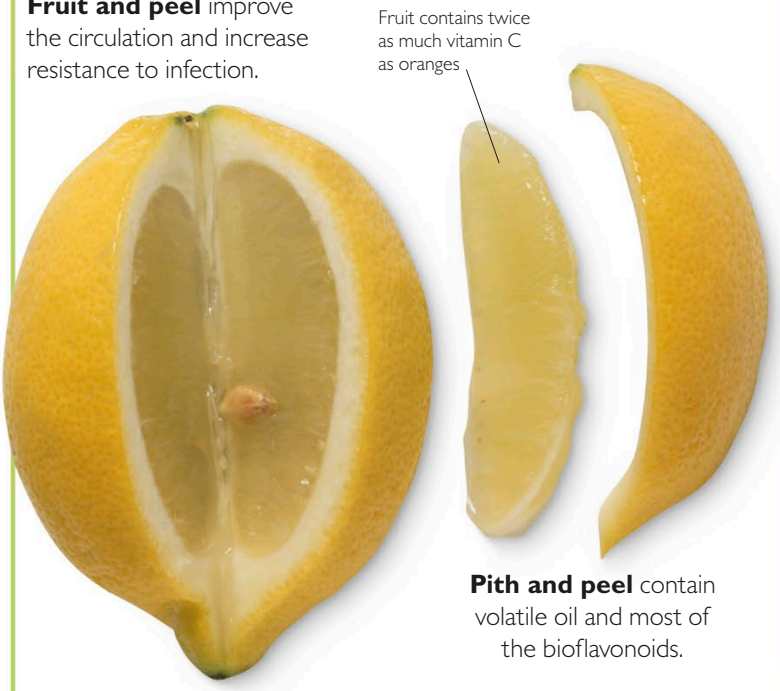
- **Valuable medicine** Spanish popular medicine ascribes so many medicinal uses to lemon that whole books have been written about it.
- **Established properties** Despite its acid content, once digested, lemon has an alkaline effect within the body, making it useful in rheumatic conditions where acidity is a contributory factor. The volatile oil is antiseptic and antibacterial. The bioflavonoids are antioxidant and strengthen the inner lining of blood vessels, especially veins and capillaries, and help counter varicose veins and easy bruising.
- **Preventative** Lemon is a valuable preventative medicine. Its antiseptic and cleansing actions make it useful for those prone to arteriosclerosis, and to infections and fevers (especially of the stomach, liver and intestines). Its ability to strengthen blood vessel walls helps prevent circulatory disorders and bleeding gums. Lemon is also useful as a general tonic for many chronic illnesses. Above all, it is a food that helps maintain general good health.
- **Strengthening vein walls** The whole fruit, especially the pith, treats arteriosclerosis, weak capillaries and varicose veins.
- **Juice** Lemon juice is good for colds, flu and chest infections. It stimulates liver detoxification, improves the appetite and helps ease stomach acidity, ulcers, arthritis, gout and rheumatism. As a gargle, lemon juice is helpful for sore throats, gingivitis and mouth ulcers. Externally, lemon juice can be applied directly to acne, athlete's foot, chilblains, insect stings, ringworm, sunburn and warts.



Lemon
A small, evergreen tree growing to about 7 m (23 ft), with light green, toothed leaves.

Parts Used

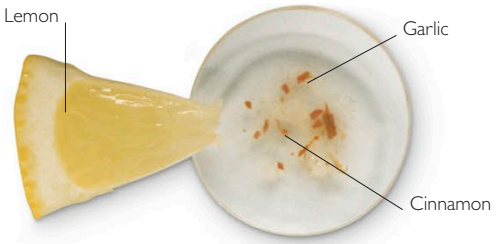
Fruit and peel improve the circulation and increase resistance to infection.



Pith and peel contain volatile oil and most of the bioflavonoids.

Key Preparations & Their Uses

Caution Do not take essential oil internally except under professional supervision.



Remedy For colds, combine 20 ml lemon juice with 50 ml hot water, a crushed clove of garlic and a pinch of cinnamon. Drink up to 3 times a day.

Juice For sore throats, dilute 20 ml lemon juice with 20 ml hot water and use as a gargle.

Essential oil Dilute 5 drops with 1 tsp carrier oil. Dab on to mouth ulcers.

Self-help Uses

- **Acne & boils**, p. 305.
- **Arthritis**, p. 313.
- **Bites & stings**, p. 303.
- **Chilblains**, p. 302.
- **Colds & flu**, p. 311.
- **Cold sores**, p. 304.
- **Sore throats**, p. 311.
- **Weak digestion**, p. 306.

Codonopsis pilosula (Campanulaceae)

Codonopsis, Dang Shen (Chinese)

Codonopsis has a central place in Chinese herbal medicine as a gentle tonic that increases energy levels, improves physical and mental well-being and helps the body adapt to stress. Codonopsis is an adaptogen similar in action to ginseng (*Panax ginseng*, p. 118) but with a milder and shorter-lasting effect. It is given to those who find ginseng too strong a tonic, and is used interchangeably with ginseng in Chinese herbal formulae.

Codonopsis *bears solitary bell-shaped flowers with purple markings in summer.*

Habitat & Cultivation

Codonopsis is native to north-eastern China and grows throughout much of the region, especially in the Shanxi and Szechuan provinces. It is propagated from seed in spring or autumn. The root is harvested in autumn once the aerial parts have died down.

Key Constituents

- Sterols
- Alkaloids
- Terpenes
- Polysaccharides
- Alkanes

Key Actions

- Adaptogen
- Tonic
- Anti-anaemic

Research

- **Blood remedy** Laboratory experiments have demonstrated that codonopsis increases haemoglobin and red blood cell levels, and lowers blood pressure.
- **Stamina** Other research has confirmed the ability of codonopsis to help increase endurance to stress and to maintain alertness.

Traditional & Current Uses

- **Tonic herb** In Chinese herbal medicine, codonopsis is considered to tone the *qi* (vital force – see pp. 24–25), lungs and spleen. It improves vitality and helps to balance metabolic function. It is a gentle tonic remedy that helps to revive the system as a whole.
- **Primary uses** Codonopsis is taken in particular for tired limbs, general fatigue and for digestive problems such as appetite loss, vomiting and diarrhoea. It is thought to nourish the *yin* (see pp. 40–41) of the stomach without making it too "wet", and at the same time to tone the spleen without making it too "dry". It is beneficial in any chronic illness where "spleen *qi* deficiency" is a contributory factor.
- **False fire** Perhaps most interestingly, codonopsis is given as a tonic to people who are stressed and have "false fire" symptoms, including tense neck muscles, headaches, irritability and high blood pressure. Such symptoms can be aggravated by stronger adaptogens such as ginseng (*Panax ginseng*, p. 118) while codonopsis is also more effective in helping to reduce adrenaline levels and associated stress.
- **Breast-feeding tonic** The herb is taken regularly by nursing mothers in China to increase milk production and as a tonic to "build strong blood".

Codonopsis
A twining perennial growing to 1.5 m (5 ft), with oval leaves and pendulous green and purple flowers.

Parts Used

Root is used in cooking or dried for use in tinctures and decoctions.

Dried root

Key Preparations & Their Uses

Remedy Simmer 4 tsp codonopsis, 4 tsp astragalus and 2 tsp lycium berries with 750 ml water for 40 minutes. Drink regularly as a tonic.

Decoction (to make, p. 291). For fatigue, drink 75 ml twice a day.

Tincture (to make, p. 292) is used in the West, but not in Chinese herbal medicine. As a tonic, take ½ tsp with water 3 times a day.

- **Respiratory problems** Codonopsis clears excessive mucus from the lungs, and is useful for respiratory problems including shortness of breath and asthma.

Self-help Uses

- **Loss of appetite & vomiting**, p. 306.
- **Nervous exhaustion, muscle tension & headaches**, p. 308.
- **Stress or convalescence**, p. 319.

Coleus forskohlii syn. *Plectranthus barbatus* (Lamiaceae)

Coleus

Coleus
An aromatic perennial, with tuber-like roots and an erect stem, reaching 60 cm (2 ft).

Native to India, coleus is used in Indian folk medicine rather than within the Ayurvedic tradition, and is a traditional digestive remedy. It shot to fame in Western medical circles when one of its constituents, forskolin, was first isolated in the 1970s. Research by an Indian/German company showed that forskolin was a powerful medicine for various conditions, including heart failure, glaucoma and bronchial asthma.

Coleus is strongly aromatic and the leaves have a distinctive camphor-like scent.

Habitat & Cultivation

Native to India, coleus grows on the dry slopes of the Indian plains and in the foothills of the Himalayas. It is also found in sub-tropical or warm temperate areas, including Nepal, Sri Lanka, Myanmar (Burma) and parts of eastern Africa. Coleus was popular as an ornamental in the 19th century. Today it is cultivated on a large scale in Gujarat, India, for use in pickles – around 1,000 tonnes (980 tons) are harvested each year. The plant is propagated by stem cuttings or root division in spring or summer and flourishes in well-drained soil in sun or partial shade. Both root and leaves are harvested in autumn.

Related Species

Six other species of *Coleus* have been investigated but only *C. forskohlii* contains forskolin. Indian borage (*C. amboinicus*) is used traditionally within Ayurvedic and Unani Tibb herbal medicine to help reduce inflammation and is prescribed for bronchitis and asthma.

Key Constituents

- Volatile oil
- Diterpenes (forskolin)

Key Actions

- Lowers blood pressure
- Antispasmodic
- Dilates the bronchioles (small airways of the lungs)
- Dilates the blood vessels
- Heart tonic

Research

■ **Forskolin** The active constituent forskolin was first isolated in the 1970s. It has important therapeutic benefits, which include lowering high blood pressure, relaxing smooth muscle, increasing the release of hormones from the thyroid gland, stimulating digestive secretions and reducing pressure within the eye.

■ **Whole herb** Research into coleus has focused on the action of forskolin in isolation, and the herb as a whole has not been researched.

Traditional & Current Uses

■ **Traditional uses** Coleus is a traditional herb in India for a wide range of digestive problems. It is given to relieve wind, bloating and abdominal discomfort.

■ **Circulatory remedy** An important heart and circulatory tonic, coleus is used to treat congestive heart failure and poor coronary blood flow. It also improves circulation of blood to the brain.

■ **Respiratory problems** Its antispasmodic action makes coleus valuable for respiratory complaints, including asthma and bronchitis.

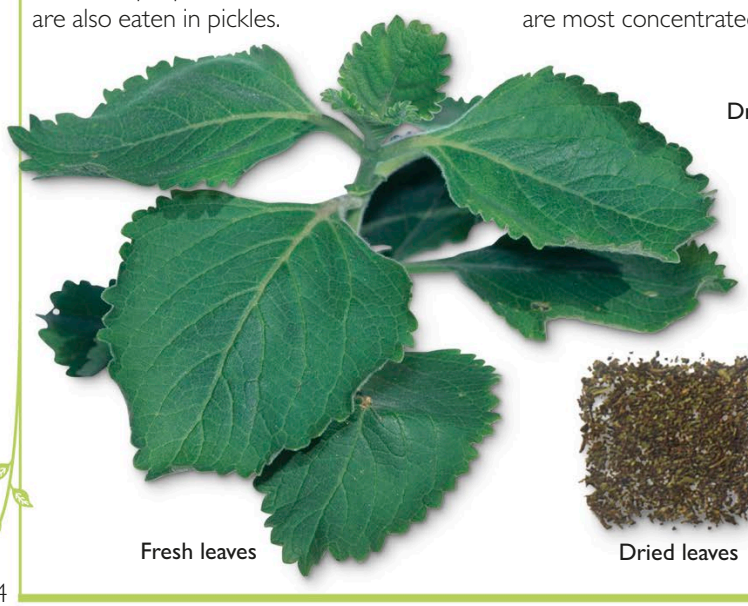
■ **Glaucoma** Coleus is used topically in treatments to relieve glaucoma (excess pressure within the eye, which, if untreated, can result in loss of vision).

■ **Weight loss** Recently, coleus has been marketed as a weight loss aid. It is argued that because coleus stimulates cellular metabolism, it will help to promote weight loss. There is no evidence to support this, though it may be of use if weight gain is due to poor thyroid function.

Parts Used

Leaves have valuable medicinal properties and are also eaten in pickles.

Root is unearthed in autumn when the active constituents are most concentrated.



Fresh leaves

Dried leaves

Dried root

Key Preparations & Their Uses

Cautions Do not take for circulatory problems or glaucoma without professional advice.

Decoction of the root. For bronchial asthma, make a decoction with 15 g root and 500 ml water (see p. 291). Drink in small doses over 2 days.

Infusion of the leaves (to make, p. 291). To relieve wind and bloating, drink 150 ml twice a day.

Commiphora molmol syn. *C. myrrha* (Burseraceae)

Myrrh

Myrrh
A spiny, deciduous tree growing to 5 m (16 ft), with yellow-red flowers and pointed fruit.

Myrrh has been used in perfumes, incense and embalming, and, as a symbol of suffering, was one of the three gifts offered to the infant Jesus by the Three Wise Men. Myrrh is also one of the oldest known medicines and was extensively used by the ancient Egyptians. It is an excellent remedy for mouth and throat problems, with a drying, slightly bitter taste, and it is also useful for skin problems.

Myrrh trees yield a thick, yellow resin which has a distinct, aromatic odour. It is used in mouthwashes.

Habitat & Cultivation

Native to north-east Africa, especially Somalia, myrrh is now also found in Ethiopia, Saudi Arabia, India, Iran and Thailand. It grows in thickets and likes well-drained soil and sun. Myrrh is propagated from seed in spring or from cuttings at the end of the growing season. The resin is collected from cut branches and is dried for use.

Related Species

A number of closely related *Commiphora* species are used interchangeably with myrrh. See guggul (*C. mukul*, p. 193).

Key Constituents

- Gum (30–60%), acidic polysaccharides
- Resin (25–40%)
- Volatile oil (3–8%), including heerabolene, eugenol and many furanosesquiterpenes

Key Actions

- Antiseptic
- Astringent
- Antiparasitic
- Anti-inflammatory
- Anti-ulcer
- Wound healer

Research

- **Antibiotic** Egyptian research confirms that myrrh is a key treatment for certain parasitic infections, notably liver flukes and schistosomiasis (both common and serious waterborne diseases). In one clinical study, myrrh extract cleared all signs of liver fluke infection within 6 days, with patients remaining clear 3 months later. Others have been similarly successful. It is also being studied as a gastric ulcer remedy and for anti-cancer properties. The gum resin has thyroid-stimulating activity.

Traditional & Current Uses

- **Mouth & throat remedy** Being astringent and strongly antiseptic, myrrh is a favoured remedy for sore throats, mouth ulcers and gingivitis (gum disease). As myrrh is not soluble in water, tincture or essential oil is used and diluted. The resulting mouthwash or gargle is often swiftly effective (though tastes very bitter). Myrrh's key actions also make it valuable in countering infection throughout the digestive tract, while at the same time it promotes healing in inflamed areas, notably gastric ulcers.
- **Ayurvedic remedy** In Ayurvedic medicine, myrrh is considered a tonic and aphrodisiac and to cleanse the blood. It has a reputation for improving intellect. Myrrh is also taken for irregular or painful menstruation.
- **External uses** Myrrh is an underused treatment for skin problems such as acne, boils and inflammatory conditions. The herb's drying and slightly anaesthetizing effect has led to its use in Germany as a treatment for pressure sores caused by prosthetic limbs.

Self-help Uses

- **Acne & boils**, p. 305.
- **Mouth & tongue ulcers**, p. 306.
- **Mouth ulcers & gum problems**, p. 306.
- **Oral thrush**, p. 314.
- **Sore throats**, p. 311.

Parts Used

Gum resin oozes from fissures or cuts in the bark of the tree and dries into yellow-red solid pieces.

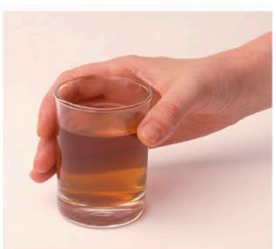
Dried gum resin

Key Preparations & Their Uses

Cautions Do not use in pregnancy. Do not take the essential oil internally.

Tincture (to make, p. 292). For mouth ulcers, carefully dab on a little every hour.

Essential oil For congested sinuses, dilute 3 drops in 1 tsp carrier oil and massage gently (see p. 297).



Mouthwash Dilute 1 tsp tincture (to make, p. 292) with 100 ml water and use as a mouthwash or for sore throats.

Powder Rub a little on to sore gums 3 times daily.

Capsules (to make, p. 292). For bronchial catarrh, take a 300 mg capsule twice a day.

Corydalis yanhusuo (Papaveraceae)

Corydalis, Yan Hu Suo (Chinese)

Corydalis
A small herbaceous plant growing to 20 cm (8 in) with narrow leaves and pink flowers.

Corydalis is an important Chinese remedy that has been used at least since the 8th century to help "invigorate the blood" and relieve almost any painful condition. It is used particularly for menstrual cramps and for chest and abdominal pain. Research in China has confirmed the validity of corydalis' traditional use, revealing that it contains powerful alkaloids that are responsible for its analgesic effect.

Corydalis *is commonly prescribed by the Chinese in formulations for period pain.*

Habitat & Cultivation

Native to Siberia, northern China and Japan, corydalis is commonly cultivated in eastern and north-eastern parts of China. It is propagated from seed in early spring or autumn, and the rhizome is harvested in late spring and early summer when the aerial parts have withered.

Related Species

C. cava, a related species from southern Europe, has been shown to provide relief from involuntary tremors and ataxia (shaky movements). *C. gariana*, native to the Himalayas, is used in India as a detoxifying and tonic herb for skin problems and genito-urinary infections. Fumitory (*Fumaria officinalis*, p. 213), used to treat skin problems, is also closely related.

Key Constituents

- Alkaloids (including corydalis L, corydaline, tetrahydropalmatine [THP], protopine)
- Protoberberine-type alkaloid (leonticine)

Key Actions

- Analgesic
- Antispasmodic
- Sedative

Research

- **Analgesic properties** Research in China from the 1950s onwards has shown that corydalis has useful pain-relieving properties. The powdered rhizome has up to one-tenth of the analgesic potency of morphine – an alkaloid derived from the opium poppy (*Papaver somniferum*, p. 244). Morphine is highly concentrated and the strongest analgesic in medical use. Although this research shows corydalis to be much weaker in its effect than morphine, it nonetheless indicates the value of corydalis in pain relief.
- **Alkaloids** The strongest analgesic alkaloid in corydalis is corydaline. Tetrahydropalmatine (THP), another alkaloid, is analgesic and sedative and has been shown to work, at least in part, by blocking the dopamine receptors in the central nervous system. This constituent is also known to stimulate secretion of the adrenocorticotrophic hormone (ACTH) by the anterior pituitary gland, which controls aspects of stress.
- **Menstrual pain** Several clinical trials in China have shown corydalis to be very effective in relieving menstrual pain.

Traditional & Current Uses

- **Pain relief** Corydalis is specifically taken to treat pain, and is used in Chinese herbal medicine to relieve pain resulting from almost any cause. It is rarely taken on its own, being combined with various other herbs as appropriate.
- **Period pain** Corydalis is well worth trying as a natural treatment for period pains, and combines well with cramp bark (*Viburnum opulus*, p. 150).
- **Abdominal conditions** Many types of abdominal pain, whether in the lower abdomen as in appendicitis, or in the upper abdomen as in peptic ulcer, are treated with corydalis.
- **Injuries** In Chinese medical theory, and in other herbal traditions, pain is often thought to stem from obstruction of normal blood flow. As corydalis is thought to "invigorate the blood", it is considered to be especially useful as a treatment for the pain that results from a traumatic injury.

Parts Used

Rhizome contains powerful alkaloids that research shows help alleviate pain. It is unearthed in autumn and dried and chopped.

Dried rhizome

Key Preparations & Their Uses

Caution Do not take during pregnancy.

Powder To ease pain, take 2 g of powder with food twice a day.

Decoction Make a decoction with 10 g corydalis, 3 g cinnamon and 500 ml water (see p. 291). For period pain, take 100 ml twice a day.

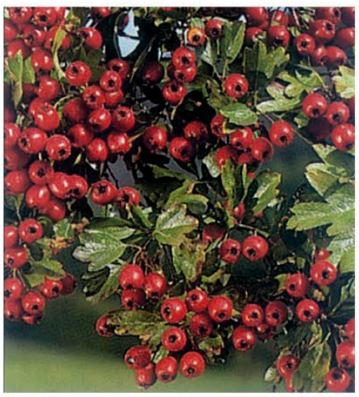
Tincture (to make, p. 292). For abdominal pain, take up to 1 tsp with water twice a day.

Crataegus oxyacantha & *C. monogyna* (Rosaceae)

Hawthorn

Hawthorn
A deciduous, thorny tree with small leaves, white flowers and red berries, growing to 8 m (26 ft).

Hawthorn is an extremely valuable medicinal herb. It was known in the Middle Ages as a symbol of hope and taken for many ailments. Today it is used mainly for heart and circulatory disorders, in particular for angina. Western herbalists consider it literally to be a "food for the heart", increasing blood flow to the heart muscles and restoring normal heart beat. Recent research has confirmed the validity of these uses.



Hawthorn has bright red berries in autumn. They are used in remedies to treat a variety of circulatory disorders.

Habitat & Cultivation

The hawthorn tree grows in hedgerows, copses and fields throughout the British Isles and in all temperate regions of the northern hemisphere. It can be propagated from seed, but it takes 18 months to germinate, so the trees are usually cultivated from cuttings. The flowering tops are harvested in late spring and the berries in late summer to early autumn.

Key Constituents

- Polyphenols
- Proanthocyanins
- Bioflavonoids
- Triterpenoids
- Coumarins
- Amines (trimethylamine – in flowers only)

Key Actions

- Cardiotonic
- Circulatory tonic
- Lowers blood pressure
- Antioxidant

Research

■ **Bioflavonoids** Hawthorn has been fairly well researched. Its main medicinal benefit is due to its high bioflavonoid and proanthocyanin content. These constituents relax and dilate the arteries, especially the coronary arteries. This increases the flow of blood to the heart muscles and reduces the symptoms of angina. Both the bioflavonoids and the proanthocyanins are also strongly antioxidant, helping to prevent or reduce degeneration of the blood vessels.

■ **Cardiac herb** Several clinical trials have explored hawthorn's ability to lower blood pressure and support heart function, with substantially positive findings and strong evidence of the herb's safety.

Traditional & Current Uses

■ **Historical uses** Hawthorn was traditionally used in Europe for kidney and bladder stones, and as a diuretic. The 16th- and 18th-century herbals of Gerard, Culpeper and K'Eogh all list these uses. Its current use for circulatory and cardiac problems stems from an Irish physician who started using it successfully for such conditions towards the end of the 19th century.

■ **Heart remedy** Hawthorn is used today to treat angina and coronary artery disease. It specifically improves heart function and is useful for mild congestive heart failure and irregular heart beat. Like many herbs, hawthorn works in tune with the body's own physiological processes and it takes time for change to occur.

■ **Blood pressure** Hawthorn is best thought of as a remedy that normalizes blood pressure. It clearly works to lower high blood pressure, but also appears to support blood pressure levels where these tend to be low.

■ **Poor memory** Combined with ginkgo (*Ginkgo biloba*, p. 100), hawthorn is used to enhance poor memory. It works by improving the circulation of blood within the head, thereby increasing the amount of oxygen to the brain.

Parts Used

Flowering tops contain trimethylamine, which stimulates the circulation.

Dried flowering tops

Fresh flowering tops

Berries help the heart to function normally.

Fresh berries

Dried berries

Key Preparations & Their Uses

Cautions Interactions with prescribed medicines can occur. Seek advice from a herbal or medical practitioner if taking prescribed medicines, especially for high blood pressure and heart disorders.

Tincture of flowering tops or berries, is the most commonly used preparation.

Decoction of flowering tops is valuable for circulatory disorders.

Tablets containing powdered flowering tops are convenient for long-term use.

Infusion, made from the flowers or leaves, helps to restore blood pressure levels to normal.

Crataeva nurvula (Capparidaceae)

Varuna, Barun (Hindi), Three-leafed Caper

Varuna
A large deciduous tree growing to 10 m (33 ft), with smooth bark and pale yellow flowers.

The bark of the varuna tree is an important herb for problems affecting the kidneys and bladder, especially kidney and bladder stones. In Ayurvedic medicine, it has been used for around 3,000 years to treat these problems, and, as is the case with so many herbs, recent scientific research is confirming the appropriateness of its traditional usage, demonstrating that it prevents the formation of kidney stones.

Varuna is frequently cultivated in the vicinity of temples in central India and Bangladesh.

Habitat & Cultivation

Varuna grows throughout India and is often found along riverbanks. Grown from seed in spring, the leaves are harvested in spring and the bark is collected throughout the year.

Key Constituents

- Triterpenes
- Saponins
- Flavonoids
- Sterols
- Alkaloids
- Glucosilinates

Key Actions

- Diuretic
- Inhibits the formation of stones

Research

■ **Bladder & kidney stones** Clinical research in India from the 1980s onwards indicates that varuna increases bladder tone and inhibits the formation of bladder stones. It reduces the production within the body of oxalates, substances that can precipitate in the kidneys and bladder to form stones. The herb also seems to reduce the rate at which stone-forming constituents within the urine are deposited in the kidneys.

■ **Urinary system** Indian research in the 1980s and 1990s points to varuna being valuable in the treatment of urinary tract infections and bladder problems caused by an enlarged prostate gland. In one clinical trial, 85% of patients with chronic urinary tract infections were symptom-free after undergoing 4 weeks' treatment with varuna.

Traditional & Current Uses

■ **Ancient urinary remedy** Texts dating back to the 8th century BCE document varuna's use in Ayurvedic medicine for kidney and bladder problems. From around 1100 CE, varuna became the main Indian herbal medicine for kidney stones.

■ **Other traditional uses** Traditionally, varuna bark is considered useful in Ayurveda (see p. 36–39) for weakened conditions of *vata* (air) and *kapha* (earth), and is used to treat many conditions, including asthma, bronchitis and skin diseases. The bark is also used to treat fevers, gastritis and vomiting, as well as snake bite. The fresh leaves, bruised and mixed with vinegar, relieve sore and inflamed joints.

■ **Kidney stones** Today, varuna is beginning to be used in the West, as well as in India, in the prevention and treatment of kidney stones. It is given to people who are prone to develop kidney stones, reducing the tendency to stone formation. It is also prescribed for people who already have small stones. Varuna improves smooth muscle tone and encourages the removal of stones in the urine.

■ **Urinary tract remedy** Combined with antiseptic and immune-stimulating herbs, varuna is very useful for urinary tract infections, including cystitis. It is also sometimes effective for bladder conditions involving poor muscle tone, some cases of incontinence, and urinary problems associated with prostate enlargement.

Parts Used

Bark contains constituents that inhibit the formation of kidney stones.

Dried bark

Leaves are harvested in spring and are used in infusions.

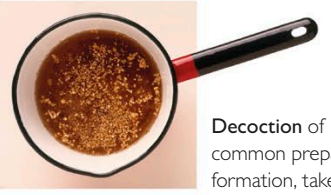
Dried leaves

Key Preparations & Their Uses

Caution Best taken under professional supervision.

Infusion of leaves (to make, p. 291). For painful joints, apply as a lotion 3 times a day (see p. 296).

Powdered bark is used in Ayurveda. For urinary infections, take 15 g with water daily.



Decoction of bark (to make, p. 291) is the most common preparation. To prevent kidney stone formation, take 150 ml once a day.

Crocus sativa (Iridaceae)

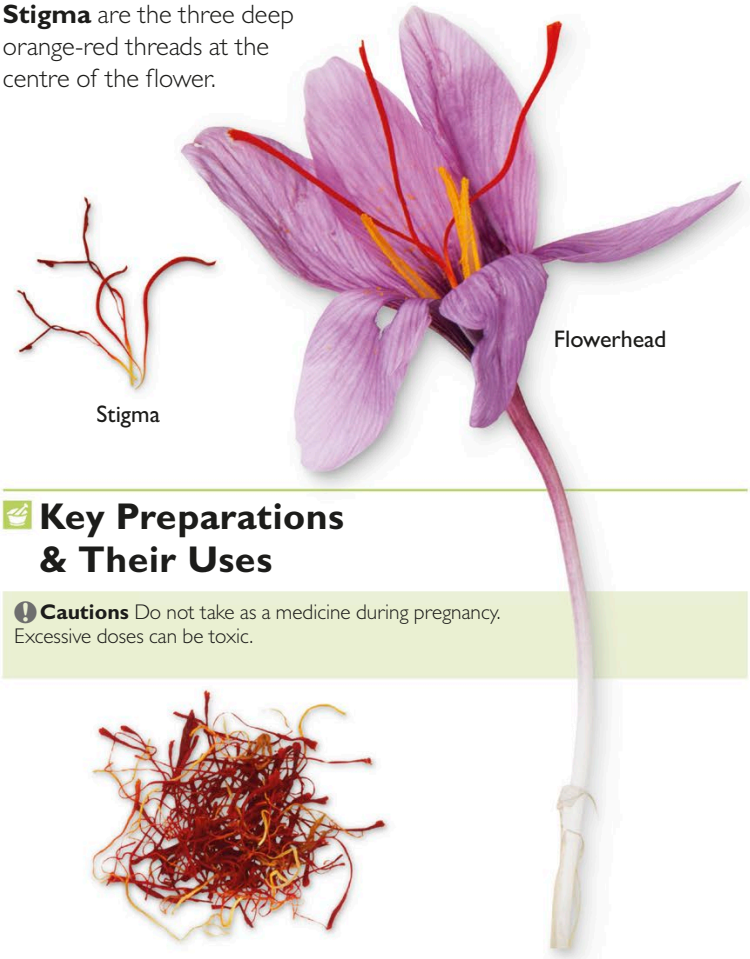
Saffron

Saffron
A perennial growing to 30 cm (1 ft), saffron has slender leaves and multiple lilac to mauve flowers.

Perhaps most familiar as an ingredient in the Spanish dish paella, saffron is a prized herbal medicine that by weight is more valuable than gold. The thin, deep orange filaments picked from the saffron flower have longstanding traditional use as a remedy for lowered mood, menstrual disorders and as a sexual tonic. Current research is endorsing some of these findings and saffron clearly offers significant health benefits.

Parts Used

Stigma are the three deep orange-red threads at the centre of the flower.

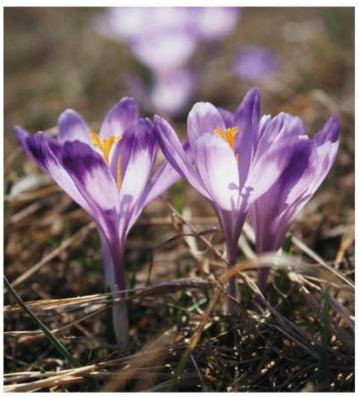


Key Preparations & Their Uses

Cautions Do not take as a medicine during pregnancy. Excessive doses can be toxic.

Dried stigma For low mood, take 5 threads 1–2 times a day.

Capsules (to make, p. 292). For menstrual cramps, take a 300 mg capsule up to five times a day.



Saffron's *golden red threads may help to support eyesight and prevent macular degeneration.*

Habitat & Cultivation

Saffron prefers a sunny, well-drained site. It is cultivated in Iran, which grows roughly 90% of world production. The stigma are collected in the autumn when the plant is in flower. The flowers are first cut, the stigma then being plucked from within. The corms (bulbs) naturally reproduce themselves – one corm producing five after 3 years.

Related Species

Saffron should not be confused with meadow saffron (*Colchicum autumnale*, p. 193), an important (but toxic) medicinal plant that is only distantly related to saffron.

Key Constituents

- Crocins (carotenoid glucosides)
- Volatile oil (including safranal)
- Bitter substances

Key Actions

- Neuroprotective
- Antidepressant
- Antispasmodic
- Aphrodisiac
- Stomach tonic

Research

- **Depression** Several clinical trials have found saffron to be beneficial in depression. In 2005, Iranian researchers found that saffron was as effective as fluoxetine (Prozac) for mild to moderate depression. In a different clinical trial, saffron was shown to help relieve the symptoms of sexual dysfunction (in both men and women) that can sometimes present themselves as a side effect of taking fluoxetine.
- **Eye health** Research from a combined Italian-Australian study suggests that saffron has a useful role to play in helping to support eye health in the early stages of macular degeneration. The study found that retinal function improved in those taking saffron. Other research suggests that saffron might prove useful in treating glaucoma.
- **Cognitive function** Saffron appears to have marked neuroprotective activity (see *Depression* and *Eye health*). Iranian clinical research has examined saffron's therapeutic potential in people with moderate Alzheimer's disease. Though still at a very early stage, two small studies indicate that saffron, and particularly the crocins within it, acts on the brain to improve memory and cognitive function, including in those with dementia.
- **Adulteration** Due to its high cost, saffron is frequently adulterated. For medicinal purposes, good quality material is essential.

Traditional & Current Uses

- **Traditional uses** Avicenna, a 10th-century physician famous for his *Canon of Medicine*, described saffron in detail, noting that it was an "exhilarant and cardiac tonic" that "strengthens eyesight", "reduces appetite" and is "a stimulant of sexual desire". A re-reading of the *Canon* paved the way for much of the Iranian research over recent years. The herbalist Christopher Catton, following the English view of saffron as a "cordial" or heart tonic, wrote in 1862 that "Saffron hath power to quicken the spirits, and the virtue thereof pierceth by and by to the heart, provoking laughter and merriness". It is said that rubbed into the palm, saffron has an immediate action on the heart.
- **Chinese herbal medicine** In Chinese medicine, saffron is used for depression and shock. It also has long use as a remedy for menstrual difficulties such as period cramps and pre-menstrual syndrome (PMS). Saffron is also used to treat skin disorders, stomach weakness and to reduce appetite.

Curcuma longa syn. *C. domestica* (Zingiberaceae)

Turmeric, Haldi (Hindi), Jiang Huang (Chinese)

Turmeric
A perennial reaching 90 cm (3 ft), with a short stem, lance-shaped leaves and a knobbly rhizome.

Although best known for its bright yellow colour and spicy taste in Indian food, turmeric is increasingly recognized as a medicinal food with almost unparalleled health benefits. Its powerful anti-inflammatory action makes turmeric a key remedy in many chronic health problems, including allergies, arthritis, diabetes and psoriasis, where long-term inflammation is usually a major underlying factor.

Turmeric is a valuable remedy for arthritic and skin conditions.

Habitat & Cultivation

Turmeric is native to India and southern Asia and is now cultivated throughout the tropics. It is propagated by cuttings from the root, and needs well-drained soil and a humid climate. The rhizome is unearthed in winter.

Key Constituents

- Curcumin
- Volatile oil (3–5%), including zingiberen and turmerone
- Bitter principles
- Resin

Key Actions

- Anti-inflammatory
- Lowers cholesterol levels
- Antimicrobial
- Anti-platelet (blood-thinning)

Research

■ **New interest in turmeric** Despite its long-standing use in India and China, the therapeutic actions of turmeric were not researched until recent decades when there was an upsurge of interest in foods and medicines that lower cholesterol levels or have antioxidant properties (neutralize harmful free radicals). Research from the 1970s onwards, mostly in India, has tended to confirm traditional uses of the root.

■ **Anti-inflammatory** Research has established that turmeric, and curcumin in particular, blocks several different inflammatory pathways, countering inflammation throughout the body. Turmeric is largely taken as a supplement to prevent or treat cancer, dementia and many auto-immune diseases. Black pepper is traditionally taken with turmeric to augment its efficacy. This effect is now supported by research.

■ **Curcumin** When applied to the skin and exposed to sunlight, turmeric is strongly antibacterial. Curcumin is the constituent responsible for this action. Curcumin is also more strongly antioxidant than vitamin E.

■ **Cholesterol** Chinese clinical trials in 1987 indicate that turmeric lowers cholesterol levels.

■ **Cancer** Turmeric may be a valuable preventative remedy for those at risk of developing cancer, but more research is needed.

■ **Other actions** Research has shown that turmeric has an anti-coagulant action, keeping the blood thin. It also increases bile production and flow, and has a protective action on the stomach and liver.

Traditional & Current Uses

■ **Traditional remedy** Turmeric improves the action of the liver and is a traditional remedy for jaundice in both Ayurvedic and Chinese herbal medicine. It is also an ancient herb for digestive problems such as gastritis and acidity, helping to increase mucus production and protect the stomach. The herb also alleviates nausea.

■ **Arthritis & allergies** Even though turmeric does not relieve pain, its anti-inflammatory action makes it useful for arthritis and other inflammatory conditions such as asthma and eczema.

■ **Circulatory disorders** Due to its anti-inflammatory, blood-thinning and cholesterol-lowering properties, turmeric is now used to reduce the risk of strokes and heart attacks.

■ **Skin conditions** Applied to the skin, turmeric is useful in treating a number of conditions, including psoriasis, and fungal infections such as athlete's foot.

Self-help Uses

■ **Athlete's foot**, p. 304.
■ **Nausea & travel sickness**, p. 306.

Parts Used

Rhizome is carefully unearthed and broken into sections. It is boiled or steamed before drying.

Dried rhizome

Fresh rhizome

Fresh rhizome is bright orange inside

Key Preparations & Their Uses

Cautions If taking blood-thinning medication, or if gallstones are present, take only on professional advice. Turmeric occasionally causes skin rashes.

Decoction (to make, p. 291). For gastritis, take 75 ml 3 times a day.

Poultice using a paste made with powder. For psoriasis, mix 1 tsp with a little water and apply 3 times a day.

Powder is the most common preparation in Ayurvedic medicine. For gastritis, take 1 tsp with water 3 times a day.

Tincture (to make, p. 292). For eczema, take 1 tsp diluted with 100 ml of water 3 times a day.

Dioscorea villosa (Dioscoreaceae)

Wild Yam, Colic Root

Wild yam
A deciduous perennial vine, climbing to 6 m (20 ft) with heart-shaped leaves and tiny green flowers.

Wild yam is the plant source of a steroid-like substance, diosgenin, which was the starting point in the creation of the first contraceptive pill. There is no suggestion that the plant was used as a contraceptive in the past, though it has traditionally been taken in Central America to relieve menstrual, ovarian and labour pains. The herb is also valuable for digestive problems, arthritis and muscle cramps.

Parts Used

Root and tuber have valuable antispasmodic properties. They are used to treat colic and menstrual cramps.

Fresh root and tuber

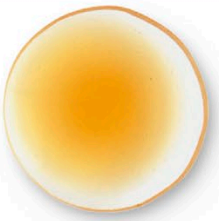
Chopped dried root and tuber

Dried root and tuber

Key Preparations & Their Uses

Caution Do not take during pregnancy.

Decoction (to make, p. 291). For irritable bowel syndrome, take 75 ml twice a day.



Tincture (to make, p. 292). For arthritis, take ½ tsp with water twice a day.

Wild yam can be found growing wild in damp woodlands in North America.

Habitat & Cultivation

Wild yam is native to North and Central America, and has now become naturalized in tropical, semi-tropical and temperate climates around the world. The plant is propagated from seed in spring, or from sections of tubers or by root division in spring or autumn. It thrives in sunny conditions and rich soil. The root and tuber of wild yam are harvested in autumn.

Related Species

Many yam species have a hormonal action. *Shan yao (Dioscorea opposita)* is an important tonic for the stomach and digestion in traditional Chinese medicine, and is taken for appetite loss and wheezing.

Key Constituents

- Steroidal saponins (mainly dioscin)
- Phytosterols (beta-sitosterol)
- Alkaloids
- Tannins
- Starch

Key Actions

- Antispasmodic
- Anti-inflammatory
- Antirheumatic
- Increases sweating
- Diuretic

Research

- **Synthesis of hormones**

Diosgenin, a breakdown product of dioscin, was first identified by Japanese scientists in 1936. This discovery paved the way for the synthesis of progesterone (one of the main female sex hormones) and of corticosteroid hormones such as cortisone. Wild yam does not contain oestrogen or progesterone, and wild yam "natural progesterone" products are derived from chemically processed diosgenin, and have little or no relationship with naturally occurring wild yam.

- **Anti-cholesterol activity**

Research indicates that diosgenin reduces the absorption of cholesterol from the gut and increases its elimination from the body.

Traditional & Current Uses

- **Traditional uses** Both the Maya and the Aztec peoples used wild yam medicinally – possibly to relieve pain. The plant is also known as colic root and rheumatism root in North America, indicating its use by European settlers for these conditions.
- **Gynaecological problems** A traditional remedy for painful periods and ovarian pain, wild yam has oestrogen-modulating activity and is used to treat menopausal symptoms.
- **Arthritis & rheumatism** The herb's combination of anti-inflammatory and antispasmodic actions makes it extremely useful in treatments for arthritis and rheumatism. It reduces inflammation and pain, and relaxes stiff muscles in the affected area.
- **Muscle spasms & pain** Wild yam helps relieve cramps, muscle tension and colic.
- **Digestive problems** The herb can be used as an effective treatment for digestive problems, including gallbladder inflammation, irritable bowel syndrome and diverticulitis.

Self-help Use

- **Period pain**, p. 315.

Echinacea spp. (Asteraceae)

Echinacea, Purple Coneflower

A key medicinal herb, echinacea has a tonic action on the body's immune system. Known by 19th-century Americans as Indian Snakeroot (due to its ability to treat snake bites) the herb has a potent ability to counter infection, especially viral and bacterial, and to aid the clearance of toxins from the body. It is commonly taken as a preventative and treatment for upper respiratory infections such as colds, flu and coughs.

***Echinacea** is a name derived from the Greek word for hedgehog and was inspired by the appearance of the flower's central cone.*

Habitat & Cultivation

Native to central parts of the US, three species of echinacea are used medicinally: *E. angustifolia*, *E. purpurea* and *E. pallida*. All are threatened in the wild and only commercially grown plants should be used. *E. purpurea* is cultivated widely in the US and Europe. Grown from seed in spring or by root division in winter, it thrives in rich, sandy soil. The leaves and flowers are gathered during flowering; the roots of 4-year-old plants are lifted in autumn.

Key Constituents

(*E. purpurea*)

- Alkylamides (mostly isobutylamides)
- Caffeic acid esters (mainly echinacoside and cynarin)
- Polysaccharides

Key Actions

- Immune modulator
- Antimicrobial
- Anti-inflammatory
- Detoxifying
- Heals wounds
- Stimulates saliva

Research

- **Immune system** Clinical research into echinacea has confirmed that it increases the number of white blood cells and their strength of action, although its precise mode of action on immune function is not well understood. The polysaccharides inhibit the ability of viruses to take over cells, while the alkylamides are antibacterial and antifungal. Research supports the use of echinacea to prevent colds, and respiratory infections resulting from air travel. Not all clinical trials have found positive effects, possibly because in some cases too low a dose of echinacea was used.

Traditional & Current uses

- **Native American medicine** The Comanche used echinacea as a remedy for toothache and sore throats and the Sioux took it for rabies, snake bite and septic conditions.
- **Western uses** Echinacea is a key remedy in Western herbal medicine, and is used to treat many health problems, notably viral and fungal infections, and skin infections such as acne and boils. It makes an excellent gargle for throat infections, and is typically prescribed by herbalists wherever the immune system is underperforming.
- **Allergies** The herb is a helpful remedy for treating allergies, such as asthma.

Self-help Uses

- **Acne & boils**, p. 305.
- **Bites & stings**, p. 303.
- **Chilblains**, p. 302.
- **Cold sores**, p. 304.
- **Coughs & bronchitis**, p. 310.
- **Earache**, p. 312.
- **Flu, sore throats & tonsillitis**, p. 311.
- **Mouth ulcers**, p. 306.
- **Urinary & fungal infections**, p. 314.

Echinacea
A perennial growing to 1.2 m (4 ft) with upright stems and pink to purple daisy-like flowers.

Parts Used

Flower of *E. purpurea* is occasionally used for infections.

Roots of all three species have valuable immune-stimulating properties.

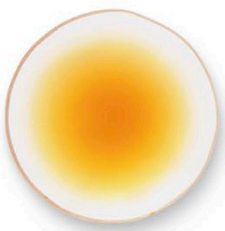
Fresh *E. purpurea* root

The best-quality root leaves a tingling sensation on the tongue

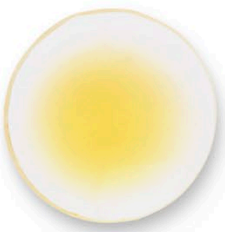
Dried root

Key Preparations & Their Uses

Caution Can cause allergic reactions in rare cases.



Tincture of root (to make, p. 292). For chronic infections, take ½ tsp in water 3 times a day.



Decoction of root (to make, p. 291). To treat throat infections, gargle with 50 ml 3 times a day.

Capsules of powdered root (to make, p. 292). For colds, take a 500 mg capsule 3 times a day.

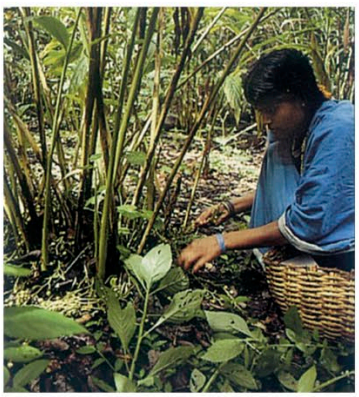
Tablets Take as an immune-stimulant for infections.

Elettaria cardamomum (Zingiberaceae)

Cardamom, Elaci (Hindi)

Cardamom is one of the oldest spices in the world and was used extensively in ancient Egypt to make perfumes. Its medicinal uses, however, are less well known. Cardamom has been employed in Ayurvedic medicine for thousands of years, and is an excellent remedy for many digestive problems, helping to soothe indigestion and wind. It has an aromatic and pungent taste and combines well with other herbs.

Cardamom
A perennial growing to 5 m (16 ft), with mauve marked, white flowers and very long, lance-shaped leaves.



Cardamom seed pods are harvested by hand. Each pod contains up to 20 aromatic, dark red-brown seeds.

Habitat & Cultivation

Cardamom is native to southern India and Sri Lanka, where it grows abundantly in forests at 800–1,500 m (2,600–4,900 ft) above sea-level. It is also widely cultivated in India, southern Asia, Indonesia and Guatemala. Cardamom is propagated from seed in autumn or by root division in spring and summer, and needs a shady position and rich and moist, but well-drained soil. The seed pods are harvested just before they start to open in dry weather during the autumn and are dried whole in the sun.

Key Constituents

- Volatile oil
- Alkaloids
- Flavonoids
- Saponins
- Sterols

Key Actions

- Digestive tonic
- Protects liver
- Mild stimulant
- Antispasmodic

Research

- **Antispasmodic** A 2009 Indian clinical study found that cardamom successfully lowered blood pressure in 20 adults over a 3-month period. Those taking part in the trial had "a feeling of well-being without any side-effects". The herb has a long-established antispasmodic action.

Traditional & Current Uses

- **Ancient herb** Cardamom has been highly valued both as a spice and a medicine and was known in Greece in the 4th century BCE.
- **Digestive problems** Throughout history, cardamom has been used for the relief of digestive problems, especially indigestion, wind and griping and irritable bowel syndrome. The seed's pleasant taste means that cardamom is often added to digestive remedies to improve their flavour.
- **Current Indian uses** Cardamom is used in India for many conditions, including asthma, bronchitis, kidney stones, anorexia, debility and weakened *vata* (see p. 37).
- **Chinese remedy** In China, the herb is taken for urinary incontinence and as a tonic.
- **Bad breath** Cardamom is an effective treatment for bad breath, and when taken with garlic helps to reduce its smell.
- **Aphrodisiac** The herb contains androgenic compounds and has a long-standing reputation as a tonic and aphrodisiac. A traditional Arabian recipe blends cardamom with coffee.

Self-help Use

- **Wind & bloating**, p. 306.

Parts Used

Seeds are crushed for use in infusions or have their volatile oil extracted.

Green seed pods indicate that the seeds are good quality

Seed pods

Opened seed pods

Crushed seeds and seed pods

Fresh seed pods on stem

Key Preparations & Their Uses

Caution Do not take the essential oil internally.

Essential oil For digestive pain, dilute 10 drops with 4 tsp carrier oil (see p. 297). Gently rub into the abdomen.

Infusion (to make, p. 291) is a pleasant drink. For indigestion, drink 150 ml after meals.

Tincture (to make, p. 292) improves the appetite. For poor appetite, combine 5 drops with 15 drops gentian tincture and take 3 times a day.

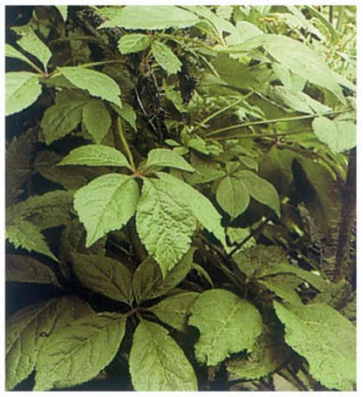
Crush cardamom seeds using a pestle and mortar just before you are about to use them.

Eleutherococcus senticosus (Araliaceae)

Siberian Ginseng, Eleuthero

Siberian ginseng A deciduous, hardy shrub, growing to 3 m (10 ft). It has 3 –7 toothed leaflets on each stem.

Siberian ginseng is a powerful tonic herb with an impressive range of health benefits. Unlike many plant medicines, Siberian ginseng is generally more useful in maintaining good health than in treating ill health. Research shows that extracts aid the body in coping with both physical and mental stress, including overwork and extreme cold or heat, and the herb is taken to support performance during periods of ongoing pressure or stress.



***Siberian ginseng** can help those exposed to toxic chemicals and radiation and was given to people following the nuclear disaster at Chernobyl in 1986.*

Habitat & Cultivation

Siberian ginseng is native to eastern Russia, China, Korea and Japan. It can be grown from seed, but it is a difficult plant to germinate. The root is lifted in autumn and dried.

Related Species

Wu jia pi (*Acanthopanacis gracilistylus*) is a very close relative of Siberian ginseng, used in Chinese herbal medicine to treat "cold, damp" conditions.

Key Constituents

- Eleutherosides, 0.6–0.9%
- Polysaccharides
- Triterpenoid saponins
- Glycans

Key Actions

- Adaptogenic
- Tonic
- Protects the immune system

Research

- **Russian studies** There has been much research into Siberian ginseng in Russia since the 1950s, though the exact method by which it stimulates stamina and resistance to stress is not yet understood.
- **Tonic herb** Siberian ginseng appears to have a general tonic effect on the body, in particular on the adrenal glands, helping the body to withstand heat, cold, infection, other physical stresses, and radiation. It has even been given to astronauts to counter the effects of weightlessness.
- **Stamina** Athletes have experienced as much as a 9% improvement in stamina when taking Siberian ginseng.

Traditional & Current Uses

- **Enhancing resilience** Siberian ginseng is taken to improve mental resilience, such as in preparation for exams, and to reduce the impact of physical training and stress on the body.
- **Exhaustion** Siberian ginseng can be highly beneficial in relieving exhaustion and debilitated states resulting from overwork or long-term stress. It can also prove helpful in treating chronic fatigue, although in some cases it may be overly stimulating.
- **Cancer treatment** A valuable remedy during conventional cancer treatment, Siberian ginseng supports vitality and healthy function when taking chemotherapy, and may reduce side-effects. Russian studies suggest that it helps to reduce the harmful effects of radiation.

Self-help Uses

- **Convalescence**, p. 319.
- **Stress**, p. 308.

Parts Used

Root is unearthed in autumn, dried whole and then chopped up for use in medicinal preparations.

Whole dried root

Chopped dried root

Fresh root

Key Preparations & Their Uses

Cautions Healthy young adults should not take for more than 6 weeks. Can be taken long term on professional advice. Avoid caffeine when taking Siberian ginseng. Side-effects are rare, but more likely if the standard dose is exceeded.

Decoction (to make, p. 291). Take 35 ml twice a day as a general tonic.

Tincture (to make, p. 292). During busy periods, take ½ tsp with water 3 times a day.

Capsules Make with powder (see p. 292) and for long-term stress take 1 g of capsules daily.

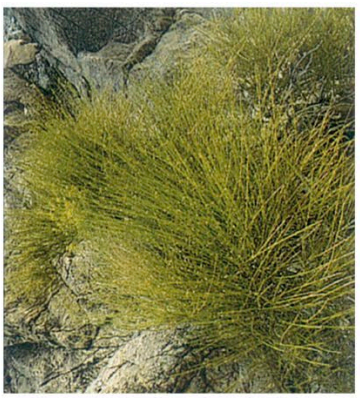
Tablets are a convenient way of taking Siberian ginseng. Use before exams or other stressful events.

Ephedra sinica (Ephedraceae)

Ephedra, Ma Huang (Chinese), Desert Tea

Ephedra
An evergreen shrub growing to 50 cm (20 in), with long, narrow sprawling stems and tiny leaves.

Ephedra is a strongly stimulant, acrid-tasting herb that has a central place in Chinese and other herbal traditions. According to legend, the bodyguards of Genghis Khan, threatened with beheading if they fell asleep on sentry duty, used to take a tea containing ephedra to stay alert. Today, ephedra is used in the West and in China for problems ranging from chills and fevers to asthma and hay fever.



Ephedra was found in a Middle Eastern neolithic grave, indicating that it may have been used as a medicine 60,000 years ago.

Habitat & Cultivation

Native to northern China and Inner Mongolia, ephedra often grows in desert areas. It is propagated from seed in autumn or by root division in autumn or spring and needs well-drained soil. The stems are gathered all the year round and dried.

Related Species

Other *Ephedra* species with similar medicinal properties to ephedra grow throughout the northern hemisphere. In North America, related species were used to treat fevers and relieve kidney pain, while in India, *Ephedra* species were taken for asthma, hay fever and rheumatism.

Key Constituents

- Protoalkaloids (ephedrine, pseudoephedrine)
- Tannins
- Saponin
- Flavone
- Volatile oil

Key Actions

- Increases sweating
- Dilates the bronchioles (small airways in the lungs)
- Dries mucus membranes
- Diuretic
- Stimulant
- Raises blood pressure

Research

- **Active constituents** Most of the active constituents mimic the effect of adrenaline within the body, increasing alertness. Ephedrine, extracted originally from ephedra, was first synthesized in 1927 and is used as a decongestant and anti-asthmatic.
- **Whole herb** When used at the correct dosage, the whole herb has significant therapeutic effects – including dilating the bronchial airways – and a very low incidence of side-effects.
- **Ephedra abuse** Ephedra has been banned in the US due to frequent abuse of the herb, as an amphetamine-type "high" and, at excessive dosage, in weight loss regimes. At therapeutic dosage, and with professional guidance, ephedra rarely gives rise to side-effects.

Traditional & Current Uses

- **Historical uses** Traditionally, Zen monks used ephedra to promote calm concentration during meditation.
- **Chinese herb** In China, ephedra is popular for chills and fevers, coughs and wheezing, and in combination with rehmannia (*Rehmannia glutinosa*, p. 125) it is given to treat kidney *yin* deficiency (see pp. 40–41).

Parts Used

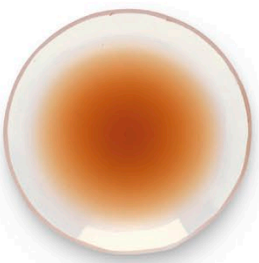
Stems are collected all the year round. Ephedra is best known in medicine for the ephedrine that it contains.

Key Preparations & Their Uses

Cautions Take only under professional supervision. Do not take if suffering from angina, glaucoma, high blood pressure, enlarged prostate gland or overactive thyroid gland. Ephedra occasionally causes side-effects, including headaches, tremors and insomnia. Restricted herb in some countries.

Decoction is prescribed by herbalists for asthma.

Powder is used by the Chinese to treat kidney energy deficiency.

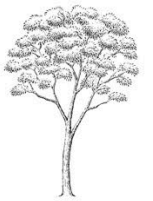


Tincture is used in treatments to alleviate the aches and pains of rheumatism.

- **Current Western uses** Ephedra is used principally in current Western herbal medicine as a treatment for asthma and hay fever, and for the acute onset of colds and flu. It also helps to raise blood pressure, cool fevers and to alleviate rheumatism.

Eucalyptus globulus (Myrtaceae)

Eucalyptus, Blue Gum



Eucalyptus
An evergreen tree growing to 60 m (195 ft), with a blue-grey trunk and green leaves.

Eucalyptus, a traditional Aboriginal remedy, is a powerful antiseptic used all over the world for relieving coughs and colds, sore throats and other infections. It is warming and stimulating and for many people its scent conjures up days spent in bed during childhood with eucalyptus and other oils smothered on the chest. Eucalpytus is a common ingredient in many over-the-counter cold remedies.

Eucalyptus was first introduced to the West from Australia in the 19th century.

Habitat & Cultivation

Native to Australia, eucalyptus is cultivated in plantations in tropical, sub-tropical and temperate areas of the world. Planting can cause ecological problems because the trees absorb huge quantities of water and prevent the growth of native plants. This can be beneficial, however, drying up marshy areas and so reducing the risk of malaria. The leaves are harvested as required and are either dried or distilled for oil.

Related Species

Many other *Eucalyptus* species contain valuable essential oils, including *E. smithii* (p. 207).

Key Constituents

- Volatile oil (cineole, up to 80%)
- Flavonoids
- Tannins
- Resin

Key Actions

- Antiseptic
- Analgesic
- Expectorant
- Stimulates local blood flow
- Insect repellent

Research

- **Essential oil** Extensive research into eucalyptus essential oil during the last 50 years has shown it to have a marked antiseptic action and the ability to dilate the bronchioles (small airways) of the lungs. The action of the essential oil as a whole is stronger than that of its main constituent, cineole.

Traditional & Current Uses

- **Infections** Eucalyptus is a traditional Aboriginal remedy for infections and fevers. It is now used throughout the world for these ailments.
- **Antiseptic** The herb is an antiseptic and is very helpful for colds, flu and sore throats.
- **Expectorant** Eucalyptus is a strong expectorant, suitable for chest infections, including bronchitis and pneumonia.
- **Warming** The diluted essential oil, applied to the skin as a chest or sinus rub, has a warming and slightly anaesthetic effect, helping to relieve respiratory infections. The same effect occurs when the infusion or tincture is used as a gargle.
- **Pain relief** Diluted essential oil applied to the affected area can help relieve rheumatic joints characterized by aching pains and stiffness, as well as neuralgia and some bacterial skin infections.

Self-help Uses

- **Catarrh, sinus problems & earache**, p. 312.
- **Coughs & bronchitis**, p. 310.

Parts Used

Leaves, which contain antiseptic chemicals, are either dried or used for essential oil.

Key Preparations & Their Uses

Caution Do not take essential oil internally except under professional supervision. Do not give to small children or infants.

Lozenges, containing eucalyptus. Take for sore throats.

Capsules, (to make, p. 292). For bronchitis, take a 200 mg capsule 3 times a day.

Inhalation For colds, add 10 drops essential oil to boiling water (p. 297).

Essential oil (to use, p. 297). Use 5 drops diluted with 10 ml carrier oil as a chest or sinus rub.

Infusion (to make, p. 291). Drink 150 ml 3 times a day for bronchitis.

Tincture (to make, p. 292). For chesty coughs, add ½ tsp tincture to 100 ml water and take twice a day.

Eugenia caryophyllata syn. *Syzgium aromaticum* (Myrtaceae)

Clove

Clove tree
An evergreen, pyramid-shaped tree growing to 15 m (49 ft). The tree is strongly aromatic.

Cloves, the dried flower buds of the clove tree, are best known as a spice, but are also highly valued as a herbal medicine, particularly in India and South-East Asia. Native to the Molucca Islands, cloves were one of the earliest spices to be traded and were imported into Alexandria in 176 CE. The cloves contain the best essential oil, but the stems and leaves of the tree can also be distilled for their oil.

Parts Used

Flower buds are picked unopened and dried for use in infusions or powders and for oil extraction.

Key Preparations & Their Uses

Cautions External use can cause dermatitis. Do not take essential oil internally except under professional supervision.

Infusion For colic, infuse 2 cloves in 150 ml of water (see p. 291). Take 3 times daily.

Tincture (to make, p. 292). For flatulence, take 20 drops with water 3 times a day.

Essential oil For toothache, dab 1–2 drops of oil on to cotton wool and rub over the affected tooth.

Cloves are pink when unripe, but later turn brown when they are dried outside in the sun.

Habitat & Cultivation

Originally from the Molucca Islands (Indonesia) and the southern Philippines, cloves are now grown extensively in Tanzania and Madagascar, and to a lesser extent in the West Indies and Brazil. The tree is grown from seed in spring or from semi-ripe cuttings in summer. Twice a year, the unopened flower buds are picked as they develop, and then sun-dried.

Key Constituents

- Volatile oil containing eugenol (up to 85%), acetyl eugenol, methyl salicylate, pinene, vanillin
- Gum
- Tannins

Key Actions

- Antiseptic
- Carminative
- Stimulant
- Analgesic
- Prevents vomiting
- Antispasmodic
- Eliminates parasites

Research

- **Volatile oil** Argentinian research in 1994 showed clove's volatile oil to be strongly antibacterial. Eugenol (a phenol) is the largest and most important component of the volatile oil. It is strongly anaesthetic and antiseptic, and therefore useful in pain relief for toothache, and as an antiseptic for many conditions.
- **Acetyl eugenol** Acetyl eugenol, another component of the volatile oil, has been shown to be strongly antispasmodic.

Traditional & Current Uses

- **Ancient all-purpose remedy** Cloves have been used in South-East Asia for thousands of years and were regarded as a panacea for almost all ills.
- **Antiseptic** The antiseptic property of cloves makes them useful for treating certain viral conditions. In tropical Asia, they have often been given to treat infections such as malaria, cholera and tuberculosis, and parasites such as scabies.
- **Antispasmodic** Digestive discomfort, such as wind, colic and abdominal bloating, can be relieved with cloves. Their anti-spasmodic property also eases coughs and, applied topically, relieves muscle spasms.
- **Mind & body stimulant** Cloves are a stimulant, both to the mind (improving memory) and to the body as a whole, and have been used as an aphrodisiac in India and in the West. The herb has also been used to prepare for childbirth. It helps stimulate and strengthen uterine muscle contractions in labour.
- **Additional uses** Besides all their other uses, cloves can be used to treat acne, skin ulcers, sores and styes. They also make a potent mosquito and clothes moth repellent. Oranges that had been studded with cloves were used in the Moluccas as insect repellents.
- **Western herbalism** Despite the bewildering variety of their therapeutic uses, cloves are underrated in the West. They are used regularly only in mouthwashes, and for their local anaesthetic effect, for example in relieving toothache.

Self-help Uses

- **Acne & boils**, p. 305.
- **Fever**, p. 311.
- **Fungal skin infections**, p. 304.
- **Neuralgia**, p. 308.
- **Toothache**, p. 308.

Filipendula ulmaria (Rosaceae)

Meadowsweet, Queen of the Meadow

Meadowsweet
A perennial reaching 1.5 m (5 ft), with toothed leaves and clusters of creamy, scented flowers.

In medieval times, meadowsweet was a favourite strewing herb – Gerard wrote in his *Herball* (1597) that "the smell thereof makes the heart merry and joyful and delighteth the senses". Salicylic acid isolated from the plant was first synthesized in 1860 and later used to develop aspirin. Nowadays, meadowsweet is taken for gastric problems and inflammatory conditions, such as arthritis.

***Meadowsweet** was called "meadwort" in the Middle Ages, as it was used to flavour mead.*

Habitat & Cultivation

Native to Europe, meadowsweet grows easily in damp places, preferring ditches and the banks of streams and rivers. It seeds itself freely, but can also be propagated by root division in autumn or spring. Leaves and flowering tops are harvested in summer when the flowers open.

Key Constituents

- Flavonol glycosides (approximately 1%), mainly glycosides of quercetin
- Phenolic glycosides (salicylates)
- Volatile oil (salicylaldehyde)
- Polyphenols (tannins)

Key Actions

- Anti-inflammatory
- Antirheumatic
- Astringent
- Diuretic
- Stimulates sweating

Research

- **Salicylates** The salicylates are aspirin-type substances, which help to reduce inflammation and relieve pain, for example in arthritic conditions. However, they do not have the blood-thinning properties of aspirin.
- **Protective combination** Unlike aspirin, which at high doses causes gastric ulceration, the combination of salicylates, tannins and other constituents acts to protect the lining of the stomach and intestines, while providing the anti-inflammatory benefit of the salicylates. Meadowsweet clearly illustrates the fact that herbal medicines cannot be understood by considering their constituents in isolation.

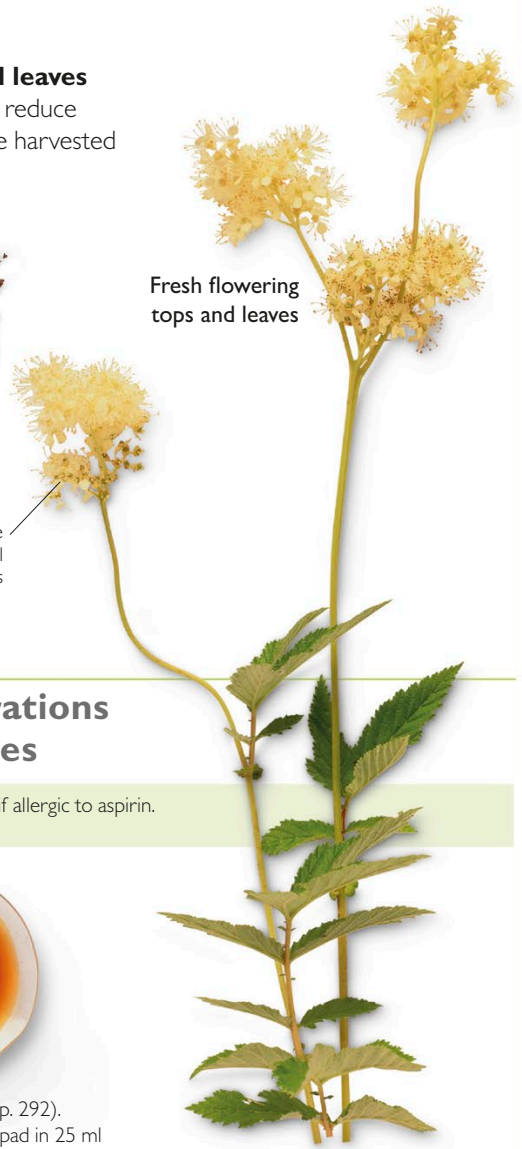
Traditional & Current Uses

- **Acid indigestion** The herb is a key remedy for acid indigestion and gastro-oesophageal reflux, and can quickly help to improve troubled digestions. Its mode of action is not well understood, though its anti-inflammatory action is clearly important.
- **Arthritis** Meadowsweet is commonly taken as a remedy for rheumatic and arthritic problems such as osteoarthritis, gout, lumbago and sciatica. It is a mild diuretic and is thought to help the kidneys to clear acid residues from the body, thereby relieving joint inflammation, which is often associated with acidity.
- **Digestive remedy** Meadowsweet is a safe remedy for diarrhoea, even in children, and is used with other herbs for irritable bowel syndrome.
- **Other uses** Meadowsweet has traditionally been taken in much the same way as aspirin – to ease the pain and discomfort of headache, colds and flu, and toothache.

Parts Used

Flowering tops and leaves contain salicylates that reduce inflammation. They are harvested in summer.

Dried flowering tops and leaves



Key Preparations & Their Uses

Caution Do not take if allergic to aspirin.

Tincture (to make, p. 292). For painful joints, soak a pad in 25 ml tincture and apply to the area.

Tablets Take for rheumatic aches.

Infusion Make by adding freshly boiled water to the herb (see p. 291). For indigestion, take 100 ml every 2 hours.

Decoction (to make, p. 291). For diarrhoea, take 150 ml 2–3 times a day.

Powder For acidity, take ½ tsp mixed with a little water 3 times a day.

Self-help Uses

- **Acidity with gastritis**, p. 307.
- **Arthritis associated with acid indigestion or a peptic ulcer**, p. 313.
- **Heartburn**, p. 317.

Gentiana lutea (Gentianaceae)

Gentian

Gentian
An erect perennial growing to 1.2 m (4 ft), with star-shaped yellow flowers and oval leaves.

Gentian is a powerful bitter, and the herb is an essential ingredient of traditional aperitifs and bitters such as Angostura bitters. The customary aperitif about half an hour before a meal is more than a social nicety – the bitter constituents stimulate gastric juices and prime the stomach, enabling it to cope effectively with a heavy meal. Medicinally, gentian strengthens a weak or underactive digestive system.

Gentian is a tall, attractive plant and has been cultivated in gardens at least since the time of the 16th-century herbalist Gerard.

Habitat & Cultivation

This largest member of the diverse gentian family is native to the Alps and other mountainous regions of central and southern Europe from Spain to the Balkans, flourishing at altitudes of 700–2,400 m (2,300–7,900 ft). The large root crowns can be split or the plant grown from seed. Due to overharvesting from the wild, this is now a threatened species, so buy only cultivated root. It needs a loamy soil and a sheltered site. The root is dug up in early autumn and dried.

Related Species

Many gentian species are bitter-tasting plants and a number are used in herbal medicine as a result, for example Japanese gentian (*G. scabra*) and the Chinese *qin jiao* (*G. macrophylla*).

Key Constituents

- Bitter principles (gentiopicroside, amarogentin)
- Gentianose
- Inulin
- Phenolic acids

Key Actions

- Bitter
- Digestive stimulant
- Eases stomach pain

Research

- **Amarogentin** Although present in much smaller quantities than gentiopicroside, amarogentin is the constituent largely responsible for the bitterness of gentian. It is 3,000 times more bitter than gentiopicroside, and, tasted at dilutions of 1:50,000, it is possibly the most bitter substance on the planet.

Traditional & Current Uses

- **Origin of the name** Gentius, king of Illyria in the 2nd century BCE, reputedly discovered the virtues of the plant. The name gentian attests to its use in classical times.
- **Action of bitter principles** There are 4 main taste receptors on the tongue – sweet, sour, salt and bitter. It has been shown that the bitter principles in gentian stimulate the bitter taste receptors on the tongue, causing an increase in the production of saliva and gastric secretions. This in turn stimulates the appetite and improves the action of the digestive system in general.
- **Digestive stimulant** By stimulating the action of the stomach, many symptoms associated with a weak digestion, such as wind, indigestion and poor appetite, are relieved. Stomach and other secretions are improved, which in turn helps increase the absorption of nutrients. The herb also acts as a stimulant on the gallbladder and liver encouraging them to function more efficiently. Gentian is therefore useful in almost any condition where the digestive system needs to be toned up. It is often taken as a digestive tonic in old age.
- **Nutrient absorption** By improving digestive function, gentian increases the absorption of nutrients across the gut wall. It aids the absorption of a wide range of nutrients, including iron and vitamin B_{12}, and is therefore useful for iron-deficiency anaemia (usually resulting from blood loss). It is often added to prescriptions for women with heavy menstrual bleeding.

Parts Used

Root is harvested in autumn for use in remedies to improve the digestion.

Key Preparations & Their Uses

Caution Do not take if suffering from acid indigestion or a peptic ulcer.

Tincture (to make, p. 292). For poor appetite, take 2–5 drops with water before meals.

Decoction (to make, p. 291). For anaemia and weakened digestion, take 25 ml 3–5 times a day.

Self-help Uses

- **Anaemia**, p. 301.
- **Fever**, p. 311.
- **Weakened digestion**, p. 319.
- **Wind & bloating**, p. 306.

Ginkgo biloba (Ginkgoaceae)

Ginkgo, Maidenhair Tree, Bai Guo (Chinese)

Ginkgo
A deciduous tree with one or several main trunks and spreading branches. It grows to 30 m (100 ft).

Ginkgo is thought to be the oldest tree on the planet, first growing about 190 million years ago. Though long used as a medicine in its native China, its therapeutic actions have only recently been researched. The leaves (and their extract) are used to treat poor circulation and to maintain a plentiful blood flow to the central nervous system. Ginkgo is also valuable for asthma and other allergic problems.

Ginkgo trees are widely cultivated for their leaves, which are an excellent herbal remedy for poor circulation and asthma.

Habitat & Cultivation

Native to China, ginkgo trees are grown in large-scale plantations in China, France and in South Carolina in the US. They produce green to yellow fan-shaped leaves with radiating veins, and round fruits about 3 cm (1 in) across. Leaves and fruit are harvested in autumn.

Key Constituents

- Flavonoids
- Ginkgolides
- Bilobalides

Key Actions

- Circulatory tonic
- Anti-inflammatory
- Anti-asthmatic
- Anti-allergenic
- Antispasmodic

Research

- **Clinical trials** Extensive research since the 1960s has established the importance of ginkgo in improving poor cerebral circulation and aiding memory and concentration. Several clinical trials have found that gingko proved useful as a treatment for dementia, including Alzheimer's disease, although some studies have found no positive benefit. Other research indicates possible use in conditions as varied as depression, glaucoma and poor peripheral arterial blood flow.
- **Anti-inflammatory action** Ginkgo's ability to reduce inflammation makes it valuable in conditions where nerve tissue is damaged by inflammation, for example multiple sclerosis.
- **Platelet activating factor (PAF)** Ginkgo inhibits PAF, a substance released by a range of blood cells that causes the blood to become stickier and more likely to produce clots.

Traditional & Current Uses

- **Chinese herbal medicine** Ginkgo seeds are used to relieve wheezing and to lessen phlegm. They are also given to treat vaginal discharge, a weak bladder and incontinence. The leaves are traditionally used for treating asthma.
- **Western herbal medicine** Western interest in ginkgo has concentrated on the remarkable ability of the leaves to improve the circulation, especially poor circulation to the brain, and the herb's anti-allergenic and anti-inflammatory actions, which make it a particularly useful herbal remedy for the treatment of asthma. Ginkgo is a bestselling herbal medicine in France and Germany, where it is taken daily by millions of people from middle age onwards to maintain and improve cerebral circulation and the memory, and to reduce the possibility of a stroke. It is also a valuable medicine to take after a stroke, where it is thought to support nerve tissue and strengthen the circulation.

Parts Used

Leaves improve the circulation. They are used to make tinctures, tablets and fluid extract.

Fresh leaf

Dried leaves

Seeds are prescribed by the Chinese for urinary problems and wheezing.

The husk of the ginkgo seed is removed before use

Seeds

Key Preparations & Their Uses

Cautions Do not exceed the dose. May cause toxic reactions if taken to excess. Take on professional advice if using blood-thinning medication. Restricted herb in some countries.

Tincture of leaves (to make, p. 292). For poor circulation, take 1 tsp 2–3 times a day with water.

Tablets Take for poor circulation and memory loss.

Decoction of the seeds is used by herbalists to treat wheeziness.

Fluid extract made from the fresh leaves is prescribed by medical herbalists for asthma.

Self-help Uses

- **Failing memory**, p. 319.
- **High blood pressure & arteriosclerosis**, p. 301.

Glycyrrhiza glabra (Fabaceae)

Liquorice

With a constituent – glycyrrhizic acid – that is 50 times sweeter than sugar, it is not surprising that liquorice is mainly thought of as a sweet. Yet it is also one of the most valuable of all herbal medicines, a powerful anti-inflammatory that is effective in conditions as varied as arthritis and mouth ulcers. It is among the most used herbs in European medicine, and has been taken medicinally for several thousand years.

Liquorice
A woody-stemmed perennial growing to 2 m (6½ ft), with dark leaves and cream to mauve flowers.

Liquorice has pea-like flowers in summer. It is cultivated commercially for its roots.

Habitat & Cultivation

Liquorice grows wild in south-eastern Europe and south-western Asia, but it is now extensively cultivated. It is propagated by dividing the roots in autumn or spring. The root of 3- to 4-year-old plants is unearthed in late autumn.

Related Species

Various *Glycyrrhiza* species are used medicinally in a similar way to liquorice, for example the Chinese *gan cao* (*G. uralensis*).

Key Constituents

- Triterpene saponins (glycyrrhizin, up to 6%)
- Isoflavones (liquiritin, isoliquiritin, formononetin)
- Polysaccharides
- Phytosterols

Key Actions

- Anti-inflammatory
- Expectorant
- Demulcent
- Adrenal agent
- Mild laxative

Research

- **Adrenal agent** Research shows that on being broken down in the gut, glycyrrhizin has an anti-inflammatory and anti-arthritic action similar to hydrocortisone and other corticosteroid hormones. It stimulates production of hormones by the adrenal glands and reduces the breakdown of steroids by the liver and kidneys.
- **Glycyrrhizin** Research in Japan in 1985 showed that glycyrrhizin was effective in the treatment of chronic hepatitis and liver cirrhosis.
- **Protective mucus** Liquorice as a whole reduces stomach secretions but produces a thick protective mucus for the lining of the stomach, making it a useful remedy in inflammatory stomach conditions.
- **Isoflavones** The isoflavones are known to be oestrogenic. Liquorice is often used to treat menopausal symptoms, including hot flushing.

Traditional & Current Uses

- **Traditional uses** Liquorice has long been valued for its medicinal uses. It was taken in ancient Greece for asthma, chest problems and mouth ulcers.
- **Soothing herb** Inflammatory conditions of the digestive system such as mouth ulcers, gastritis, peptic ulceration and excessive acid problems benefit from liquorice's demulcent and anti-inflammatory properties, as do many chest complaints, arthritis, inflamed joints, and some skin problems. Liquorice is also soothing for inflamed eyes.

Parts Used

Root is harvested in autumn. It has valuable anti-inflammatory properties.

Dried root

Fresh root

An extensive system of taproot, branch roots and runners can spread to 1 m (3 ft)

Key Preparations & Their Uses

Cautions Excessive doses can cause serious side-effects, including high blood pressure. Do not take large doses with high blood pressure. During pregnancy, or for long-term use, take on professional advice.

Tincture (to make, p. 292).
For gastritis, add ½ tsp to 100 ml water and take twice a day.

Dried juice stick
Chew for indigestion.

Powder
Gently rub on to mouth ulcers.

Decoction For constipation, make a decoction (see p. 291) with 1 part liquorice and 3 parts dandelion root. Drink 150 ml twice a day.

Fluid extract is prescribed for peptic ulcers.

- **Adrenal stimulation** Liquorice stimulates the adrenal glands, helping in Addison's disease, where the adrenal glands cease to function normally.
- **Constipation** Liquorice is useful as a gentle laxative.

Self-help Uses

- **Constipation**, p. 307.
- **Coughs & bronchitis**, p. 310.
- **Loss of appetite & vomiting**, p. 306.
- **Mouth ulcers**, p. 306.
- **Oral thrush**, p. 314.

Hamamelis virginiana (Hamamelidaceae)

Witch Hazel

Witch hazel A small deciduous tree growing to 5 m (16 ft), with coarsely toothed, broadly oval leaves.

Witch hazel was a traditional remedy of many Native North American peoples. They used poultices soaked in a decoction of bark to treat tumours and inflammations, especially of the eye, and took the herb internally for haemorrhaging and heavy menstrual bleeding. European settlers in the 18th century soon came to value witch hazel for its astringency, and its use spread to Europe and beyond.

***Witch hazel** produces distinctive flowers in winter followed by brown fruit capsules that, when ripe, eject 2 seeds up to 4 m (13 ft) away from the tree.*

Habitat & Cultivation

Witch hazel is a woodland tree, indigenous to Canada and eastern parts of the US. Today it is commonly cultivated in Europe. The trees are grown from hardwood cuttings or from seed, both of which are planted in autumn. The leaves are gathered in summer and dried. The bark is harvested during the autumn and dried as quickly as possible in the shade.

Related Species

European hazel (*Corylus avellana*) is a similar herb. It is used occasionally in European herbal medicine as an astringent to treat diarrhoea. The oil is nutritious and can be used to treat threadworms in children.

Key Constituents

- Tannins (8–10%)
- Flavonoids
- Bitter principle
- Volatile oil (leaves only)

Key Actions

- Astringent
- Anti-inflammatory
- Stops external and internal bleeding

Traditional & Current Uses

- **Established properties** Witch hazel contains large quantities of tannins. These have a drying, astringent effect, causing the tightening up of proteins in the skin and across the surface of abrasions. This creates a protective covering that increases resistance to inflammation and promotes healing of broken skin. Witch hazel also appears to help damaged blood vessels beneath the skin. It is thought that this effect may be due to the flavonoids as well as to the tannins. When witch hazel is distilled it retains its astringency, suggesting that astringent agents other than tannins are present.
- **Skin problems** Witch hazel is a very useful herb for inflamed and tender skin conditions, such as eczema. It is mainly used where the skin has not been significantly broken and helps to protect the affected area and prevent infection.
- **Damaged veins** Witch hazel is valuable for damaged facial veins, varicose veins and haemorrhoids, and is an effective remedy for bruises. Due to its astringent properties, it helps to tighten distended veins and restore their normal structure.
- **Other uses** A lotion can be applied to the skin for underlying problems such as cysts or tumours.

Parts Used

Leaves and young twigs are distilled to make "witch hazel".

Key Preparations & Their Uses

Caution If using internally, take only under professional supervision.

Tincture of bark (to make, p. 292). Dilute 20 ml in 100 ml cold water and sponge on to varicose veins.

Distilled witch hazel Dab on to insect stings, sore skin and broken veins.

Ointment of bark (to make, p. 295). Apply to haemorrhoids twice a day.

Infusion of the leaves (to make, p. 291). Use as a lotion (see p. 296) for broken veins and cysts.

Witch hazel also makes an effective eyewash for inflammation of the eyes. Less commonly, it is taken internally to alleviate diarrhoea, helping to tighten up the mucous membranes of the intestines, and for bleeding of any kind.

Self-help Uses

- **Bruises**, p. 304.
- **Cleansing wounds**, p. 304.
- **Eczema**, p. 300.
- **Haemorrhoids**, p. 302.
- **Weeping skin**, p. 303.
- **Varicose veins**, p. 302.

Harpagophytum procumbens (Pedaliaceae)

Devil's Claw

The colourful name of this African plant is derived from the appearance of its tough, barbed fruit. The medicinal properties of devil's claw were first discovered by various southern African peoples, who used a decoction of the tuber to treat digestive problems and arthritis. The herb is now widely available in pharmacies and health food shops in the West as a remedy for arthritis and rheumatism.

Devil's claw
A trailing perennial, reaching 1.5 m (5 ft) in length, with fleshy lobed leaves and barbed, woody fruit.

Devil's claw, found growing in the Transvaal, has bright purple flowers in spring.

Habitat & Cultivation

Devil's claw is native to Namibia, Botswana and South Africa, where it is a protected species due to over-harvesting of wild plants. It thrives in clay or sandy soils, preferring roadsides and wasteground, especially places where natural vegetation has been cleared. Propagated from seed in spring, the young tubers are unearthed in autumn and cut into pieces about 2 cm (¾ in) long. Care is taken not to mix the tubers, which contain the active constituents, with the roots, as this can render the herb ineffective.

Related Species

Two related species, both growing in Africa, are used medicinally in a more or less similar way to devil's claw.

Key Constituents

- Iridoid glycosides (harpagoside)
- Sugars (stachyose)
- Phytosterols
- Flavonoids

Key Actions

- Anti-inflammatory
- Analgesic
- Digestive stimulant
- Anti-arthritic

Research

- **Anti-inflammatory** French research (1992) indicated that devil's claw is anti-inflammatory, but opinion is divided on its effectiveness in practice.
- **Pain relief** There is some evidence to confirm devil claw's use as an analgesic as it seems to be effective in easing the symptoms of joint pain.
- **Bitter** The strongly bitter action of devil's claw stimulates and tones the digestive system. Many arthritic conditions are associated with poor digestion and absorption of food, and the stimulant effect of this herb on the stomach and gallbladder contributes to its overall therapeutic value as an anti-arthritic remedy.

Traditional & Current Uses

- **African traditional remedy** Devil's claw is used by various peoples in southern Africa, including the Khoisan and the Bantu. Traditionally it has been used as a tonic, especially for digestive problems; for arthritis and rheumatism; to reduce fevers; and as an ointment for sores, ulcers and boils.
- **Western uses** Current Western use of devil's claw is broadly in line with its traditional application. It is commonly available over-the-counter in tablet form for arthritic and rheumatic conditions and can bring relief from pain arising from a range of joint and muscular problems, including gout, back pain, fibrositis and rheumatoid arthritis.

Parts Used

Tuber is harvested in autumn and used in a variety of anti-arthritic preparations.

Chopped dried tuber

Sliced dried tuber

Key Preparations & Their Uses

Cautions Do not take if suffering from gallstones or peptic ulcer. Do not take during pregnancy. May interact with anticoagulants.

Decoction (to make, p. 291). For rheumatism, simmer 1 tsp root in 150 ml water for 15 minutes. Take in small doses over 1–2 days.

Tincture (to make, p. 292). For arthritis associated with poor digestion, take 30 drops with water twice daily.

Tablets Take for arthritis and rheumatism.

Self-help Uses

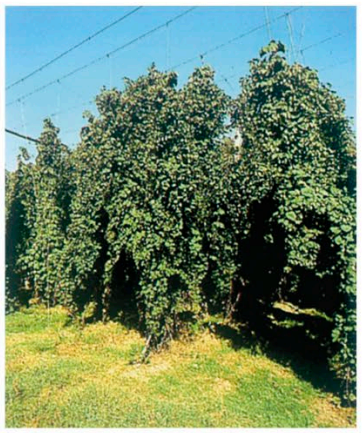
- **Arthritis & inflamed joints**, p. 313.
- **Back pain due to joint inflammation**, p. 313.

Humulus lupulus (Cannabaceae)

Hops

Hops
A tall, climbing perennial, growing to 7 m (23 ft). Hop plants are either male or female.

The bitter taste of hops, which is well known to beer drinkers, largely accounts for this herb's ability to strengthen and stimulate the digestion. Hops are also sedative and make a valuable remedy for sleeplessness and excitability. When the plant was first used to brew beer in England in the 16th century, it aroused great opposition: a petition to Parliament described it as "a wicked weed" that would "endanger the people".



Hops have been cultivated for brewing beer since at least the 11th century. The bines (stems) are trained up raised wire runners.

Habitat & Cultivation

Indigenous to Europe and Asia, hops flourish in hedgerows and on wasteground. They are grown commercially throughout northern Europe and the northern states of the US. Flowers of the female plant (strobiles) are picked in early autumn and dried at a low temperature.

Related Species

Hops are related to marijuana (*Cannabis sativa*, p. 181).

Key Constituents

- Bitter principles (lupulin containing humulon, lupulon and valerianic acid)
- Volatile oil (1%), humulene
- Flavonoids
- Polyphenolic tannins
- Oestrogenic substances

Key Actions

- Sedative
- Soporific
- Antispasmodic
- Aromatic bitter

Research

- **Bitter principles**

The bitter principles as a whole strongly stimulate the digestive system, increasing the rate of gastric and other secretions. A number of constituents, such as lupulin, are sedative, though it is not yet entirely understood how they work. Lupulon and humulon are antiseptic.

- **Other research** The herb relaxes smooth muscle and has been shown to have an oestrogenic effect. Some isolated constituents are thought to depress central nervous activity.

Traditional & Current Uses

- **Historical uses** Hops feature only occasionally in early herbals and the health benefits ascribed to them are similar to our understanding today.
- **Sedative** The herb is used mostly for its sedative effect. A sachet placed inside a bed pillow releases an aroma that calms the mind. Hops help to reduce irritability and restlessness and promote a sound night's sleep.
- **Tension** Blended with other herbs, hops are good for stress, anxiety, tension and headaches, though they should not be used if depression is a factor. Their antispasmodic action makes hops useful for certain types of asthma and for period pain.
- **Aid to digestion** Hops are beneficial for the digestion, increasing stomach secretions and relaxing spasms and colic.

Self-help Uses

- Insomnia, p. 309.

Parts Used

Strobiles (female flowers) are leafy cone-like catkins. Ripe strobiles may be used fresh but are more commonly dried for their sedative and bitter action.

The strobiles develop at the end of bines that grow up to 4 m (13 ft)

Dried strobiles

Fresh strobiles

Key Preparations & Their Uses

Caution Do not take if suffering from depression.

Sachet Make a sachet with 100 g dried herb. Put inside a pillow to aid sleep.

Infusion (to make, p. 291). For insomnia, drink 150 ml at night.

Tablets usually contain other herbs. Take for stress or sleeplessness.

Tincture (to make, p. 292). For excessive anxiety, take 20 drops diluted in a glass of water 3 times a day. For digestive headaches, take 10 drops with water up to 6 times a day.

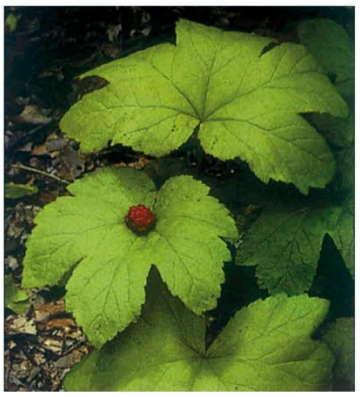
Capsules (to make, p. 292). To stimulate the appetite, take a 300 mg capsule 2 times a day before meals.

Hydrastis canadensis (Ranunculaceae)

Goldenseal

Goldenseal
A small herbaceous perennial, with a thick yellow root and an erect stem growing to 30 cm (1 ft).

Goldenseal is a North American remedy, prized during the 19th century as a cure-all. The Cherokee and other Native Americans used it, mixed with bear fat, as an insect repellent and they also made it into a lotion for wounds, ulcers and sore, inflamed eyes. It was given internally for stomach and liver problems. Today it is employed as an astringent, antibacterial remedy for the mucous membranes of the body.



Goldenseal is an unusual looking plant with a single, red inedible fruit.

Habitat & Cultivation

Goldenseal grows wild in moist mountainous woodland areas of North America and prefers soil that is well covered with dead leaves. Due to excessive harvesting in the wild, instances of goldenseal in its natural habitat have become very rare. In 1997 it was listed as an endangered species, and so only cultivated produce should be used. Goldenseal is propagated by root division. Rhizomes from 3-year-old plants are dug up in the autumn and dried in the open air on cloth.

Key Constituents

- Isoquinoline alkaloids (hydrastine, berberine, canadine)
- Volatile oil
- Resin

Key Actions

- Bitter tonic
- Anti-inflammatory
- Antibacterial
- Uterine stimulant
- Stops internal bleeding

Research

- **Alkaloids** For a herb with such a high medicinal reputation, there has been very little research into its pharmacology, but it is known that goldenseal's medicinal actions are due largely to the isoquinoline alkaloids.
- **Hydrastine** Research in Canada in the late 1960s showed that hydrastine constricts the blood vessels and stimulates the autonomic nervous system.
- **Antibacterial** Although this herb's mode of action and degree of effectiveness is not fully known, it has been found that the herb's constituents collectively have a stronger antibacterial activity than berberine alone.
- **Berberine** Berberine is bitter, antibacterial and amoebicidal. Recent research has established that it can be used to lower harmful blood fat levels and stabilizes blood glucose levels.
- **Canadine** Research shows that this alkaloid stimulates the muscles of the uterus.

Parts Used

Rhizome contains alkaloids that help to soothe and astringe the mucous membranes.

Dried rhizome

Rhizome has a characteristic golden yellow colour

Fresh rhizome

Key Preparations & Their Uses

Cautions Toxic if taken to excess. Do not take if suffering from high blood pressure. Do not take during pregnancy or while breast-feeding. Not suitable for children.

Capsules For gastritis, take a 300 mg capsule 3 times a day.

Tincture (to make, p. 292). For catarrh, take 20 drops with water 3 times a day.

Powder is used to make capsules (see p. 292).

Decoction (to make, p. 291). For sore throats, gargle with 50 ml 3–4 times a day.

Infusion of powder (to make, p. 291). For vaginal thrush, apply 150 ml.

Traditional & Current Uses

- **Mucous membranes** Most authorities agree that goldenseal is a potent remedy for disorders affecting mucous membranes of the body, notably of the eye, ear, nose and throat, the stomach and intestines, and the vagina.
- **Countering infection** As a dilute infusion, goldenseal can be used as an eyewash, as a mouthwash for infected gums, and as an extremely effective wash or douche for vaginal thrush and vaginal infections generally. The infusion is also valued as a remedy for psoriasis.
- **Digestive problems** Taken internally, goldenseal increases digestive secretions, astringes the mucous membranes that line the gut, and checks inflammation. It should not be taken for extended periods of time as it reduces the gut's capacity to absorb certain nutrients, notably B vitamins.
- **Gynaecological uses** Goldenseal helps to reduce heavy menstrual bleeding and is used by herbal practitioners and midwives to help stop bleeding following childbirth (post-partum haemorrhage). Goldenseal stimulates the uterus and should not, therefore, be taken during pregnancy.

Hypericum perforatum (Hypericaceae)

St John's Wort

St John's wort
An erect perennial growing to 80 cm (32 in), with bright yellow flowers in a flat-topped cluster.

St. John's wort flowers at the summer solstice and in medieval Europe it was considered to have the power to protect against ill-health and evil influences. Medicinally it was thought to heal wounds and "all down-heartedness". In the 19th century the herb fell into disuse, but recent research has brought it back into prominence as a key herb for nervous exhaustion and depression. It is now one of the most used herbal medicines in the world.

***St John's wort** was a folk remedy for insanity in the Middle Ages.*

Habitat & Cultivation

St. John's wort thrives in temperate regions worldwide. It prefers a sunny site and well-drained, chalky soil. It can be grown from seed or by root division in autumn. The flowering tops are harvested in summer.

Related Species

A number of other *Hypericum* species have a roughly similar medicinal action.

Key Constituents

- Phloroglucinols (hyperforin)
- Polycyclic diones (hypericin)
- Flavonoids

Key Actions

- Antidepressant
- Anxiolytic
- Antiviral
- Wound healer
- Anti-inflammatory

Research

- **Depression** Clinical research since the 1970s has established St John's wort as an effective treatment for mild to moderate depression. A review in 2009 also concluded that the herb was helpful in treating severe depression. Research shows that St John's wort works on neurotransmitter levels (e.g. serotonin) in several different ways.
- **Viral infection** St John's wort extracts (particularly hypericin, the red pigment found in the petals and leaves) have strong antiviral activity, notably against influenza, herpes and hepatitis B and C.
- **Safety** St John's wort rarely causes side-effects itself, but it does interact with certain conventional medicines, mostly increasing the rate at which they are broken down by the liver. This changes the amount of the drug present in the bloodstream, significantly reducing its effectiveness. In rare situations, this can be life threatening.

Traditional & Current Uses

- **Nerve tonic** The herb acts as a restorative and neuroprotective, helping to reverse long-term nervous exhaustion and lowered mood. It can prove useful in seasonal affective disorder and chronic anxiety, and improves sleep quality.
- **Menopause** The herb is considered a specific for the lowered mood that can accompany the menopause, often combined with black cohosh (*Cimicifuga racemosa*, p. 79) in such cases.
- **Tissue healing** The red infused oil has potent wound-healing properties and historically has been used to heal knife and stab wounds. Nowadays, St John's wort oil is more commonly used to promote healing after surgery and minor burns. The oil can be particularly helpful in relieving neuralgia – shingles, sciatica and toothache being common applications.

Parts Used

Flowering tops are picked when the flowers have opened.

Key Preparations & Their Uses

Cautions Can cause sensitivity to sunlight. Due to possible interactions, seek professional advice if taking a prescribed medicine. Restricted in some countries. Do not combine with other antidepressants.

Infused oil Make by steeping the herb in oil for 6 weeks (see p. 294). Dab on to minor wounds and burns.

Tincture (to make, p. 292). For depression, take ½ tsp with water 3 times a day.

Cream (to make, p. 296). For cramp or neuralgia, rub on to the affected part.

Infusion (to make p. 291), Drink 100 ml daily as a digestive tonic.

Self-help Uses

- **Anxiety, depression & tension**, p. 308.
- **Back pain**, p. 313.
- **Bites & stings**, p. 303.
- **Cold sores, chicken pox & shingles**, p. 304.
- **Depression & decreased vitality due to menopause**, p. 316.
- **Neuralgia**, p. 308.
- **Stiff & aching joints**, p. 313.
- **Tired & aching muscles**, p. 312.

Inula helenium (Asteraceae)

Elecampane

Prized by the Romans as a medicine and as a food, this herb derives its botanical name from Helen of Troy, who, according to legend, was holding elecampane in her hand when she set off with Paris to live with him in Troy. The root of the plant has long been seen as a gently warming and tonic herb, and is particularly useful for chronic bronchitis and other chest problems.

Elecampane
A perennial growing to 3 m (10 ft), with golden yellow, daisy-like flowers and large pointed leaves.

Parts Used

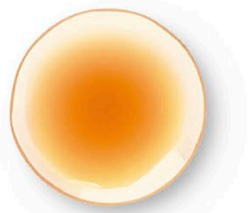
Root contains inulin, a mucilaginous (jelly-like) substance that soothes and relieves coughing.

Dried root

Fresh root

Key Preparations & Their Uses

Cautions Can cause skin reactions. Do not take internally in pregnancy or if breast-feeding.



Decoction (to make, p. 291). For irritable coughs, take 75 ml 2–3 times a day.

Tincture (to make, p. 292). For bronchitis, mix 50 ml with 50 ml thyme tincture. Take 1 tsp 3 times a day.

Syrup For coughs, make an infusion (see p. 291) and simmer until it has reduced to half its volume, before adding the sugar or honey (to make, p. 293). Take 1–2 tsp every 2 hours.

"Elecampane will the spirits sustain", is a medieval saying. It reflects the herb's tonic properties.

Habitat & Cultivation

Native to south-eastern Europe and western Asia, elecampane now grows in many temperate regions, including parts of the US. It is also cultivated. Propagated from seed in spring or by root division, it prefers moist, well-drained ground. The root is unearthed in autumn, cut up and then dried at a high temperature.

Related Species

Xuan fu hua (*I. japonica*) grows in China and Japan. Other relatives used medicinally include sunflower (*Helianthus annuus*), common fleabane (*Pulicaria dysenterica*) and echinacea (*Echinacea* spp., p. 94).

Key Constituents

- Inulin (up to 44%)
- Volatile oil (up to 4%), containing alantol and sesquiterpene lactones (including alantolactone)
- Triterpene saponins
- Phytosterols

Key Actions

- Expectorant
- Soothes coughing
- Increases sweating
- Mildly bitter
- Eliminates worms
- Antibacterial

Research

- **Inulin** Inulin was first isolated from elecampane in 1804 and took its name from the herb. It has mucilaginous qualities that help soothe the bronchial linings.
- **Antimicrobial** Alantolactone has been shown to have significant activity against the tuberculosis mycobacterium. Researchers in Ireland found that the root had potent effect against MRSA, an antibiotic-resistant "superbug".
- **Whole herb** As a whole, the root has a stimulant, expectorant effect, encouraging the coughing up of mucus from the lungs. The volatile oil is known to be partly responsible for this and also for the herb's antiseptic properties.

Traditional & Current Uses

- **Chest infections** Elecampane has long been valued for its tonic, strengthening effect on the respiratory system and for its ability to resolve chest infections. Its warming effect on the lungs, combined with its ability to gently stimulate the clearing of mucus from the chest, makes it safe for young and old. It can be used in almost all chesty conditions, and is very useful when the patient is debilitated.
- **Chronic chest complaints** Elecampane's qualities have led to its specific use for chronic bronchitis and bronchial asthma. It is particularly useful because it both soothes the bronchial tube linings and is an expectorant. In addition, the herb is mildly bitter, helping recovery by improving digestion and the absorption of nutrients.
- **Digestive problems** Elecampane has been taken traditionally as a tonic herb for the digestion. It stimulates the appetite and relieves dyspepsia. It is a useful remedy for the treatment of worms.
- **Infection** In the past, elecampane was used in the treatment of tuberculosis. It works well with other antiseptic herbs and is given for infections such as tonsillitis. Its restorative, tonic action complements its ability to counter infection.

Self-help Use

- **Coughs & bronchitis**, p. 310.

Lavandula angustifolia syn. *L. officinalis* (Lamiaceae)

Lavender

Lavender
A perennial shrub growing to 1 m (3 ft), with spikes of violet-blue flowers extending above the foliage.

Lavender is an important relaxing herb, but it is better known for its sweet-scented aroma than for its medicinal properties. It became popular as a medicine during the late Middle Ages and in 1620 it was one of the medicinal herbs taken to the New World by the Pilgrims. It was described by the herbalist John Parkinson (1640) as being of "especiall good use for all griefes and paines of the head and brain".

Lavender is widely cultivated for perfume and medicinal use.

Habitat & Cultivation

Native to France and the western Mediterranean, lavender is cultivated worldwide for its volatile oil. It is propagated from seed or cuttings and needs a sunny position. The flowers are picked in the morning in high summer and are dried, or distilled to produce essential oil.

Related Species

Spike lavender (*L. spica*) yields more oil than *L. officinalis*, but of an inferior quality. *L. stoechas* is used as an antiseptic wash for wounds, ulcers and sores in Spain and Portugal.

Key Constituents

- Volatile oil (up to 3%) containing over 40 constituents, including linalyl acetate (30–60%), cineole (10%), linalool, nerol, borneol
- Flavonoids

Key Actions

- Antispasmodic
- Relieves anxiety
- Antidepressant
- Neuroprotective
- Antimicrobial

Research

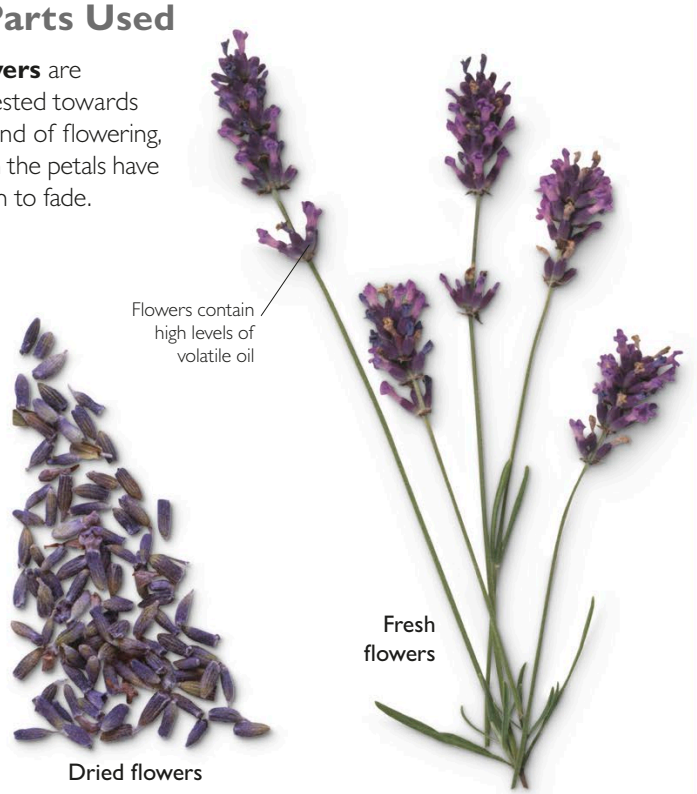
- **Lavender oil** A 2014 clinical trial found lavender oil taken internally to be more effective than both a placebo and a conventional tranquilizer in relieving generalized anxiety. It also showed antidepressant activity. Other studies have found similar benefits and tended to confirm relaxant, antidepressant and gently sedative activity. The oil is thought to have low toxicity and significant antibacterial and antifungal activity.
- **Flowers** Lavender flowers and oil have similar properties. Although little research has been conducted, it is likely the flowers have a significantly greater carminative and neuroprotective activity. Applied externally, flower extracts are insecticidal and rubefacient (irritant and stimulating to the local circulation).

Traditional & Current Uses

- **Nervous system** Lavender is well known for its soothing and calming effect and is combined with other sedative herbs to relieve sleeplessness, irritability, headaches and migraine. It also helps to alleviate depression.
- **Digestion** Like many herbs with a significant volatile oil content, lavender soothes indigestion and colic, and relieves wind and bloating.
- **Asthma** Lavender's relaxing effect makes it helpful for some types of asthma, especially where excessive nervousness is a feature.
- **Essential oil** The oil is an invaluable first aid remedy. It is strongly antiseptic, helping to heal burns, wounds and sores. Rubbed on to insect stings, it relieves pain and inflammation, and can be used to treat scabies and headlice. Massaging a few drops on the temples eases headaches, and five drops added to a bath at night relieves muscle tension, tones the nervous system and encourages sleep.

Parts Used

Flowers are harvested towards the end of flowering, when the petals have begun to fade.



Key Preparations & Their Uses

Caution Do not take essential oil internally except under professional supervision.

Tincture (to make, p. 292). For insomnia, take ½–1 tsp with water at night.

Massage oil For headaches, combine 20 drops with 20 ml carrier oil and apply (see p. 297).

Essential oil Apply undiluted to insect stings.

Infusion (to make, p. 291) is a calming remedy for digestive problems. For indigestion, take 75 ml twice a day.

Self-help Uses

- **Back pain**, p. 313.
- **Bites & stings**, p. 303.
- **Minor burns & sunburn**, p. 303.
- **Earache**, p. 312.
- **Headaches & migraine**, p. 309.
- **Insomnia**, p. 309.
- **Neuralgia**, p. 308.
- **Stiff & aching joints**, p. 313.

Linum usitatissimum (Linaceae)

Flaxseed, Linseed

Flaxseed
A slender annual, to 1 m (3 ft) tall, with narrow leaves, blue flowers and spherical seed capsules.

Flaxseed or linseed has been cultivated in the Middle East for at least 7,000 years, and its seed and fibre have been put to innumerable uses – both medicinal and industrial – throughout history. Flaxseed has been shown to have very high levels of polyunsaturated essential fatty acids, making it valuable in maintaining a healthy heart and circulation, and in preventing chronic inflammatory diseases.

Parts Used

Whole seeds gently support elimination and cleanse the colon. Cracked or ground seeds need to be used for other medicinal benefits. Golden linseed varieties are usually preferred.

Key Preparations & Their Uses

Caution Do not use immature seeds, which may be toxic. Store cracked or ground seed in a closed container and keep in the fridge.

Oil from the seed is convenient to use but goes rancid easily. Take 1–2 tsp daily as a nutritional supplement.

Cracked or ground seed Take 1–2 tbsp daily with water to help relieve menopausal symptoms.

Flour is mixed with water and used as a poultice, and used in baking as a phytoestrogenic food during the menopause.

Flaxseed *is the best vegetable source of omega-3 essential fatty acids.*

Habitat & Cultivation

Originally native to temperate zones in Europe and Asia, flaxseed is now widely cultivated in temperate regions, including Canada and the US, Argentina and northern Europe. It is grown from seed in spring and harvested when the seed is ripe in late summer or early autumn.

Related Species

Purging flax (*L. catharticum*), native to western Europe, is a purgative, but no longer used.

Key Constituents

- Fixed oil (approximately 35%) mostly alpha-linolenic acid (omega-essential fatty acid)
- Protein (about 26%)
- Fibre (about 14%)
- Mucilage (about 12%)
- Sterols
- Lignans

Key Actions

- Demulcent
- Emollient
- Laxative
- Phytoestrogenic
- Anti-cancer

Research

- **Omega-3 oils** Flaxseed is unusual in that it has very high levels of alpha-linolenic acid, an omega-3 polyunsaturated fatty acid, similar to those most commonly found in fish oils. Research indicates that omega-3 oils have significant anti-inflammatory activity. They also help to protect the heart and circulation, and to reduce heart irregularities. The seed, rather than the oil, helps to lower cholesterol levels.
- **Anti-cancer** Ground flaxseed appears to be specifically useful against endometrial, breast and prostate cancer: it is rich in omega-3 oils, which are deficient in most Western diets; in lignans, which are phytoestrogenic and reduce the impact of estradiol (a potentially harmful type of oestrogen); and in mucilage and fibre, which prevent reabsorption of unwanted oestrogens from the intestines. Flaxseed added to the diet lowers PSA levels (used to measure prostate cancer risk) and thus is thought to protect against prostate cancer.

Traditional & Current Uses

- **Laxative** Flaxseed has mostly been used as a bulk laxative, especially valuable in chronic constipation. The seeds soak up fluid in the gut, helping to make the stool softer and encouraging easier bowel movements. They should be taken with about 5 times their volume of water. With their significant mucilage content, the seeds are also soothing and anti-inflammatory, reducing irritation and inflammation in the gut in such conditions as colitis, irritable bowel and haemorrhoids.
- **Respiratory & urinary disorders** The seeds, which need to be split or ground up before being swallowed, soothe the chest and, to a lesser extent, the urinary tract. They have proved helpful in chronic or paroxysmal coughs, bronchitis and emphysema, and in urinary troubles such as chronic cystitis.
- **External uses** A poultice of the crushed seeds or of flaxseed flour is applied to painful or tender boils and carbuncles, softening the skin and drawing out the purulent material. A Portuguese recipe recommends combining flaxseed oil with red wine as an effective topical remedy for wounds.
- **Menopause** Adding flaxseed to the diet can support oestrogen balance at the menopause and reduce associated symptoms. Flax and other seeds can be made into a "menopause" cake.

Self-help Uses

- **Constipation**, p. 317.
- **Menopause**, p. 316.

Lobelia inflata (Campanulaceae)

Lobelia, Indian Tobacco

Lobelia is a powerful antispasmodic used for respiratory and muscle disorders. In common with other *Lobelia* species, it was a traditional Native American remedy for many conditions. It was used as a "puke weed" to induce vomiting, as a remedy for worms and venereal disease and as an expectorant. Lobelia was also smoked as a substitute for tobacco, and was reputed to share some of its magical qualities.

Lobelia
An annual growing to 50 cm (20 in), with lance-shaped leaves and pale blue, pink-tinged flowers.

***Lobelia's** pale blue flowers were believed to have magical properties and were used to ward off ghosts.*

Habitat & Cultivation

An indigenous American plant, lobelia is found in much of North America, especially in eastern parts of the US. It grows by roadsides and in neglected areas, and prefers acid soil. The aerial parts are harvested in early autumn, when the seed capsules are most numerous, and are carefully dried.

Related Species

At least 4 other *Lobelia* species were traditionally used by Native Americans. One, great lobelia (*L. siphilitica*), as its Latin name suggests, was credited by Native Americans and European settlers with the power to cure syphilis. Chinese lobelia (*ban bian lian*, *L. chinensis*) is used in Chinese herbal medicine mainly as a diuretic and for snake bite.

Key Constituents

- Piperidine alkaloids (6%) – principally lobeline, but many others present
- Carboxylic acids

Key Actions

- Respiratory stimulant
- Antispasmodic
- Expectorant
- Induces vomiting
- Increases sweating

Traditional & Current Uses

- **Native American remedy** Lobelia was a traditional Native American remedy with a wide range of applications. Its use was later championed by the American herbalist Samuel Thomson (1769–1843), who made the herb the mainstay of his therapeutic system (see p. 27). He mainly used it to induce vomiting.
- **Therapeutic properties** The whole herb is strongly antispasmodic. The constituent lobeline stimulates the respiratory centre within the brain stem, producing stronger and deeper breathing. Laboratory investigations during the 1990s suggest that lobeline has antidepressant activity.
- **Respiratory problems** A powerful antispasmodic and respiratory stimulant, lobelia is valuable for tight-chested conditions, including asthma, particularly bronchial asthma, and chronic bronchitis. The herb helps to relax the muscles of the smaller bronchial tubes, thereby opening the airways, stimulating breathing and promoting the coughing up of phlegm. In the Anglo-American herbal tradition, lobelia has always been combined with chilli (*Capsicum frutescens*, p. 74); the heating, stimulant action helps to push blood into areas that lobelia has relaxed.
- **External applications** Some constituents, especially lobeline, break down rapidly in the body and lobelia is often most effective applied externally. Its antispasmodic action helps to relax muscles, particularly smooth muscle, making it useful for sprains, and back problems where muscle tension is a key factor. In combination with cayenne, lobelia has been used as a chest and sinus rub.
- **Tobacco addiction** The piperidine alkaloids, especially lobeline, have similar chemical effects to nicotine, found in tobacco (*Nicotiana tabacum*, p. 240), and lobelia is employed by herbalists to help patients give up smoking.

Parts Used

Aerial parts have important antispasmodic properties and help relieve respiratory complaints.

Dried aerial parts

Fresh leaves

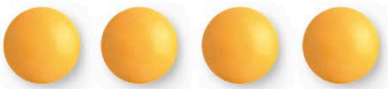
Fresh aerial parts

Key Preparations & Their Uses

Cautions Take only when prescribed by a medical herbalist or doctor and do not eat the fresh plant. Excessive ingestion is rare (vomiting normally occurs first) but can be fatal. Restricted herb in some countries.

Infusion is prescribed for bronchitis.

Tincture is given to relieve asthma.



Tablets containing lobelia in combination with other herbs are used to treat bronchial asthma.

Lycium chinense syn. *L. barbarum* (Solanaceae)

Goji Berry, Chinese Wolfberry

Goji berry is a major Chinese tonic herb, first mentioned in the *Divine Husbandman's Classic (Shen'nong Bencaojing)* written in the 1st century CE. Traditionally it is believed to promote long life – a Chinese herbalist, said to have lived for 252 years, ascribed his longevity to tonic herbs, including goji berry. Today, both the berries and the root have a wide range of medicinal uses.

Goji berry A deciduous shrub growing to 4 m (13 ft), with bright green leaves and scarlet berries.

Parts Used

Root is used in preparations to relieve fevers.

Berries can be eaten raw or dried, or used in cooking, e.g. soups.

Key Preparations & Their Uses

Cautions Avoid during pregnancy. It can interact with some prescribed medicines: do not take with warfarin.

Decoction of the root (to make, p. 291). For fevers, take 100 ml daily.

Tincture of the root (to make, p. 292). For coughs and wheezing, take 3 ml diluted with water 3 times a day.

Making a decoction with berries Chop dried berries and simmer (*see* p. 291). For poor eyesight, take 100 ml daily.

Goji berry *produces berries that are a blood tonic.*

Habitat & Cultivation

Goji berry grows throughout much of China, and is cultivated extensively across the country's central and northern regions. It is grown from seed in autumn. The root can be unearthed at any time of the year, but is most commonly harvested in spring. The berries are picked in late summer or early autumn.

Key Constituents

- Beta-sitosterol

Berries only:

- Polysaccharides
- Betaine
- Sterols
- Carotenoids - mostly zeaxanthin
- Vitamins B_1, B_{12} and C

Root only:

- Cinnamic acid
- Psyllic acid

Key Actions

- Tonic
- Protects liver
- Neuroprotective
- Lowers blood pressure
- Anti-ageing

Research

- **Immune modulation** Research that has been carried out over the past 30 years indicates goji berry supports immune function, in part countering the reduction of white blood cell production resulting from ageing. It also appears to prevent infection by preventing bacteria and viruses from attaching to cell membranes, particularly in the liver. The polysaccharides have anti-cancer activity.
- **Zeaxanthin** This compound, occurring in higher concentration in goji berry than any other food, is taken as a supplement to support eyesight and the health of the retina. It is thought to protect against age-related macular degeneration.
- **Tonic and neuroprotective** Several clinical trials in China have found that goji berry juice promotes general well-being, reducing signs of fatigue, weakness, depression and stress. In early stage research, goji berry has shown promise as a neuroprotective agent, and seems to act within the brain to prevent some aspects of the degenerative processes associated with Alzheimer's disease.

Traditional & Current Uses

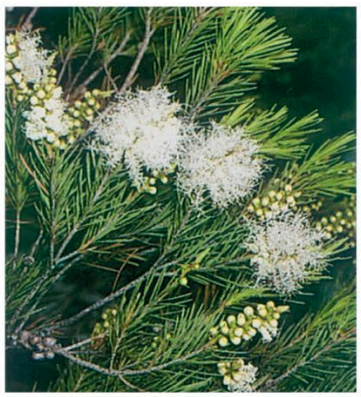
- **Circulation** In China, goji berry is taken as a blood tonic, and to improve the circulation. It is also taken in order to help lower blood pressure and treat a range of symptoms that include dizziness and tinnitus.
- **Slowing ageing** The traditional use of goji berry as a tonic of key importance in the elderly is gradually being endorsed by research. Combined effects that protect immune, liver, cardio-vascular and brain function from deterioration suggest that goji berry has a place in the diet of anyone seeking to keep healthy in their later years. A small handful of berries taken on a daily basis (eaten raw or as part of a larger dish) makes a useful contribution to long term good health.

Melaleuca alternifolia (Myrtaceae)

Tea Tree

Tea tree
An evergreen reaching 7 m (23 ft), with layers of papery bark, pointed leaves and white flower spikes.

Tea tree, and in particular its essential oil, is one of the most important natural antiseptics. Useful for stings, burns, wounds and skin infections of all kinds, the herb merits a place in every medicine chest. Tea tree is native to Australia and is a traditional remedy of the Aborigines. Its therapeutic properties were first researched during the 1920s and it is now widely used in Europe and the US, as well as in Australia.



Tea tree provides one of the most effective natural antiseptics.

Habitat & Cultivation

Tea tree is native to Australia, flourishing in moist soils in northern New South Wales and Queensland. It is now cultivated extensively, especially in New South Wales. Tea tree is grown from cuttings in summer. The leaves and small branches are picked throughout the year and distilled to produce essential oil.

Related Species

Other *Melaleuca* species that provide valuable essential oils include cajuput (*M. leucadendron*, p. 233), broad-leaved paperbark tree (*M. viridiflora*) and *M. linariifolia*, the essential oil of which is very similar to tea tree.

Key Constituents

- Volatile oil containing terpinen-4-ol (40%), gamma-terpinene (24%), alpha-terpinene (10%), cineo (5%) – percentages are variable.

Key Actions

- Antiseptic
- Antibacterial
- Antifungal
- Antiviral
- Immune stimulant

Research

- **Antiseptic properties** Tea tree essential oil was first researched in 1923 in Australia. Since the 1960s it has been intensively investigated, and its antiseptic properties are well established. Clinical trials, mainly in Australia, have shown that it is effective at treating a broad range of infectious conditions, especially fungal and skin problems such as vaginal thrush, acne and warts.
- **Active constituents** One of the most important constituents is known to be terpinen-4-ol, which is significantly antiseptic and well tolerated by the skin. The oil also contains cineol, which can irritate the skin. The cineol content varies – poor-quality oil has more than 10%; in some cases up to 65%.

Traditional & Current Uses

- **Traditional remedy** Tea tree is a traditional Aboriginal remedy. The leaves are crushed and either inhaled or used in infusions for coughs, colds and skin infections.
- **Skin problems** Tea tree can be applied to skin infections such as athlete's foot and ringworm, as well as to corns, warts, acne and boils, infected burns, wounds, insect bites and stings, and other skin conditions.
- **Chronic infections** Tea tree may be taken internally as a treatment for chronic, and some acute, infections, notably cystitis, glandular fever and chronic fatigue syndrome.
- **Oral infections** The herb is effective in mouth washes, countering oral infection and gum disease, and it can also be used as a gargle for sore throats.
- **Vaginal infections** Tea tree is an excellent remedy for vaginal irritation and infection, including thrush. It may be used as a pessary or can be diluted in a carrier cream and then applied.

Parts Used

Leaves have high levels of a strongly antiseptic volatile oil and are used in preparations for skin problems and infections.

Dried leaves

Key Preparations & Their Uses

Caution Do not take the essential oil internally except under professional supervision.

Cream Add 5 drops essential oil to 1 tsp base cream and apply to spots 3 times a day.

Infusion (to make, p. 291). For chronic infections, infuse ½ tsp herb in 150 ml of water. Take twice a day.

Essential oil Add 3 drops to 12 drops carrier oil and dab on to athlete's foot.

Pessaries (to make, p. 297). For vaginal infections, insert one a day.

Self-help Uses

- **Acne & boils**, p. 305.
- **Athlete's foot**, p. 304.
- **Vaginal thrush**, p. 314.

Melissa officinalis (Lamiaceae)

Lemon Balm, Melissa

In writing that "Balm is sovereign for the brain, strengthening the memory and powerfully chasing away melancholy", John Evelyn (1620–1706) neatly summarized lemon balm's long tradition as a tonic remedy that raises the spirits and comforts the heart. Today, this sweet-smelling herb is still widely valued for its calming properties, and new research shows that it can help significantly in the treatment of cold sores.

***Lemon balm's** botanical name, Melissa, comes from the Greek for bee and refers to the great attraction the plant holds for bees.*

Habitat & Cultivation

Native to southern Europe, western Asia and northern Africa, lemon balm now grows throughout the world. The plant is propagated from seed or cuttings in spring. The aerial parts are picked from early summer onwards and are best harvested just before the flowers open, when the concentration of volatile oil is at its highest.

Key Constituents

- Volatile oil up to 0.2% (citral, caryophyllene oxide, linalool and citronellal)
- Flavonoids
- Triterpenes
- Polyphenols
- Tannins

Key Actions

- Relaxant
- Antispasmodic
- Increases sweating
- Carminative
- Antiviral
- Nerve tonic

Research

- **Volatile oil** German research has shown that the volatile oil and in particular citral and citronellal calm the central nervous system. The oil is also strongly antispasmodic.
- **Polyphenols** Polyphenols are antiviral. In particular, they combat the herpes simplex virus, which produces cold sores. In one research study, the average healing time of cold sores was halved to about 5 days and the time between outbreaks doubled.
- **Thyroid** Lemon balm inhibits thyroid function.

Traditional & Current Uses

- **Traditional uses** This herb has always been taken to lift the spirits. Taken regularly, it was believed to encourage longevity. Other traditional uses include healing wounds, relieving palpitations and relaxing the heart, and treating toothache.
- **Modern relaxing tonic** Lemon balm is a relaxing tonic for anxiety, mild depression, restlessness and irritability. It reduces feelings of nervousness and panic and will often quieten a racing heart, being a valuable remedy for palpitations of a nervous origin. Lemon balm is also useful when over-anxiety is causing digestive problems such as indigestion, acidity, nausea, bloating and colicky pains.
- **Cold sores** Lemon balm relieves cold sores and reduces the chances of further outbreaks.
- **Hormonal herb** Following the discovery of its anti-thyroid effect, the herb is given to people with an overactive thyroid.
- **Other uses** Lemon balm is a first-aid remedy for cuts and insect stings and is good for fevers.

Self-help Uses

- **Anxiety, depression & tension**, p. 308.
- **Cold sores, chicken pox & shingles**, p. 304.
- **Flu with muscle aches & pains**, p. 311.
- **Nausea due to emotional problems**, p. 306.
- **Stomach spasm**, p. 305.

Lemon balm
A perennial growing to 1.5 m (5 ft), with tiny white flowers and deeply veined, toothed leaves.

Parts Used

Aerial parts are used in a variety of preparations as a calming remedy.

Dried aerial parts

Leaves produce a lemon scent when crushed

Fresh aerial parts

Key Preparations & Their Uses

Caution Do not take the essential oil internally except under professional supervision.

Essential oil For shingles, add 5 drops to 1 tsp olive oil and massage the painful area gently (see p. 297).

Infusion (to make, p. 291). For nervous headaches, drink 150 ml 3 times a day.

Tincture (to make, p. 292). For anxiety and mild depression, take ½ tsp with water 3 times a day.

Lotion For cold sores, make an infusion (see p. 291) and apply regularly (see p. 296).

Juice Apply as needed to cuts and grazes.

Ointment (to make, p. 295). Apply to insect stings.

Mentha x piperita (Lamiaceae)

Peppermint

Peppermint's origin is a mystery, but it has been in existence for a long time – dried leaves were found in Egyptian pyramids dating from around 1000 BCE. It was highly valued by the Greeks and Romans, but only became popular in Western Europe in the 18th century. Peppermint's chief therapeutic value lies in its ability to relieve wind, flatulence, bloating and colic, though it has many other applications.

***Peppermint** is cultivated in many parts of the world for its oil.*

Habitat & Cultivation

Peppermint is grown commercially and in gardens throughout Europe, Asia and North America. It is propagated from seed in spring and is harvested just before it flowers in summer, in dry sunny weather.

Related Species

Peppermint is a hybrid of watermint (*M. aquatica*) and spearmint (*M. spicata*), which have similar, though milder, therapeutic properties.

Key Constituents

- Volatile oil (up to 1.5%), including menthol (35–55%), menthone (10–40%)
- Flavonoids (luteolin, menthoside)
- Phenolic acids
- Triterpenes

Key Actions

- Antispasmodic
- Stimulates sweating
- Antimicrobial
- Analgesic
- Carminative

Research

- **Volatile oil** Research has shown that the volatile oil is strongly antibacterial. Menthol (a constituent of the oil) is antiseptic, antifungal, cooling and anaesthetic to the skin, although it is also an irritant.
- **Whole herb** The whole plant has an antispasmodic effect on the digestive system. Clinical trials in Denmark and the UK during the 1990s have confirmed its value in the treatment of irritable bowel syndrome.

Traditional & Current Uses

- **Digestive problems**

Peppermint is excellent for the digestive system, increasing the flow of digestive juices and bile and relaxing the gut muscles. It reduces nausea, colic, griping and wind, and soothes an irritated bowel. In soothing the lining and muscles of the colon, it helps diarrhoea and relieves a spastic colon (often the cause of constipation).

- **Pain relief** Applied to the skin, peppermint relieves pain and reduces sensitivity. It also relieves headaches and migraines linked to digestive weakness.
- **Infection** Diluted oil is used as an inhalant and chest rub for respiratory infections. The whole herb is important for digestive infections.

Self-help Uses

- **Digestive headaches**, p. 309.
- **Eczema**, p. 300.
- **Nausea with headache**, p. 306.
- **Neuralgia**, p. 308.
- **Wind & bloating**, p. 306.

Peppermint
A strongly aromatic, square-stemmed annual, growing to 80 cm (32 in) with serrated leaves.

Parts Used

Aerial parts are distilled for their volatile oil and used in a variety of preparations.

Dried aerial parts

Leaves have high levels of volatile oil which has important digestive properties

Fresh aerial parts

Key Preparations & Their Uses

Cautions Do not give peppermint to children under five. The essential oil is best taken internally on the advice of a health care practitioner; it is not suitable for children under 12.

Essential oil Dilute to 2% (see p. 297) and dab on to temples to ease headaches.

Lotion made with infusion (see p. 296). Apply to irritated skin.

Infusion (to make, p. 291). To improve digestion, drink 150 ml after meals.

Tincture mixed with other herbs, is prescribed mainly for digestive problems.

Capsules are prescribed for irritable bowel syndrome.

Myristica fragrans (Myristicaceae)

Nutmeg & Mace, Rou Dou Kou (Chinese)

Nutmeg tree An evergreen tree growing to 12 m (39 ft), with aromatic leaves and clusters of small yellow flowers.

Nutmeg and mace both come from the nutmeg tree and have very similar medicinal properties. They are infrequently used in the West because of their toxicity at high dosages, but nonetheless are important medicines, employed principally to stimulate the digestion and to treat infections of the digestive tract. Nutmeg also has long been valued as an aphrodisiac and as a remedy for eczema and rheumatism.

Nutmeg and mace are cultivated commercially in the tropics.

Habitat & Cultivation

Native to the Molucca Islands of Indonesia, nutmeg trees are now widely cultivated. They are propagated from seed, sown when ripe. The tree yields fruit after about 8 years, and can continue to fruit for over 60 years. The fruit is picked when ripe and the nutmeg and mace are separated and dried.

Key Constituents

Nutmeg:

- Volatile oil (up to 15%), including alpha-pinene, beta-pinene, alpha-terpinene, beta-terpinene, myristicin, elincin, safrole
- Fixed oil ("nutmeg butter"), myristine, butyrin

Mace:

- Volatile oil (similar to nutmeg but with a higher concentration of myristicin)

Key Actions

Nutmeg:

- Carminative
- Relieves muscle spasms
- Prevents vomiting
- Stimulant

Mace:

- Stimulant
- Carminative

Traditional & Current Uses

- **Digestive problems** Nutmeg essential oil has an anaesthetic and stimulating effect on the stomach and intestines, increasing appetite and reducing nausea, vomiting and diarrhoea. It is a helpful remedy for many digestive problems, especially gastroenteritis.
- **Sleep aid** Though nutmeg is a stimulant, it has narcotic and anticonvulsant properties and can be successfully used at low dose (a pinch of powder will do) as a sleep aid for short- or long-term sleep problems. Laboratory studies also indicate that nutmeg has antidepressant activity.
- **Aphrodisiac** In India, nutmeg has a long reputation as an aphrodisiac. It is believed to increase sexual stamina.
- **External uses** Ointments based on the fixed oil (nutmeg butter) are used to treat rheumatic conditions. They have a counter-irritant effect, stimulating blood flow to the area. In India, nutmeg is ground into a paste and applied directly to areas of eczema and ringworm.
- **Safety** Low medicinal doses and culinary amounts of nutmeg and mace are safe. In excess, however, the herbs are strongly stimulant, hallucinogenic and toxic. The consumption of just two whole nutmegs has been known to cause death.

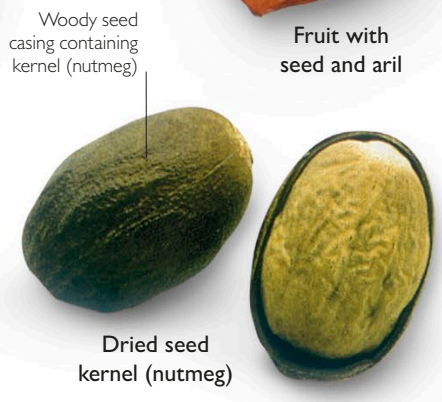
Parts Used

Aril (mace) surrounds the seed casing. It is used in cooking and as a medicine.

Dried seed and aril

Fruit with seed and aril

Seed kernel (nutmeg) is a stimulant remedy for intestinal infections and rheumatic conditions. In China, nutmeg is known as *rou dou kou*.



Dried seed kernel (nutmeg)

Key Preparations & Their Uses

Caution Take the essential oil internally only under professional supervision. Do not take more than 3 g of either herb a day. Do not use during pregnancy.

Essential oil of nutmeg is occasionally used by herbalists to treat vomiting.

Powdered mace is prescribed to treat wind and bloating.

Grated nutmeg For eczema, mix 2 tsp with a little water into a paste and apply.

Infusion For gastroenteritis, add a pinch of nutmeg to 150 ml of peppermint infusion (see p. 291). Take 3 times a day.

Ointment made from fixed oil (nutmeg butter). For rheumatic conditions, apply several times a day.

Ocimum tenuiflorum syn. *O. sanctum* (Lamiaceae)

Holy Basil, Tulsi (Hindi)

Holy basil
An aromatic annual growing to about 70 cm (28 in), with small, purple-red or white flowers.

Holy basil, like sweet (culinary) basil, comes from India, where it is revered as the herb sacred to the goddess Lakshmi, wife of Vishnu, the god who preserves life. *Tulsi* means "matchless", and the herb has very important medicinal properties – notably its ability to reduce blood sugar levels. In Indian herbal medicine, holy basil has a wide range of uses, relieving fevers, bronchitis, asthma, stress and mouth ulcers.

***Holy basil** is so called because it is often planted around temples and courtyards in India.*

Habitat & Cultivation

Holy basil is native to India and other tropical regions of Asia. It is also grown extensively in Central and South America, mainly for its medicinal properties. Holy basil can be grown from seed and is often cultivated as a pot plant. The aerial parts are picked before the flowers open, in early summer.

Related Species

The familiar culinary species, sweet basil (*O. basilicum*, p. 241), is a close relative.

Key Constituents

- Volatile oil (1%) including eugenol (70–80%)
- Flavonoids (apigenin, luteolin)
- Triterpene (ursolic acid)
- Polyphenols
- Saponins

Key Actions

- Antispasmodic
- Analgesic
- Lowers blood sugar levels
- Reduces fever
- Adaptogenic
- Anti-inflammatory

Research

- **Diabetes** Research into holy basil's ability to reduce blood sugar levels, and thus help diabetes, has been going on for some decades. It has now been established as a useful medicine for some types of diabetes.
- **Indian research** Research in India has shown that holy basil helps lower blood pressure and has anti-inflammatory, pain-relieving and fever-reducing properties. Preliminary research also indicates that the herb strengthens immune resistance, protects against radiation, has anti-cancer properties, and inhibits sperm production.

Traditional & Current Uses

- **Traditional use** Holy basil has always been considered to be a tonic, invigorating herb, useful for improving vitality.
- **Ayurvedic remedy** In Ayurvedic medicine, holy basil is chiefly employed for fevers. A classical Indian recipe mixes holy basil, black pepper (*Piper nigrum*, p. 250), ginger (*Zingiber officinale*, p. 155) and honey in a remedy that prevents infection and controls high fever.
- **Heart & stress** Holy basil is thought to have an affinity with the heart, protecting it from stress and lowering blood pressure and cholesterol levels. It has a reputation for reducing stress and is regarded as adaptogenic – helping the body to adapt to new demands and stresses.

Parts Used

Aerial parts are tonic and invigorating and have a wide range of other properties.

Key Preparations & Their Uses

Cautions Do not take during pregnancy. Do not take if trying to conceive.

Juice For skin infections, apply 10 ml to the affected part twice a day.

Decoction (to make, p. 291) is used for fevers and as a tonic. Take 150 ml daily as a general tonic.

Powder For mouth ulcers, rub powder gently into sore areas several times a day.

- **Diabetic remedy** The herb's ability to help stabilize blood sugar levels makes it useful in the treatment of diabetes.
- **Respiratory problems** Holy basil is valuable for respiratory infections, especially colds, coughs, bronchitis and pleurisy. It also treats asthma.
- **Other uses** Juice is extracted and applied to insect bites, ringworm and skin diseases. It is also used as ear drops for ear infections. Juice or powdered herb helps mouth ulcers to heal.

Self-help Use

- **Bites & stings**, p. 303.

Paeonia lactiflora syn. *P. albiflora* (Paeoniaceae)

White Peony, Chinese Peony, Bai Shao Yao (Chinese)

White peony
An upright perennial, growing to 2 m (6½ ft), with large white flowers and divided, dark green leaves.

White peony's history of medicinal use in China stretches back for at least 1,500 years. It is known most widely as one of the herbs used to make "Four Things Soup", a women's tonic, and it is also a remedy for gynaecological problems and for cramp, pain and dizziness. Traditionally, it is considered that women who take the herb on a regular basis become as radiant as the flower itself.

Parts Used

Root has important tonic and pain-relieving properties. It is boiled and dried for use in a wide range of preparations.

Dried root

Fresh root

Key Preparations & Their Uses

Caution Do not take during pregnancy.

Decoction (to make, p. 291) helps relieve period pain, heavy bleeding and other menstrual disorders. To relieve period pain, take 75 ml 3 times a day.

Four things soup (to make, see p. 315). Drink 150 ml daily as a general tonic.

White peony is cultivated for its root, which is a hormonal tonic, and for its flowers.

Habitat & Cultivation

White peony is cultivated throughout north-eastern China and Inner Mongolia. It is propagated from seed in spring, or from root cuttings taken in winter. The root of 4- or 5-year-old plants is harvested in spring or autumn.

Related Species

P. suffructicosa, also commonly used in East Asian herbal medicine, and peony (*P. officinalis*, p. 243), a European species, have broadly similar properties to white peony.

Key Constituents

- Monoterpenoid glycosides (paeoniflorin, albiflorin)
- Benzoic acid
- Pentagalloyl glucose

Key Actions

- Antispasmodic
- Anti-inflammatory
- Enhances cognition
- Lowers blood pressure

Research

- **Paeoniflorin** White peony has significant anti-inflammatory and antispasmodic properties and preclinical research indicates that its traditional use for problems such as rheumatoid arthritis is justified. Paenoniflorin, the constituent most responsible for these effects, is also thought to lower blood pressure and support blood flow to the heart.
- **Polycystic ovary syndrome (PCOS)** White peony has a hormone-balancing activity that helps to reverse the symptoms of PCOS, which include irregular menstruation and infertility. In combination with liquorice (*Glycyrrhiza glabra*, p. 101) it has been shown to support regular ovulation and to lower the raised testosterone levels that typically occur in PCOS.
- **Supports cognition** There is accumulating evidence that white peony supports mental function, including spatial awareness and memory. Although no clinical trials have yet been published, white peony appears to have a strong neuroprotective effect within the brain.
- **Cold sores** Pentagalloyl glucose may have an antiviral action against the cold sore virus, herpes simplex.

Traditional & Current Uses

- **Four Things Soup** White peony is regarded primarily as a women's herb. Together with rehmannia (*Rehmannia glutinosa*, p. 125), *chuan xiong* (*Ligusticum wallachii*) and Chinese angelica (*Angelica sinensis*, p. 63) it is an ingredient in "Four Things Soup", the most widely used women's tonic in China.
- **Gynaecological remedy** White peony helps menstrual disorders, including heavy bleeding and bleeding between periods, and is specifically used to treat period pain and cramp. It is a blood and *yin* tonic (see pp. 40–41) and will help "blood deficiency" states, as well as hot flushing and night sweats.

Self-help Uses

- **Heavy menstrual bleeding**, p. 315.
- **Hot flushes & night sweats**, p. 316.
- **Period pain**, p. 315.

Panax ginseng (Araliaceae)

Ginseng, Ren Shen (Chinese)

Ginseng is the most famous Chinese herb of all. It has been prized for its remarkable therapeutic benefits for about 7,000 years and was so revered that wars were fought for control of the forests in which it thrived. An Arabian physician brought ginseng back to Europe in the 9th century, yet its ability to improve stamina and resistance to stress became common knowledge in the West only from the 18th century.

Ginseng
A perennial growing to 1 m (3 ft), with oval, toothed leaves and a cluster of small green-yellow flowers.

Parts Used

Root is harvested after 4 years, when the active constituents are most concentrated.

Key Preparations & Their Uses

Cautions Do not exceed the dose (can cause insomnia and high blood pressure). Young healthy adults should not take ginseng for more than 6 weeks. Avoid caffeine while taking ginseng. Do not take if pregnant.

Capsules For nervous exhaustion, take a 500 mg capsule once a day.

Soup is a common way of taking ginseng in China. Add 1 g dried root per portion of vegetable soup. Take daily.

Tablets are a convenient way of taking ginseng. Take for short-term stressful events, such as moving house.

Ginseng has always been valued as a tonic in old age.

Habitat & Cultivation

Ginseng is native to north-eastern China, eastern Russia and North Korea, but is now extremely rare in the wild. Ginseng cultivation requires great skill. It is propagated from seed in spring and requires rich, well-drained soil. The plant takes at least 4 years to mature. The root is then normally harvested in autumn and washed and steamed before being dried.

Related Species

San qi (*P. notoginseng*, p. 243), *P. pseudoginseng* and American ginseng (*P. quinquefolium*, p. 243) all have significant benefits.

Key Constituents

- Triterpenoid saponins (0.7–3%), ginsenosides – at least 25 have been identified
- Acetylenic compounds
- Panaxans
- Sesquiterpenes

Key Actions

- Adaptogen
- Tonic

Research

- **Adaptogen** Ginseng has been researched in detail over the last 50 years in China, Japan, Korea, Russia and many other countries. Its remarkable adaptogenic quality (helping the body adapt to stress, fatigue and cold) has been confirmed. Trials show that ginseng significantly improves the body's capacity to cope with hunger, extremes of temperature, and mental and emotional stress.
- **Hormonal support** The ginsenosides, which are similar in structure to the body's own hormones, can be adapted within the body to tone up deficient hormonal states. Clinical trials support the root's traditional use by men, as they age, to maintain vitality and virility. There is also evidence it helps with both impotence and erectile dysfunction. Research indicates that ginseng is equally valuable for women and is a useful medicine at the menopause and beyond, aiding hot flushing and lowered mood, and improving sexual arousal.
- **Other research** Ginseng increases immune function and resistance to infection and improves liver function. Ginseng is a key herb in maintaining health and quality of life in those with cancer.

Traditional & Current Uses

- **Chinese remedy** In China, ginseng is best known as a stimulant, tonic herb for athletes and those subject to physical stress, and as a male aphrodisiac. It is also a tonic for old age, and is traditionally taken by people in northern and central China from late middle age onwards, helping them endure the long hard winters.
- **Western tonic** In the West, ginseng is viewed not so much as a medicine, but as a life-enhancing tonic. It is useful for those coping with stressful events, such as taking exams.

Self-help Uses

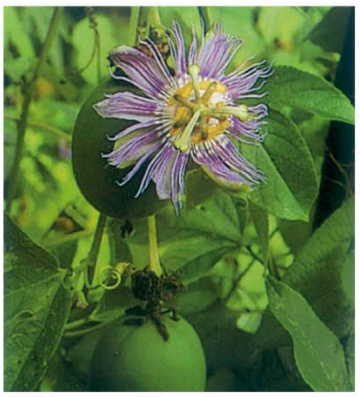
- **Impotence & premature ejaculation**, p. 316.
- **Maintaining vitality**, p. 319.
- **Poor sleep & nervous exhaustion**, p. 309.
- **Short-term stress**, p. 308.

Passiflora incarnata (Passifloraceae)

Passion Flower, Passiflora, Maypop

Passion flower
A climbing vine growing to 9 m (30 ft), with 3-lobed leaves, ornate flowers and egg-shaped fruit.

Passion flower's name comes from its beautiful flowers, thought to represent Christ's crucifixion – 5 stamens for the 5 wounds, 3 styles for the 3 nails and white and purple-blue colours for purity and heaven. The herb has valuable sedative and tranquillizing properties and has a long use as a medicine in Central and North American herbal traditions, being taken in Mexico for insomnia, epilepsy and hysteria.



Passion flower *was used by the Algonquin people of North America as a herbal tranquillizer.*

Habitat & Cultivation

Native to southern US (Virginia, Texas and Tennessee) and to Central and South America, passion flower is now extensively cultivated in Europe, notably in Italy, as well as in North America. It is propagated from seed in spring and needs plenty of sun. The aerial parts are gathered when the plant is flowering or in fruit.

Related Species

There are approximately 400 *Passiflora* species, some of which are popular garden plants. A number have a similar sedative action to passion flower. *P. quadrangularis* has been found to contain serotonin, one of the main chemical messengers within the brain.

Key Constituents

- Flavonoids (apigenin)
- Amino acids
- Cyanogenic glycosides (gynocardin)
- Indole alkaloids (trace)

Key Actions

- Sedative
- Antispasmodic
- Tranquillizing

Research

- **Tranquillizing properties** Pharmacological research shows the herb to have sedative, tranquillizing and sleep-inducing properties. A 2001 clinical trial found that passion flower was as effective in relieving anxiety as oxazepam, a conventional tranquillizer, and had fewer reported side-effects. A clinical study in 2011 found improvement in subjective sleep quality in those taking the passion flower.
- **Indole alkaloids** Research has not yet conclusively established that passion flower contains indole alkaloids.

Traditional & Current Uses

- **Insomnia** Passion flower is best known as a remedy for insomnia and disturbed sleep patterns, and is useful for short-term bouts of sleeplessness.
- **Gentle sedative** This herb is widely acknowledged to be a good medicine for anxiety, tension, irritability and insomnia. Its gentle sedative properties produce a soothing and relaxing effect, reducing nervous over-activity and panic, and making it a mild and non-addictive herbal tranquillizer, comparable in some ways to valerian (*Valeriana officinalis*, p. 148). Occasionally, it is prescribed for convulsions.
- **Pain relief** Passion flower has valuable painkilling properties and is given for toothache, period pain and headaches.
- **Tranquillizing effects** Its ability to reduce anxiety makes passion flower valuable for many nervous states, and it is used to treat conditions as diverse as asthma, palpitations, high blood pressure and muscle cramps. In each case, its antispasmodic and tranquillizing properties are the key to its usefulness, reducing the over-activity responsible for the disorder.

Self-help Uses

- **Insomnia**, p. 309.
- **Sleeplessness due to backache**, p. 313.

Parts Used

Key Preparations & Their Uses

Cautions Passion flower can cause drowsiness. Do not take high doses in pregnancy.

Tincture (to make, p. 292) is a useful sedative for an over-active mind. Take 1 tsp with water daily.

Infusion (to make, p. 291). For occasional sleeplessness, drink up to 300 ml during the evening.

Tablets are a common over-the-counter remedy for insomnia and stress.

Pelargonium sidoides (Geraniaceae)

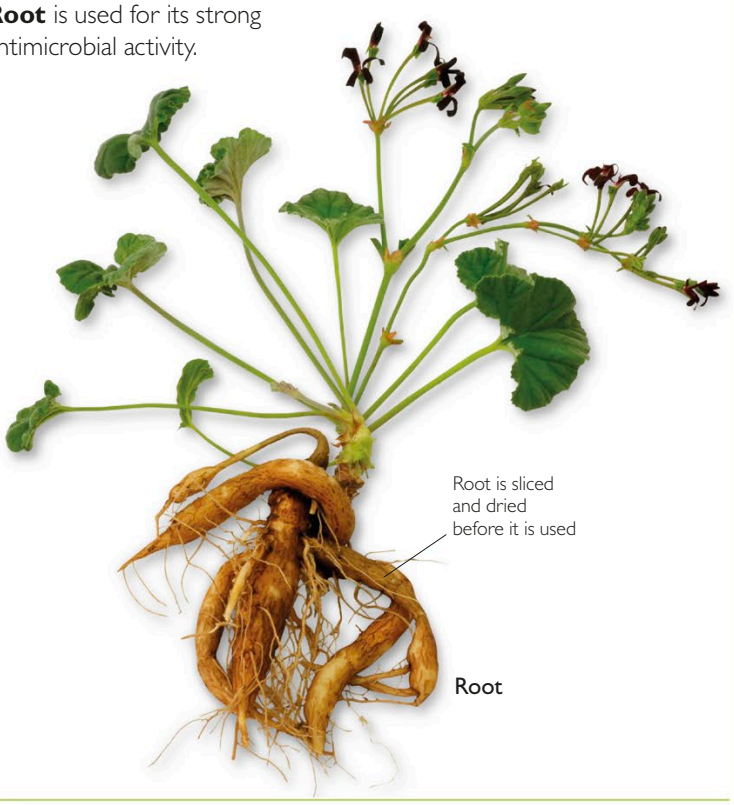
Pelargonium, Umckaloabo

Known as umckaloabo (thought to mean "heavy cough" in Zulu), pelargonium has been used for centuries by traditional South African healers as a key remedy for coughs and respiratory infections and for gastro-intestinal disorders. The herb came to the attention of Europeans in the early 1900s after an Englishman called Charles Stevens was cured of his tuberculosis by a Basuto traditional healer who had given him large doses of pelargonium root.

Pelargonium
An evergreen herb growing to 25 cm (10 in), pelargonium forms a rosette of long-stalked, heart-shaped leaves with striking purple-black flowers.

Parts Used

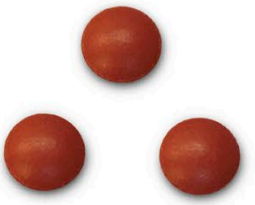
Root is used for its strong antimicrobial activity.



Key Preparations & Their Uses

Cautions Only give to children under 1 year of age on professional advice.

Tincture (to make, p. 292) is a valuable remedy for acute and chronic bronchitis.



Tablets can be taken to support and strengthen immune function.

Fluid extract is best for children with upper respiratory tract infections.

Pelargonium *is a potent medicine for coughs, colds and sore throats.*

Habitat and Cultivation

Pelargonium is still collected from the wild in the eastern parts of South Africa where it is native, though demand for the root has led to increased commercial cultivation. The root is harvested at the end of the growing season, sliced and then kiln dried. The plant is mostly propagated from seed.

Related Species

Many other geranium species have medicinal activity, including another South African species, *P. reniforme*, which is often used for the same indications. The closely related American cranesbill and herb robert (*Geranium maculatum* and *Geranium robertianum,* both p. 216) are strongly astringent in action.

Key Constituents

- Polyphenols (including high levels of proanthocyanidins)
- Coumarins

Key Actions

- Antibacterial
- Antiviral
- Immune enhancing
- Expectorant

Research

- **Antimicrobial** Pelargonium extracts have been shown to have strong activity against a wide range of bacteria, notably those commonly responsible for ear, nose, throat and chest infections. Extracts have also been shown to act against herpes viruses. The root exerts a tonic effect on the immune system.
- **Upper respiratory tract problems** German research over the last 15–20 years has established conclusively that pelargonium is a safe and effective treatment for problems affecting the upper respiratory tract and chest. Clinical trials have shown that it is an effective treatment for acute and chronic bronchitis, tonsillitis, sinusitis and the common cold, reducing the intensity of symptoms and speeding recovery.
- **Children's remedy** Unusually, several clinical trials have focused on treating respiratory infections in children, and the results of these indicate that pelargonium is a very safe and well-tolerated medicine for children (from 1 year old) with coughs, colds, sore throats and sinus problems.

Traditional & Current Uses

- **Respiratory infections** Now commonly available in health stores and chemists, pelargonium can be considered a front-line home treatment for upper respiratory problems and chest infections. It combines well with elderberry extract, also easily found and very safe for children.
- **Traditional African remedy** Pelargonium has a much wider range of uses in South Africa, where the root has been used to treat not only respiratory infections, including tuberculosis, but conditions as diverse as painful periods, liver disease and gastroenteritis.

Self-help Uses

- **Colds & catarrh in children**, p. 318.

Persea americana (Lauraceae)

Avocado

Avocado
An evergreen tree, growing to 20 m (65 ft), with dark green, leathery leaves and white flowers.

Many parts of the avocado tree have a use in herbal medicine. The leaves and bark are effective remedies for digestive problems and coughs. As well as being extremely nutritious, the fruit has a wide range of medicinal uses. Native peoples of Guatemala, for example, use the pulp to stimulate hair growth, the rind to expel worms and the seeds to treat diarrhoea. The fruit pulp is used as a baby food in West Africa.

Avocado is very nutritious and makes an excellent baby food.

Habitat & Cultivation

Indigenous to Central America, avocado is widely cultivated for its fruit in tropical and sub-tropical areas, including Israel, Spain and South Africa. It is propagated from seed. The leaves are harvested as needed and the unripe fruit is picked when fully grown.

Related Species

Other *Persea* species have similar fruits to avocado and are used in a similar way.

Key Constituents

Leaves & bark:
- Volatile oil (methylchavicol, alpha-pinene)
- Flavonoids
- Tannins

Fruit pulp:
- Unsaturated fats
- Protein (about 25%)
- Sesquiterpenes
- Vitamins A, B_1 and B_2

Key Actions

Leaves & bark:
- Astringent
- Carminative
- Relieve coughs
- Promote menstrual flow

Fruit pulp:
- Emollient
- Carminative

Rind:
- Eliminates worms

Research

- **Cholesterol** Research shows that the fruit helps lower cholesterol levels.
- **Poisons** Livestock that have grazed on avocado leaves, fruit or bark have been observed to suffer less toxic effects from snake bite and other poisons.
- **Herpes simplex** Laboratory experiments have shown that avocado leaf extracts strongly inhibit the herpes simplex virus, responsible for cold sores and genital herpes.

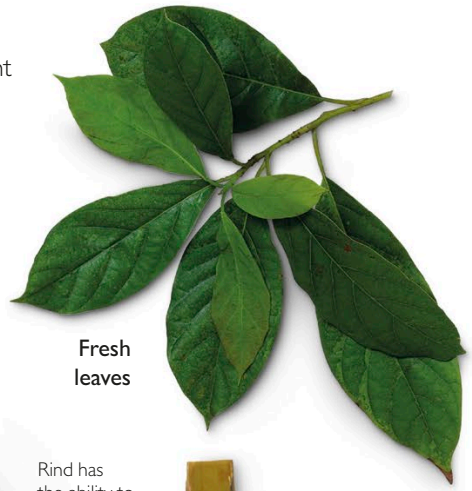
Traditional & Current Uses

- **Leaves & bark** Avocado leaves and young bark stimulate menstruation and can induce abortion. The leaves are taken for diarrhoea, bloating and wind and are valuable for relieving coughs, for liver obstructions and for clearing high uric acid levels, which cause gout.
- **Fruit** The rind is used to expel worms. The fruit pulp is considered to have aphrodisiac properties. Used externally, it soothes the skin. It is applied to suppurating wounds and to the scalp to stimulate hair growth.
- **Oil** The expressed oil of the avocado seed nourishes the skin. It softens rough, dry or flaking skin and, massaged in to the scalp, it improves hair growth.

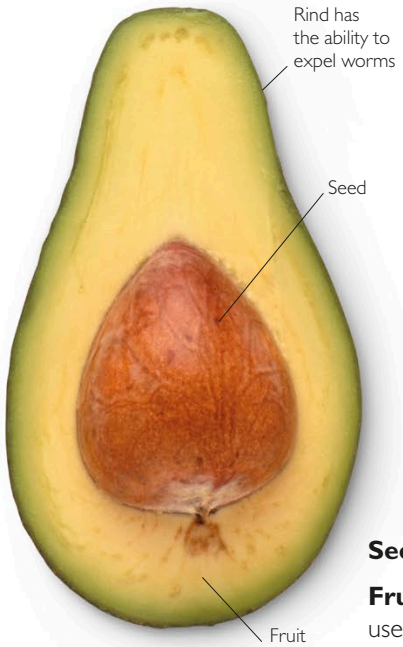
Parts Used

Leaves are an astringent remedy for diarrhoea.

Dried leaves



Fresh leaves



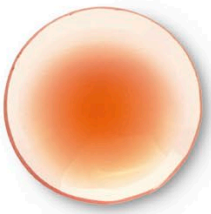
Bark is stripped from the tree for use in treating diarrhoea and dysentery.

Seed contains good-quality oil.

Fruit is nutritious and is used to "draw" wounds.

Key Preparations & Their Uses

Caution The leaves and bark should not be used during pregnancy.



Decoction of leaves or bark (to make, p. 291). For diarrhoea, take 75 ml 3 times daily.

Mashed pulp To help wounds to heal, apply a little mashed pulp 3 times a day.

Oil from the seed. For skin blemishes, rub a little oil on to the area daily 3 times a day.

Piper methysticum (Piperaceae)

Kava, Kava Kava

Kava
An evergreen shrub climbing to 3 m (10 ft), with fleshy stems and heart-shaped leaves.

Kava has major ritual and cultural significance among the peoples of the Pacific Islands, where it is as much part of daily social life as coffee is in the West. At modest doses, kava is calming and tranquilizing. At large doses, it leads to intoxication and euphoria, though without a hangover the next day. It has a hot, slightly aromatic and bitter taste and leaves the mouth feeling slightly numb.

Kava has huge, tapering leaves, growing to 25 cm (10 in) across. Its root is used medicinally to relieve pain.

Habitat & Cultivation

Kava is an indigenous Polynesian vine and grows throughout the Pacific Islands as far east as Hawaii. It is cultivated commercially in parts of the US and in Australia. Kava is propagated from runners in late winter or early spring and is usually grown on frames. It needs well-drained, stony soil and a shady position. The root is harvested at any time of year.

Related Species

The closely related *P. sanctum* is native to Mexico. It is similar to kava in many ways; for example it also contains kava lactones and is traditionally taken as a stimulant. Other related species include matico, betel, cubeb and pepper (*P. angustifolia*, *P. betle*, *P. cubeba* and *P. nigrum*, pp. 249–250).

Key Constituents

- Resin containing kava lactones, including kawain
- Piperidine alkaloid (pipermethysticine)

Key Actions

- Tonic
- Reduces anxiety
- Urinary antiseptic
- Analgesic
- Induces sleep

Research

■ **German ban** In 2002, German regulators banned kava products due to concerns that extracts were toxic to the liver and had led to 20 deaths. Many other countries followed Germany's example. The ban was repealed by the German authorities in 2015. Those campaigning against it had long maintained that the traditional use of kava, especially water-based extracts of kava, were inherently safe. Australian regulators had adopted this approach in 2003 by allowing the sale of water-based extracts of kava. A rigorous re-examination of the 20 fatal cases, found that only two cases could in any way be attributed to the use of kava.

■ **Anxiety** A 2003 review of kava found that "compared with placebo, kava extract is an effective symptomatic treatment for anxiety". The authors commented that "few adverse events were reported in the reviewed trials". Kava is non-addictive, and clinical evidence suggests it is also a safe and effective treatment for anxiety linked with depression, for insomnia and for pain relief.

Traditional & Current Uses

■ **Traditional aphrodisiac** Kava is valued in the South Sea Islands as a calming and stimulating intoxicant. It produces a euphoric state when taken in large quantities.

■ **Relaxing remedy** Kava is a safe and proven remedy for anxiety that does not cause drowsiness or affect the ability to operate machinery. It is valuable for treating muscle tension as well as emotional stress.

■ **Pain relief** With its tonic, strengthening and mildly analgesic properties, kava is a good remedy for chronic pain, helping to reduce sensitivity and to relax muscles that are tensed in response to pain.

■ **Arthritic conditions** The analgesic and cleansing diuretic effect of Kava often makes it a beneficial herb for treating rheumatic and arthritic problems such as gout. It helps to bring relief from pain and to remove waste products from the affected joint.

■ **Antiseptic** Kava is routinely used by peoples of the South Pacific to treat infection, especially where pain is a key symptom. In New Guinea, it is taken to soothe and treat sore throats and to relieve toothache. It makes a valuable urinary antiseptic and will help in treating cystitis, urethritis, urinary frequency and bladder irritability.

■ **External uses** The herb makes a useful analgesic mouthwash for treating toothache and mouth ulcers.

Parts Used

Root relieves pain and counters urinary infections.

Traditionally the root is chewed and fermented with saliva

Dried root

Key Preparations & Their Uses

Cautions Do not exceed recommended dosage or take for more than 2 months at a time. Use water-based extracts. Do not take during pregnancy. If there is a history of liver disease, take only on professional advice. Subject to legal restrictions in many countries.

Infusion (to make, p. 291). To relieve anxiety and muscle tension, drink 75 ml a day.

Tablets containing a water-based extract can be taken for anxiety.

Plantago spp. (Plantaginaceae)

Psyllium, Ispaghula (Hindi), Flea Seed

Psyllium
An annual, growing to 40 cm (16 in) high, with narrow leaves and clusters of minute white-brown flowers.

Produced by several *Plantago* species – *P. ovata*, *P. psyllium* and *P. indica* – psyllium has been used as a safe and effective laxative for thousands of years in Europe, North Africa and Asia. Given their small size and brown colour, psyllium husks and seeds have been mistaken for fleas, hence their folk name flea seed. Bland-tasting, they swell when moistened, and have a jelly-like consistency in the mouth.

Psyllium is widely cultivated for its husks and seeds, which are used as a remedy for bowel problems.

Habitat & Cultivation

The three species that produce psyllium grow variously throughout southern Europe, North Africa and Asia, especially in India, and are extensively cultivated. They are propagated from seed in spring and require plenty of sun. The seeds are harvested when ripe in late summer and early autumn.

Related Species

Common plantain (*P. major*, p. 251) is prescribed for diarrhoea and irritable bowel syndrome. *Che qian zi* (*P. asiatica*) is used in China as a diuretic, for diarrhoea, and for bronchial catarrh. The powdered husk is given late in pregnancy to aid normal presentation of the foetus (head-down position in the uterus).

Key Constituents

- Mucilage (arabinoxylan)
- Fixed oil (2.5%) – mainly linoleic, oleic and palmitic fatty acids
- Starch

Key Actions

- Demulcent
- Bulk laxative
- Antidiarrhoeal

Research

- **Regulating bowel function** Clinical trials in the US, Germany and Scandinavia during the 1980s have shown that psyllium has both a laxative and an antidiarrhoeal action.
- **Diabetes** A 1998 clinical trial with 125 patients concluded that 5 g of psyllium taken 3 times a day helped to lower blood-fat and -glucose levels in people with late-onset diabetes.

Traditional & Current Uses

- **Laxative** Psyllium is prescribed in conventional as well as herbal medicine for constipation, especially when the condition results from an over-tensed or over-relaxed bowel. Both husks and seeds contain high levels of fibre (the mucilage) and expand, becoming highly gelatinous when soaked in water. By maintaining a high water content within the large bowel, they increase the bulk of the stool, easing its passage.
- **Other bowel problems** Contrary to expectation, psyllium is a useful remedy for diarrhoea. It is also an effective treatment for many other bowel problems, including irritable bowel syndrome, ulcerative colitis and Crohn's disease. In India, psyllium is commonly used to treat dysentery.
- **Haemorrhoid relief** Psyllium is valuable for haemorrhoids, helping to soften the stool and to reduce irritation of the vein.
- **Detoxifying herb** The jelly-like mucilage produced when psyllium is soaked in water has the ability to absorb toxins within the large bowel. Psyllium is commonly taken to reduce auto-toxicity (the toxins are expelled from the body with the husks and seeds in the faeces).
- **Digestive ailments** The soothing, protective effect imparted by the mucilage-rich husks and seeds benefits the whole gastro-intestinal tract. Psyllium is taken for stomach and duodenal ulcers, and for acid indigestion.
- **Urinary infections** The demulcent action of psyllium extends to the urinary tract. In India, an infusion of the seeds (the only time this preparation is used) is given for urethritis.
- **External uses** When psyllium husks are soaked in an infusion of marigold (*Calendula officinalis*, p. 73) they make an effective poultice for external use, drawing out infection from boils, abscesses and whitlows (pus-filled swellings on the fingertips).

Self-help Uses

- **Chronic diarrhoea & irritable bowel syndrome**, p. 307.
- **Constipation**, p. 317.
- **Difficult passage of the stool & haemorrhoids**, p. 302.

Parts Used

Seeds should be soaked in water before they are used.

Husks are generally powdered for use in a variety of preparations.

Seeds

Powdered husk

Key Preparations & Their Uses

Cautions Do not exceed the stated dose. Always take with plenty of water.

Cold maceration For constipation, soak 20 g of seeds in 200 ml water for 10 hours. Take the whole dose at night.

Capsules of powdered husk (p. 292). For haemorrhoids, take a 200 mg capsule 3 times a day.

Poultice For boils, mix 5 g of powdered husks with sufficient infusion of marigold to make a thick paste. Apply (see p. 295) 3 times a day.

Polygonum multiflorum (Polygonaceae)

Fleeceflower, He Shou Wu (Chinese)

A Chinese tonic herb with a bitter-sweet taste, fleeceflower is thought to concentrate *qi* (vital energy) in its root, so that taking this herb gives vitality to the body. It has always been considered a rejuvenating herb, helping to prevent ageing and encouraging longevity. Traditionally, much folklore is attached to fleeceflower, and large old roots are thought to have remarkable powers.

Fleeceflower
A perennial climber, growing to 10 m (33 ft), with red stems, light green leaves and white or pink flowers.

Parts Used

Root is highly valued in Chinese medicine for its tonic properties. It is unearthed in the autumn.

Dried root

Key Preparations & Their Uses

Caution Only the prepared root from Chinese herbal shops should be used.

Decoction (to make, p. 291). As a general tonic, take the decoction over 2 days.

Tablets, known as *shou wu pian*, are taken in China for their rejuvenating properties.

Tincture (to make, p. 292). To reduce blood cholesterol levels, take 1 tsp twice a day with water.

Powder may be added to food for its tonic effect. Take 5 g a day.

Fleeceflower is one of the oldest Chinese tonic herbs. It helps lower blood cholesterol levels.

Habitat & Cultivation

Fleeceflower is native to central and southern China, and is cultivated throughout that region. It is propagated from seed or by root division in spring, or from cuttings in summer. The plant requires well-fertilized soil and plenty of protection from winter weather. The roots of 3- to 4-year-old fleeceflower plants are unearthed and dried during the autumn. Older, larger roots are prized for their therapeutic properties, but are generally not available to obtain commercially.

Related Species

Bistort (*P. bistorta*, p. 253), one of the most strongly astringent of all herbs, and knotgrass (*P. aviculare*, p. 253) are used in European herbal medicine. They do not have the same tonic therapeutic properties as *P. multiflorum*. In Chinese herbal medicine, *P. cuspidatum* is used to treat amenorrhoea (absence of periods).

Key Constituents

- Anthraquinone glycosides
- Stilbene glycoside
- Polyphenols
- Phospholipids, including lecithin

Key Actions

- Tonic
- Antioxidant
- Mild sedative
- Lowers cholesterol levels
- Neuroprotective

Research

- **Cholesterol levels** In animal experiments in China, fleeceflower was shown to significantly reduce raised blood cholesterol levels. Also, in a clinical trial, over 80% of patients with high blood cholesterol who had been taking decoctions of the root showed an improvement.
- **Blood sugar levels** Chinese research has revealed that fleeceflower helps increase the levels of sugar in the blood.
- **Neuroprotective** Preclinical research points to fleeceflower having a stabilizing effect on brain function, and that it might – as traditional use would suggest – prove valuable in slowing ageing processes within the central nervous system.

Traditional & Current Uses

- **Popular tonic** Although fleeceflower is not the earliest tonic herb listed in Chinese herbal medicine (it is first mentioned in 713 CE), it has become one of the most widely used. It is taken regularly by millions of people in the East for its rejuvenating and toning properties, and to increase fertility in both men and women.
- **Liver & kidney remedy** In Chinese herbal medicine, fleeceflower's most important use is as a tonic for the liver and kidneys. By strengthening liver and kidney function, it helps cleanse the blood, enabling the *qi* to circulate freely around the whole body.
- **Nerve & blood tonic** Fleeceflower is given in Chinese herbal medicine to people with symptoms, such as dizziness, weakness, numbness and blurred vision, that indicate inefficient nerves and "blood deficiency".
- **Premature ageing** Fleeceflower is prescribed in China for people showing signs of premature ageing, including greying of the hair. There is much anecdotal evidence to support the root's use to help reverse greying of the hair and hair loss.
- **Malaria** The herb is prescribed in the treatment of chronic malaria, when it is often combined with ginseng (*Panax ginseng*, p. 120), Chinese angelica (*Angelica sinensis*, p. 63) and green tangerine peel (*Citrus reticulata*).

Rehmannia glutinosa (Scrophulariaceae)

Rehmannia, Di Huang (Chinese)

An important Chinese tonic herb, rehmannia has figured extensively in many traditional herbal formulae and has an ancient history: it was referred to by Ge Hong, the 4th-century CE Chinese physician and alchemist. Rehmannia is a "longevity" herb and has a marked tonic action on the liver and kidneys. Research has confirmed its traditional use, showing that it protects the liver and is useful for hepatitis.

Rehmannia
A perennial, reaching 30–60 cm (1–2 ft), with large, sticky leaves and purple flowers.

Parts Used

Root is unearthed in autumn. It has a protective action on the liver.

Dried root

Fresh root

Key Preparations & Their Uses

Caution Take only on professional advice during pregnancy.

Remedy Decoct 15 g rehmannia and 10 g Chinese figwort (see p. 291). For fevers, take 150 ml 2–3 times daily.

Shu di huang Simmer 15 g root in 500 ml red wine for 20 minutes. For blood loss and anaemia, take 100 ml daily.

Rehmannia's *appearance gave rise to its Western folkname "Chinese foxglove".*

Habitat & Cultivation

Rehmannia grows wild on sunny mountain slopes in northern and north-eastern parts of China, especially in Henan province. Rehmannia can be cultivated, in which case it is propagated from seed sown in autumn or spring. The root is harvested in autumn, after the plant has flowered.

Related Species

R. lutea is used in Chinese herbal medicine as a diuretic.

Key Constituents

- Iridoids
- Polysaccharides
- Phytosterols
- Phenethyl glycosides

Key Actions

- Tonic
- Anti-inflammatory
- Kidney tonic
- Lowers blood pressure
- Anti-diabetic
- Reduces fever
- Anti-haemorrhagic

Research

- **Liver remedy** Chinese research has shown rehmannia to be a very important liver-protective herb, preventing poisoning and liver damage. Clinical trials in China have demonstrated that it can be effective in treating hepatitis.
- **Other research** Chinese research over the last 10 years indicates that rehmannia has a positive stabilizing effect on blood sugar regulation, and aids liver and pancreatic function. Ongoing preclinical research in China is examining the herb's usefulness in preventing osteoporosis.

Traditional & Current Uses

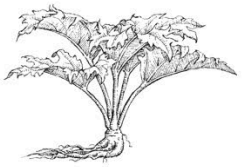
- **Raw & prepared root** In Chinese herbal medicine, the root (*di huang*) is known as *sheng di huang* when it is eaten raw and *shu di huang* when it has been cooked in wine. The former is the most commonly taken remedy. Both are *yin* tonics (see p. 40), but have different therapeutic indications.
- **Sheng di huang** The raw root "cools the blood", and is given to help lower fever in acute and chronic illnesses. Its cooling nature is reflected in its use for problems such as thirst and a red tongue that arise from "heat patterns". *Sheng di huang* is useful for treating people with impaired liver function and is used specifically to treat hepatitis and other liver conditions.
- **Shu di huang** This preparation is used specifically for blood loss and "blood deficiency" states such as irregular and heavy menstrual bleeding. It is warming rather than cooling, and is considered to be a prime kidney tonic.
- **Blood pressure** Rehmannia is used to treat high blood pressure. Interestingly, while *sheng di huang* appears to raise blood pressure, *shu di huang* has the opposite effect.
- **Longevity** Rehmannia is a traditional and valuable tonic for old age. It is considered to help prevent senility.
- **Chinese formulae** The herb is an ingredient of many famous herbal formulae, most notably "the pill of eight ingredients", which contemporary Chinese herbalists consider to "warm and invigorate the *yang* of the loins".

Self-help Uses

- **Heavy menstrual bleeding**, p. 315.
- **Weakened liver & metabolism**, p. 319.

Rheum palmatum (Polygonaceae)

Chinese Rhubarb, Da Huang (Chinese)



Chinese rhubarb
A thick-rhizomed perennial growing to 3 m (10 ft), with large palm-shaped leaves and small flowers.

Chinese rhubarb has long been prized as the most useful purge in herbal medicine, safe even for young children due to its gentle action. It has been used in China for over 2,000 years and is an extremely effective treatment for many digestive problems. Paradoxically, it is a laxative when taken in large doses but has a constipating effect in small measures. The rhizome has an astringent, unpleasant taste.

Parts Used

Rhizome contains anthraquinones, which are laxative, and tannins, which are astringent.

Dried rhizome

Rhizome is a mild appetite stimulant and helps improve digestion

Fresh rhizome

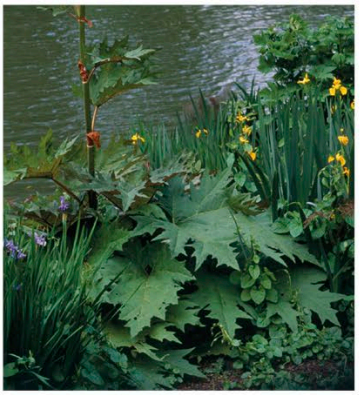
Key Preparations & Their Uses

Cautions Do not take during pregnancy or while breast-feeding. Do not take during menstruation or if prone to gout or kidney stones. Not suitable for children.

Decoction (to make, p. 291). For an occasional bout of constipation, take 100 ml each evening.

Tincture (to make, p. 292). To stimulate the appetite, take 20 drops with water twice a day.

Tablets are one of the most convenient ways of taking the herb. Take for one-off bouts of constipation.



Chinese rhubarb *grows best close to water. In summer it produces clusters of red flowers.*

Habitat & Cultivation

Native to China, where the best-quality herb is still found, Chinese rhubarb now also grows in the West. It is found in the wild and is widely cultivated. It is grown from seed in spring or by root division in spring or autumn and requires a sunny position and well-drained soil. The rhizomes of 6–10-year-old plants are dug up in the autumn after the stem and leaves have turned yellow.

Related Species

R. tanguticum and *R. officinale* have similar uses to *R. palmatum*. These 3 species are considered to be superior in action to other rhubarbs. The familiar, edible rhubarb is *R. rhaponticum*.

Key Constituents

- Anthraquinones (about 3–5%), rhein, aloe-emodin, emodin
- Flavonoids (catechin)
- Phenolic acids
- Tannins (5–10%)
- Calcium oxalate

Key Actions

- Laxative
- Anti-inflammatory
- Astringent
- Stops bleeding
- Antibacterial

Research

- **Anthraquinones & tannins** Chinese rhubarb's medicinal value is largely due to the irritant, laxative and purgative properties of the anthraquinones and in large doses the rhizome is strongly laxative. A 2007 Chinese study concluded that the anthraquinones in rhubarb "possess promising anti-cancer properties and could have a broad therapeutic potential".
- **Antibacterial properties** Decoctions of the root have been shown to be effective against *Staphylococcus aureus*, an infectious bacterium that causes mouth ulcers and folliculitis (an acne-type infection of the beard area). In laboratory studies, rhubarb has been found to have notable activity against *Helicobacter pylori*, a bacterium that causes stomach ulcers.

Traditional & Current Uses

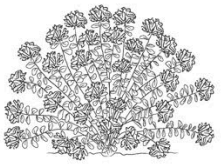
- **History** Chinese rhubarb was first mentioned in the 1st-century CE Chinese text *The Divine Husbandman's Classic*, and has been grown in the West since 1732. It is one of the few herbs still used today in conventional as well as herbal medicine, and is listed in the *British Pharmacopoeia* of 1988.
- **Constipation** Large doses of Chinese rhubarb are combined with carminative herbs and taken as a laxative, helping to clear the colon without causing excessive griping. This is useful for treating constipation where the muscles of the large bowel are weak.
- **Diarrhoea** Small doses of the root are astringent, relieving irritation of the inner lining of the gut, thus reducing diarrhoea.
- **Other uses** Chinese rhubarb can be applied to burns, boils and carbuncles. The herb acts as a tonic and mild appetite stimulant and serves as a useful mouthwash for mouth ulcers.

Self-help Use

- **Constipation**, p. 307.

Rhodiola rosea (Crassulaceae)

Rhodiola, Golden Root

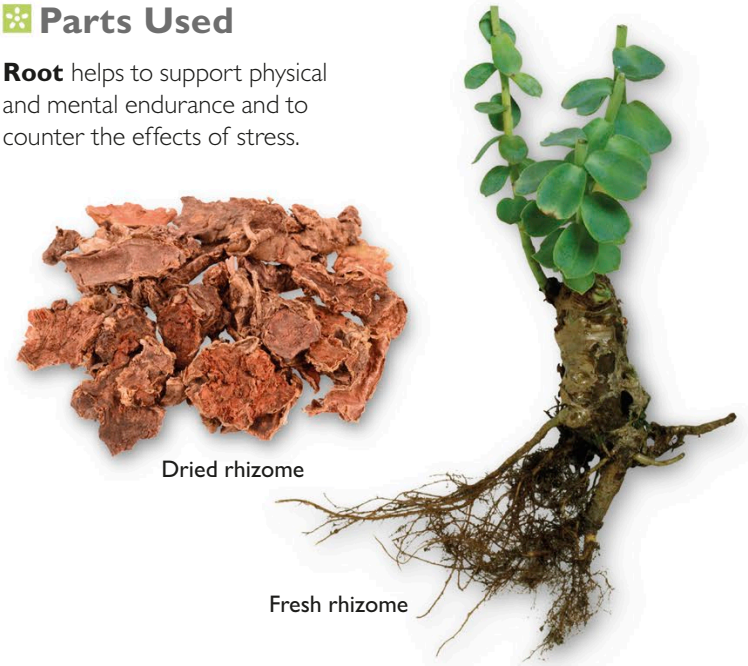


Rhodiola
A fleshy perennial growing to 40 cm (16 in) in height with thick oblong leaves and clusters of yellow flowers.

An Arctic plant that thrives in extreme environments, rhodiola's rose-coloured roots have pronounced medicinal activity, enhancing the ability of the body to deal with stresses of all kinds. An adaptogen, similar to Korean ginseng (*Panax ginseng*, p. 118), rhodiola also acts on the central nervous system, supporting memory and concentration under conditions of stress, and helping to relieve nervous exhaustion and mild to moderate depression.

Parts Used

Root helps to support physical and mental endurance and to counter the effects of stress.



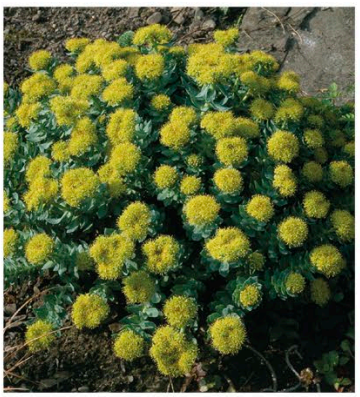
Key Preparations & Their Uses

Cautions Can cause irritability and sleep disturbance. Not advisable in manic and bipolar disorders.

Decoction Take 50 ml twice a day to promote physical endurance.

Tablets take as recommended by supplier for lowered mood and vitality.

Tincture (to make, p. 292). To support memory and concentration, take 2.5 ml 2–3 times a day.



Rhodiola root is most commonly taken to improve mental and physical performance.

Habitat and Cultivation

Rhodiola is indigenous to mountainous and Arctic regions of the northern hemisphere, including Canada, Scotland, Scandinavia, Russia and Alaska. Rhodiola is still mostly collected from the wild, threatening its long-term survival in some regions, though it is now cultivated in Canada, Norway and Finland.

Related Species

The central Asian *R. quadrifida* is used in Mongolia to enhance strength and vigour. *R. crenulata* and *R. rosea* are used in Chinese medicine, though across China many different species of *Rhodiola* are used to alleviate fatigue and protect against the cold. Chinese research into *R. crenulata* indicates that this species aids endurance and has a protective activity against radiation.

Key Constituents

- Phenylpropanoids (rosavins – occuring only in *Rhodiola rosea*)
- Salidroside
- Flavonoids
- Monoterpenes (including rosiridin)
- Triterpenes

Key Actions

- Adaptogen
- Antidepressant
- Aids mental performance
- Anti-inflammatory

Research

- **Adaptogen** Rhodiola is an unusual medicine – an adaptogen that combines the ability to promote physical and mental endurance with antidepressant and anti-inflammatory activity. Though large-scale clinical trials are lacking, research shows that rhodiola root increases the capacity to resist physical and mental fatigue.
- **Clinical trials** In a 2000 Armenian clinical trial, young healthy hospital doctors working night shifts were given a rhodiola extract. After 2 weeks, those taking the extract showed significantly fewer signs of mental fatigue, including better levels of concentration and short-term memory, than those taking a placebo. In a 2015 US clinical trial, 57 adults with moderate depression were given rhodiola or sertraline, a conventional anti-depressant. Both medicines proved effective but those taking rhodiola reported fewer side effects.

Traditional & Current Uses

- **Key traditional uses** In Europe and Asia, the central core of rhodiola's use in traditional medicine has always been its power to increase endurance and work rate, and the capacity to cope with high altitude and winter cold. The roots have also been taken to promote longevity, ease depression and treat infection. Rhodiola is now most commonly taken to improve mental and physical performance and to protect against the harmful effects of ongoing stress.
- **Russian medicine** Rhodiola became an official medicine in Russia in 1969, being recommended for a wide range of health problems, not only as an adaptogen (see *Research*), but for psychiatric and neurological problems, such as depression and schizophrenia.
- **Other uses** Rhodiola is traditionally considered to help improve fertility in both men and women. In Siberia, rhodiola roots are given to marrying couples to promote fertility and the health of their future children. In Mongolia, alongside its use as a tonic, rhodiola is given for infections such as bronchitis and pneumonia, and is also used as a mouthwash for bad breath.

Self-help Use

- **Maintaining vitality**, p. 319.

Rosmarinus officinalis (Lamiaceae)

Rosemary

Rosemary
A strongly aromatic evergreen shrub growing to 2 m (6½ ft), with narrow, dark green, pine-like leaves.

Rosemary is a well-known and greatly valued herb that is native to southern Europe. It has been used since antiquity to improve and strengthen the memory. To this day it is burnt in the homes of students in Greece who are about to take exams. Rosemary has a long-standing reputation as a tonic, invigorating herb, imparting a zest for life that is to some degree reflected in its distinctive aromatic taste.

***Rosemary** was a symbol of fidelity between lovers, on account of its ability to improve the memory.*

Habitat & Cultivation

Native to the Mediterranean, rosemary grows freely in much of southern Europe and is cultivated throughout the world. It is propagated from seed or cuttings in spring and prefers a warm, moderately dry climate and a sheltered site. The branches are gathered during the summer after flowering and dried in the shade.

Key Constituents

- Volatile oil (1–2%) containing borneol, camphene, camphor, cineole
- Flavonoids (apigenin, diosmin)
- Tannins
- Rosmarinic acid
- Diterpenes (including carnosic acid and carnosol)

Key Actions

- Tonic
- Stimulant
- Astringent
- Nervine
- Anti-inflammatory
- Antioxidant

Research

- **General circulation** A 2011 study published in *Phytotherapy Research* found that rosemary exerted anti-inflammatory and protective effects on the inner lining of blood vessels in young adults. Such research supports the understanding that many active compounds in rosemary support a healthy circulation. A small 2006 clinical trial in Germany concluded (in line with traditional usage) that rosemary raised blood pressure in people suffering from low blood pressure. All those taking rosemary also reported feeling better at the end of the trial.
- **Other actions** Japanese laboratory research in 2003 found that diterpenes within rosemary (carnosic acid and carnosol) strongly stimulated nerve growth factor, suggesting that rosemary may stimulate nerve repair. A 2015 review in *Cancer Letters* stated that these constituents also had "promising results of anti-cancer activity".

Traditional & Current Uses

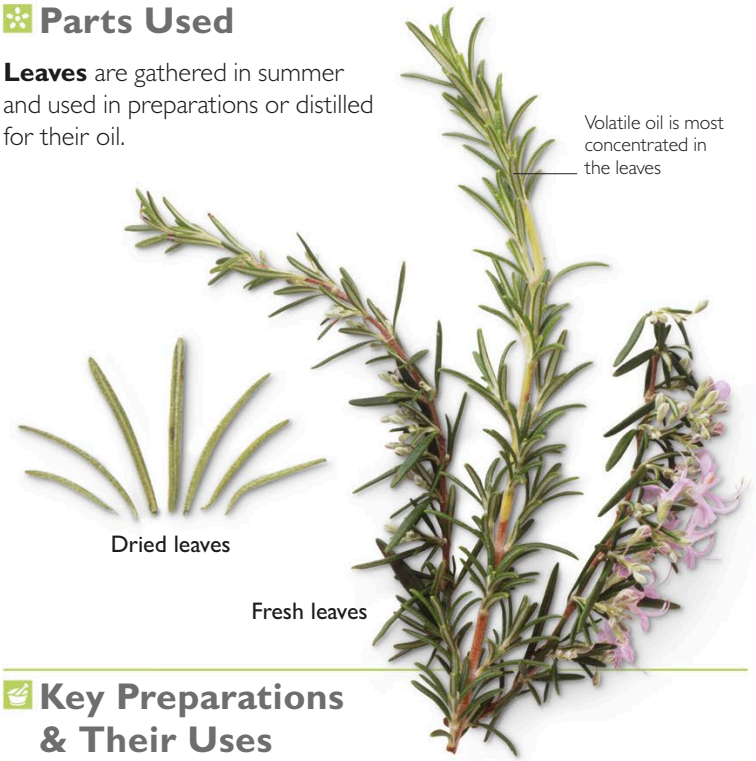
- **Circulatory stimulant** Rosemary has a central place in European herbal medicine as a warming, tonic remedy that stimulates blood flow throughout the body, especially in those with low blood pressure. It is thought to promote blood flow to the head, thus improving memory and concentration. It may be taken to relieve migraine and headaches and encourages hair growth and health.
- **Poor circulation** Thought to raise low blood pressure, the herb is valuable for fainting and weakness associated with deficient circulation.
- **Restorative** Rosemary aids recovery from long-term stress and chronic illness. It is thought to stimulate the adrenal glands and is used specifically for debility, especially when accompanied by poor circulation and digestion.
- **Uplifting herb** Rosemary is often prescribed for people who are stressed and "failing to thrive". Valued as a herb that raises the spirits, it is useful for mild to moderate depression.
- **Other uses** Applied as a lotion or diluted essential oil, rosemary eases aching, rheumatic muscles. Add the infusion, or essential oil, to bathwater for a reviving soak.

Self-help Uses

- **Migraine**, p. 309.
- **Pre-menstrual tension**, p. 315.
- **Sore throats**, p. 311.
- **Tired & aching muscles,** p. 312.

Parts Used

Leaves are gathered in summer and used in preparations or distilled for their oil.



Key Preparations & Their Uses

Caution Do not take the essential oil internally except under a professional practitioner's supervision.

Tincture (to make, p. 292) is an excellent tonic. For stress, take 2 ml twice daily with water.

Essential oil To improve concentration, burn several drops in an oil burner (to use, p. 297).

Infusion (to make, p. 291). To relieve headaches, take 50 ml every 3 hours. The infusion, rubbed into the scalp, improves hair growth.

Salix alba (Salicaceae)

White Willow

Justly famous as the original source of salicylic acid (the forerunner of aspirin), white willow and closely related species have been used for thousands of years in Europe, Africa, Asia and North America to relieve joint pain and manage fevers. Dioscorides, a Greek physician in the 1st century CE, suggested taking "willow leaves, mashed with a little pepper and drunk with wine" to relieve lower back pain.

***White willow** is used in Britain to make cricket bats. The bark has anti-inflammatory properties.*

Habitat & Cultivation

Native to much of Europe, white willow is also found in North Africa and Asia, thriving in damp areas, such as on riverbanks. It is propagated from semi-ripe cuttings in summer or from hardwood cuttings in winter. The trees are frequently pollarded and bark is stripped from branches of 2- to 5-year-old trees in spring.

Related Species

Many *Salix* species, for example crack willow (*S. fragilis*), are used interchangeably with white willow. *S. acmophylla* is used on the Indian sub-continent as a remedy for fevers. In North American herbal medicine, black willow (*S. nigra*) is given as an anaphrodisiac (sexual depressant).

Key Constituents

- Phenolic glycosides (up to 11%)
- Salicin
- Flavonoids
- Polyphenols

Key Actions

- Anti-inflammatory
- Analgesic
- Reduces fever
- Antirheumatic
- Astringent

Research

- **Salicylic acid & aspirin** Salicylic acid, a strongly anti-inflammatory and analgesic compound, was first isolated from salicin in willow bark in 1838. It was the forerunner of aspirin, a chemical drug developed in Germany during 1899. Salicylic acid (and salicin) has many of the properties of aspirin but causes notably fewer side-effects. As such, it is now being widely researched as an alternative to aspirin-based anti-inflammatory medicines such as ibuprofen. Unlike aspirin-type medicines, salicylic acid does not thin the blood, and any problems it might cause within the digestive tract are likely to be minor.
- **Clinical trials** Over the last 15 years clinical trials have shown that high-strength willow bark extract offers an effective alternative to mainstream anti-inflammatory medicines, particularly in treating conditions such as osteoarthritis and lower back pain. In a 2008 clinical trial published in *Phytomedicine*, among people with arthritis of the hip or knee, aged between 50 and 75, those taking willow bark extract, after 6 weeks, were rated by doctors as doing significantly better than those taking standard aspirin-based medication. Those taking willow bark reported far fewer side-effects.

White willow
A deciduous tree growing to 25 m (80 ft), with green tapering leaves, and catkins in spring.

Parts Used

Bark is stripped from young branches and used fresh or dried.

Dried bark

Fresh bark

Key Preparations & Their Uses

Caution Avoid if allergic to aspirin. Do not take during pregnancy or if breast-feeding Not suitable for young children. Rarely, may cause gastro-intestinal upset.

Tincture (to make, p. 292). For rheumatism, take 2.5 ml with water 3 times a day.

Remedy Make a decoction (see p. 291) with 10 g each of white willow, St John's wort and cramp bark. For aching muscles, drink 150 ml twice a day.

Tablets often also contain other herbs. Take for arthritis.

Decoction (to make, p. 291). For painful joints and aching rheumatic muscles, take 75 ml 3 times a day.

Traditional & Current Uses

- **Joint remedy** White willow is an excellent remedy for arthritic and rheumatic pain affecting the back, and joints such as the knees and hips, though large doses may be required, such as a standardized tablet. In combination with other herbs and dietary changes, it relieves inflammation and swelling, and improves mobility in painful or creaky joints.
- **Fevers & pain** White willow is taken to manage high fevers. It may also be used to ease headaches and head pain.
- **Menopause** A cooling herb that reduces sweating, willow bark can be helpful in controlling symptoms such as hot flushing and night sweats.

Self-help Uses

- **Arthritis & inflamed joints**, p. 313.
- **Back pain due to joint inflammation**, p. 313.
- **Hot flushes & night sweats**, p. 316.

Salvia miltiorrhiza (Lamiaceae)

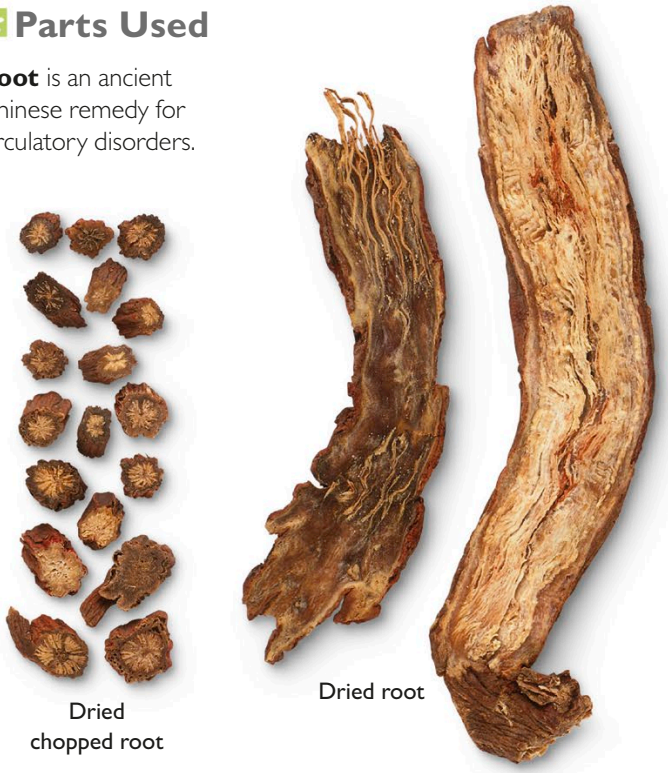
Dan Shen, Chinese Sage

Dan shen
A hardy perennial growing to 80 cm (32 in), with toothed oval leaves and clusters of purple flowers.

Recent scientific research supports *dan shen's* traditional usage as a remedy for heart and circulatory problems such as angina and palpitations. *The Divine Husbandman's Classic* (*Shen'nong Bencaojing*), the earliest of all Chinese herbal texts, listed *dan shen* as a herb that "invigorates the blood" and it is still used as a circulatory remedy. In particular, it is taken for period pain and other conditions resulting from circulatory congestion.

Parts Used

Root is an ancient Chinese remedy for circulatory disorders.



Key Preparations & Their Uses

Cautions For serious circulatory or heart problems, take only under professional supervision. The tincture may produce digestive and skin reactions. Avoid in pregnancy.

Tincture is used by herbalists to treat angina and other circulatory problems.

Decoction (to make, p. 291). For painful periods, take 75 ml up to 3 times a day.

Dan shen *is an important circulatory stimulant. It is sold in herbal markets across China for use in medicinal formulae.*

Habitat & Cultivation

Native to China, *dan shen* is now cultivated in north-eastern China and Inner Mongolia. It requires moist, sandy soil and is propagated by root division in spring. The root is harvested from late autumn through to early spring.

Related Species

Sage (*S. officinalis*, p. 131) is closely related, but is used for an entirely different range of medical problems. In Mexico, the related species *S. divinorum* is used as a hallucinogen.

Key Constituents

- Diterpenes (tanshinones)
- Phenolic compounds
- Volatile oil
- Vitamin E

Key Actions

- Tonic to heart and circulation
- Anticoagulant
- Dilates the blood vessels
- Sedative
- Antibacterial

Research

- **Tanshinones** There has been extensive research into *dan shen* in China and the tanshinones have been shown to have a profound effect on the coronary circulation, reducing the symptoms of angina and improving heart function.
- **Heart attack** The whole herb (rather than isolated constituents) has been used in China to assist patients who are recovering from a heart attack and it appears to support heart function at this critical time. Clinical trials in China, however, have shown that *dan shen* is most effective when taken as a preventative, rather than as a remedy after the heart attack has taken place.
- **Other research** Many recent clinical trials involving *dan shen* have used Chinese herbal combinations, rather than *dan shen* alone, so it is hard to draw conclusions. However, they do provide further evidence of *dan shen's* usefulness in cardio-vascular problems such as high blood pressure, angina and heart disease. Unusually, two clinical trials in China (2012), found that injected extracts of *dan shen* were helpful in pre-eclampsia, a serious condition during pregnancy which involves fluid retention and high blood pressure.

Traditional & Current Uses

- **Circulatory stimulant** *Dan shen* has been esteemed by the Chinese for thousands of years as a circulatory stimulant. Like hawthorn (*Crataegus oxyacantha*, p. 87), it is a safe, effective remedy for many circulatory problems. It particularly benefits the coronary circulation, opening up the arteries and improving blood flow to the heart and is therefore helpful in treating coronary heart disease. Though it does not lower blood pressure, *dan shen* relaxes the blood vessels and improves circulation throughout the body.
- **Circulatory congestion** *Dan shen* is used traditionally to treat conditions caused by blood stagnation, primarily those affecting the lower abdomen, such as absent or painful periods and fibroids.
- **Sedative** The sedative action of *dan shen* helps to calm the nerves and it is therefore helpful in treating angina, a condition made worse by anxiety and worry. Palpitations, insomnia and irritability also benefit from *dan shen's* sedative properties.

Self-help Use

- **Palpitations**, p. 302.

Salvia officinalis (Lamiaceae)

Sage

Sage
An evergreen growing to 80 cm (32 in), with square stems and hairy grey-green or purple leaves.

Sage's botanical name is a clue to its medicinal importance: *Salvia* comes from *salvare*, meaning "to cure" in Latin. A medieval saying echoes this: "Why should a man die while sage grows in his garden?" Today, sage is an excellent remedy for sore throats, poor digestion and irregular periods, and it is also taken as a gently stimulating tonic. It has a slightly warm, noticeably bitter and astringent taste.

***Sage** is known most commonly as a culinary herb, but it is also of great medicinal importance.*

Habitat & Cultivation

Native to the Mediterranean, sage is cultivated all round the world, thriving in sunny conditions. It is grown from seed in spring and the plants are replaced after 3 to 4 years. The leaves are picked in summer.

Related Species

In all, there are about 500 species of *Salvia*. Spanish sage (*S. lavandulifolia*) is the most familiar culinary variety and does not contain thujone. Two close relatives of *S. officinalis* are *dan shen* (*S. miltiorrhiza*, p. 130) and clary sage (*S. sclarea*, p. 265).

Key Constituents

- Essential oil (1–2%)
- Diterpenes
- Triterpenes
- Phenolic compounds including rosmarinic acid
- Tannins

Key Actions

- Antiseptic
- Astringent
- Anti-catarrhal
- Nerve tonic
- Oestrogenic

Research

- **Nerve tonic** Ongoing research taking place in the UK provides strong support for the traditional use of sage to enhance memory. In the most recent study (2008), healthy volunteers averaging 73 years of age showed a significant improvement in memory processing and accuracy of attention, after taking a single dose of sage extract. Interestingly, a moderate dose, equivalent to 2.5 g of sage, proved most effective, more so than higher doses.
- **Sore throat** In a randomized trial published during 2006, a sage throat spray was found to relieve throat pain in people who had acute throat infection.
- **Hormonal activity** The herb's long-standing use during the menopause has also been researched. In the most recent study, undertaken in Switzerland (2011), women with at least 12 months of hot flushing reported an average 64% decrease in symptoms after 8 weeks of taking sage.
- **Lowering blood fat levels** A clinical trial published in 2011 in *Phytotherapy Research* concluded that "sage may be effective and safe in the treatment of hyperlipidemia". All blood fat markers showed improvement in those taking sage.

Parts Used

Leaves have valuable antiseptic and astringent properties.

Key Preparations & Their Uses

Cautions Do not take medicinal doses during pregnancy or while breast-feeding, or if epileptic.

Infusion (to make, p. 291). Use as a gargle for sore throats up to 3 times a day.

Tincture (to make, p. 292) is a digestive tonic. Take 2 ml with water twice a day.

Fresh sage leaves are a useful first aid remedy. Rub on to stings and bites.

Traditional & Current Uses

- **Sore throat** Sage's combination of antiseptic and astringent action makes it ideal as a gargle for sore throats and throat infections. It can equally be used for mouth ulcers and sore gums.
- **Hormonal remedy** A valuable remedy for irregular and scanty periods, sage encourages better blood flow at menstruation. The herb is thought to reduce or prevent sweating and can prove particularly effective during the menopause. It also helps to reduce hot flushing and night sweats and it has a calming, relaxant aspect. Sage will decrease breast-milk production, and is traditionally taken by a mother while weaning.
- **Digestive tonic** Sage has long traditional use as a digestive aid, supporting stomach health and promoting better digestion and absorption.

Self-help Uses

- **Bites & stings**, p. 303.
- **Diarrhoea**, p. 307.
- **Hot flushes & night sweats**, p. 316.
- **Mouth ulcers**, p. 306.
- **Sore throats**, p. 311.

Sambucus nigra (Caprifoliaceae)

Elder

Elder
A deciduous tree growing to 10 m (33 ft), with oval leaves, cream flowers and blue-black berries.

Elder has more folklore attached to it than almost any other European plant, except perhaps mandrake (*Mandragora officinarum*, p. 232). Chopping elder branches was considered dangerous in rural England as it was believed that the tree was inhabited by the Elder Mother, and to avoid her wrath, woodcutters would recite a placatory rhyme. Elder is a valuable remedy for flu, colds and chesty conditions.

Elder was traditionally known as "Nature's medicine chest".

Habitat & Cultivation

Native to Europe, elder thrives in woods, hedges and on waste-ground. It is now found in most temperate regions, and is often cultivated. Elder is propagated from cuttings in spring. The flowering tops are harvested in late spring and the berries are picked in early autumn.

Key Constituents

Berries:
- Flavonoids
- Anthocyanins
- Lectins
- Vitamins A and C

Flowers:
- Flavonoids
- Anthocyanins
- Triterpenes
- Volatile oil (0.7%)
- Mucilage
- Tannins

Key Actions

- Antiviral
- Anti-catarrhal
- Anti-inflammatory
- Diuretic
- Increases sweating

Research

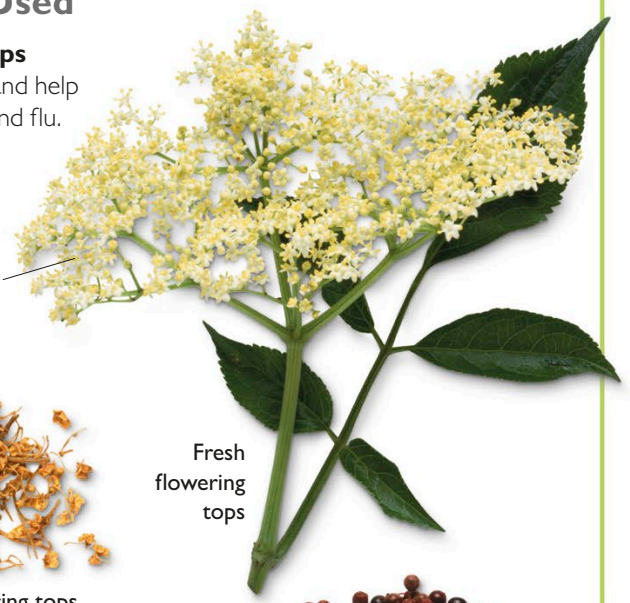
- **Elder berries** Israeli research from 1995 found 90% of people that were given elderberry extract recovered in 2–3 days, whilst 90% of those taking the placebo took up to 6 days. Further clinical trials have supported these findings – a 2014 review concluded there was "good scientific evidence" that elderberry extract was an effective treatment for influenza. Although the safety profile of elderberry has not been established, evidence indicates it is a safe influenza remedy for adults and children.

Traditional & Current Uses

- **Coughs & colds** The berries have an established antiviral activity, helping prevent and speed recovery from upper respiratory infections, such as colds and flu. Following traditional usage, the flowers are taken to stimulate sweating and relieve fever by cooling the body. An elderflower infusion makes a soothing remedy when suffering from cold and flu.
- **Catarrh & allergies** The flowering tops tone the mucous linings of the nose and throat (increasing their resistance to infection) and are prescribed for chronic catarrh, ear infections and allergies. Infusions with other herbs can reduce severity of hay fever attacks if taken some months before the season.
- **Arthritis** By encouraging sweating and urine production, elder flowering tops aid removal of waste products and are of value in arthritic conditions.
- **Other uses** Flowers and berries are mildly laxative and appear to help lower blood pressure. The flowers are thought to help control diabetes. The berries appear to enhance immune function.

Parts Used

Flowering tops reduce fevers and help coughs, colds and flu.



Dried flowering tops

Berries are nutritious and may be used as a mild laxative.

Dried berries

Key Preparations & Their Uses

Cautions None known. Do not consume unripe berries.

Infusion of flowering tops (to make, p. 291). For colds, drink 150 ml 3 times a day.

Cream made with flowering tops (see p. 296). Apply freely to chapped skin.

Tincture of flowering tops (to make, p. 292). For hay fever, take 1 tsp with water 3–4 times a day.

Decoction of berries (to make, p. 291). For rheumatic aches, take 100 ml 3 times a day.

Self-help Uses

- **Allergic rhinitis, including hay fever**, p. 300.
- **Colds, flu & fevers**, p. 311.
- **Colds & catarrh in children**, p. 318.
- **Earache due to chronic catarrh**, p. 312.

Schisandra chinensis (Schisandraceae)

Schisandra, Wu Wei Zi (Chinese)

Schisandra
An aromatic woody vine reaching up to 8 m (26 ft), with pink flowers and spikes of red berries.

Schisandra ranks along with other Chinese tonic herbs as an excellent tonic and restorative. It helps in stressful times and increases zest for life. The berries tone the kidneys and sexual organs, protect the liver, strengthen nervous function and cleanse the blood. The name *wu wei zi* means "5-flavoured herb" as this herb reputedly tastes of the 5 main elemental energies (see p. 40). It has a sour, salty and slightly warm taste.

Parts Used

Fruit helps the body to cope with stress.

Berries are chewed every day for 100 days as a tonic in China

Dried fruit

Key Preparations & Their Uses

Cautions Large doses can cause heartburn. Can interact with some medicines. Take only on professional advice, if taking prescribed medicines.

Decoction (to make, p. 291). For coughs and shortness of breath, decoct 5 g of crushed berries with 100 ml of water. Divide into 3 doses and drink during a 24-hour period.

Schisandra is one of China's most important tonic herbs, widely taken as a sexual tonic.

Habitat & Cultivation

Schisandra is cultivated in north-eastern China, especially in the provinces of Jilin, Lianoning, Heilongjiang and Hebei. It is propagated from seed in spring. The fruit is harvested in autumn when it is fully ripe.

Related Species

Though less therapeutically active than schisandra, the berries of the related *nan wu wei zi* (*S. sphenanthera*) are commonly used in Chinese medicine for the treatment of acute coughs.

Key Constituents

- Lignans (schizandrin, deoxyschizandrin, gomisin)
- Triterpeneso
- Volatile oil
- Vitamins C and E

Key Actions

- Nerve tonic
- Adaptogenic
- Protects liver

Research

- **Aiding performance** Healthy adults given schisandra extract showed a marked improvement in both physical and mental stamina. Russian sailors given schisandra had an increased capacity to maintain and endure normal working regimes, and Russian factory workers were reported to have decreased sickness levels.
- **Protecting the liver** The lignans have been shown to have pronounced anti-hepatoxic (liver-protective) action. Up to 30 different lignans have been identified in schisandra, which all contribute to this effect. One clinical trial reported a 76% success rate in treating patients with hepatitis, with no side-effects being noted.
- **Nervous system** Schisandra is known to stimulate the nervous system, increasing the speed of reflex nervous responses and improving mental clarity. The berries have a mild anti-depressant activity and are thought to improve nervous irritability and forgetfulness. In Russia, schisandra has been used to treat people with severe mental health disorders including schizophrenia and chronic alcoholism. Clinical studies in 1967 found that those taking a schisandra tincture became more sociable and less emotionally tense.

Traditional & Current Uses

- **Tonic** Schisandra is a major tonic herb and acts throughout the body, strengthening and toning many different organs.
- **Sexual stimulant** Probably best known as a sexual tonic for both men and women, schisandra reputedly increases the secretion of sexual fluids and, in men, it also improves sexual stamina.
- **Liver treatment herb** Schisandra has proven benefits for the liver and is used in the treatment of hepatitis and poor liver function.
- **Sedative** Although a stimulant, schisandra is used in Chinese medicine to "quiet the spirit and calm the heart". It is given for insomnia and dream-disturbed sleep and is a fine example of how adaptogenic herbs often work in apparently contradictory ways to restore normal body function.
- **Mental & emotional disorders** In Russia and China, schisandra berries have traditionally been prescribed to treat mental illnesses such as neuroses. They are also given to improve concentration and co-ordination and are a traditional remedy for forgetfulness and irritability.
- **Respiratory infections** The herb is used in the treatment of respiratory infections such as chronic coughs, shortness of breath and wheezing.
- **Balancing fluid levels** Schisandra is used to tone up and strengthen kidney function and to help the body balance levels of fluid, making it helpful for treating night sweats, thirst and urinary frequency.
- **Skin rashes** Recently, Chinese herbalists have started to use schisandra to treat urticaria (hives) and other skin problems, including eczema. It is usually given for these conditions in the form of a medicinal wine.
- **Additional uses** Schisandra is used for a wide variety of other physical disorders, including diarrhoea and dysentery, as well as to help improve failing sight and hearing.

Self-help Use

- **Low sex drive**, p. 316.

Scutellaria baicalensis syn. *S. macrantha* (Lamiaceae)

Baical Skullcap, Huang Quin

In 1973, 92 wooden tablets were discovered in a 2nd-century CE tomb in north-western China. Among other herbs listed in prescriptions for decoctions, tinctures, pills and ointments was Baical skullcap. The herb has had an established role in Chinese herbal medicine at least from that time, and is one of the main remedies for "hot and damp" conditions, such as dysentery and diarrhoea.

Baical skullcap A perennial growing to 30–120 cm (1–4 ft) high, with lance-shaped leaves and purplish-blue flowers.

Parts Used

Root is harvested when the plant is 3–4 years old in autumn or spring.

Key Preparations & Their Uses

Cautions Best taken under professional supervision.

Decoction (to make, p. 291). For feverish chesty colds, drink 75 ml 3 times a day.

Tincture (to make, p. 292). For hay fever, take 40 drops with water 3 times a day.

Remedy For headaches, decoct 15 g root with 10 g self-heal (see p. 291). Drink 75 ml 3 times a day.

Baical skullcap is an important medicinal plant in China and is also cultivated as an ornamental.

Habitat & Cultivation

Baical skullcap is found in China, Japan, Korea, Mongolia and Russia. It thrives on sunny, grassy slopes and wasteground between 100 m (330 ft) and 1,800 m (5,900 ft) above sea level. Baical skullcap is propagated from seed sown in autumn or spring. The roots of 3- to 4-year-old plants are harvested in autumn or spring.

Related Species

Skullcap (*S. lateriflora*, p. 135) is a close relation. It is a Native North American remedy for anxiety and stress.

Key Constituents

- Flavonoids (about 12%) – baicalin, wogoniside
- Sterols
- Benzoic acid

Key Actions

- Sedative
- Anti-allergenic
- Antibacterial
- Anti-inflammatory

Research

- **Flavonoids** Baical skullcap has been quite widely researched in China, and it is clear that it has marked anti-inflammatory, anti-allergy and antioxidant effects, all 3 actions mostly being due to the flavonoids.
- **Clinical evidence** Clinical studies investigating different applications of Baical skullcap show the herb has promise in the treatment of infections, including bronchitis, and dysentery, high blood pressure, chronic hepatitis and allergic rhinitis (hay fever). The root has anti-cancer activity, with studies showing small-scale positive results in patients with lung and prostate cancer.
- **Diabetes** The herb may be useful for problems arising from diabetes, including cataracts.
- **Weight loss aid** A South Korean clinical trial in 2011 looked at the effectiveness of a baical skullcap and platycodon (*Platycodon grandiflorum*) combination in treating obesity. After 2 months, the group taking the herbs had lost significantly more weight than the placebo group.

Traditional & Current Uses

- **Cold & bitter herb** In traditional Chinese medicine, Baical skullcap is "cold" and "bitter" (see p. 42). It is prescribed in China for hot and thirsty conditions such as high fevers, coughs with thick yellow phlegm and gastro-intestinal infections that cause diarrhoea, such as dysentery. It is also given to people suffering from painful urinary conditions.
- **Circulatory remedy** Baical skullcap is a valuable remedy for the circulation. In combination with other herbs, it is used to treat high blood pressure, arteriosclerosis, varicose veins and easy bruising.
- **Other uses** Applied to the skin, Baical skullcap treats sores, swelling and boils. It is also given for circulatory problems that arise from diabetes.
- **Allergic conditions** The herb is useful for treating allergic conditions such as asthma, hay fever, eczema and nettle rash. The flavonoids in particular inhibit the inflammatory processes in the body that lead to allergic reactions.

Self-help Uses

- **Allergic rhinitis including hay fever**, p. 300.
- **Wheeziness**, p. 301.

Scutellaria lateriflora (Lamiaceae)

Skullcap, Virginian Skullcap, Mad Dog

A Native American herb, skullcap was traditionally taken for menstrual problems. It was also used in purification ceremonies when menstrual taboos had been broken. Skullcap became well known in 19th-century America as a treatment for rabies, hence its folk name "mad dog". Today, it is mainly used as a tonic and sedative for the nerves in times of stress. It has a bitter, slightly astringent taste.

***Skullcap** is easy to recognize. It has pairs of pink to blue flowers and distinctive seed capsules.*

Habitat & Cultivation

A native of North America, skullcap still grows wild in much of the US and Canada. It thrives in damp conditions, for example on riverbanks, and needs plenty of sun. Skullcap can be propagated from seed or by root division in spring. The aerial parts of 3- to 4-year-old plants are harvested in summer, when in flower.

Related Species

There are around 100 species of *Scutellaria*. In the past, European skullcap (*S. galericulata*) and lesser skullcap (*S. minor*) have been used in a similar way to *S. lateriflora*, but today they are considered to have a less important therapeutic action. Baical skullcap (*S. baicalensis*, p. 134) is also closely related.

Key Constituents

- Flavonoids (scutellarin)
- Bitter iridoids (catalpol)
- Volatile oil
- Tannins

Key Actions

- Sedative
- Nervine tonic
- Antispasmodic
- Mild bitter

Research

■ **Anxiety remedy** Little research has been carried out on this species of *Scutellaria* despite its long use in North American and British herbal medicine to ease anxiety and stress. A small English study published in 2011 tested skullcap against placebo in reducing anxiety in 43 "non-anxious" people. Those taking skullcap showed significantly better overall mood levels at the end of the 2 weeks of the study.

Traditional & Current Uses

■ **Native American cure** The Cherokee used skullcap to stimulate menstruation, relieve breast pain and encourage expulsion of the placenta.

■ **19th-century remedy** The Physiomedicalists (followers of a 19th-century Anglo-American school of herbal medicine) first discovered skullcap's use as a nervine. They recognized that it has a "deeper" action on the nervous system than many other herbs and used it for hysteria, epilepsy, convulsions and rabies, as well as for serious mental illnesses such as schizophrenia.

■ **Current uses** Today, skullcap is taken mainly as a nerve tonic and for its restorative properties. It helps support and nourish the nervous system, and calms and relieves stress and anxiety. Its antispasmodic action makes it useful for conditions where stress and worry cause muscular tension. Skullcap is often prescribed on its own, or with other sedative herbs, to treat insomnia and it is also given for period pain.

Skullcap
A perennial growing to 60 cm (2 ft), with an erect, many-branched stem and pink to blue flowers.

Parts Used

Aerial parts are harvested in summer for use in a number of calming preparations.

Dried aerial parts

Fresh aerial parts

Key Preparations & Their Uses

Cautions Best taken under professional supervision.

Infusion (to make, p. 291). For short-term relief of stress and anxiety, take 50 ml 3 times a day.

Tincture (to make, p. 292). For nervous tension and headaches, take 3 ml with water twice a day.

Capsules (to make, p. 292). For nervous exhaustion, take a 200 mg capsule twice daily.

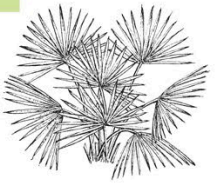
Tablets, often containing other sedative herbs, are taken for insomnia.

Self-help Uses

- **Anxiety, depression & tension**, p. 308.
- **Migraine**, p. 309.
- **Panic attacks & headaches**, p. 308.

Serenoa repens syn. *Sabal serrulata* (Palmaceae)

Saw Palmetto



Saw palmetto
A small palm growing to 6 m (20 ft), with fans of yellow-green leaves and ivory flowers.

Saw palmetto berries were eaten by Native North Americans and animals. According to legend, on seeing the animals grow "sleek and fat", European settlers tried the berries and attributed medicinal properties to them. The fruit pulp was used as a tonic from the 19th century onwards, and today it is used to help in debility, for urinary tract problems and for reducing an enlarged prostate gland.

Saw palmetto has dark purple to black berries, growing in the centre of the leaf fans.

Habitat & Cultivation

Saw palmetto is indigenous to North America and can be found growing in sand dunes along the Atlantic and Caribbean coasts from South Carolina to Texas. It is propagated from seed in spring and needs well-drained soil and plenty of sun. The berries are harvested when ripe in autumn, then dried, often with the seeds removed.

Related Species

The Maya of Central America used the roots or leaves of *S. japa*, another small palm, as a remedy for dysentery and abdominal pain. The crushed roots of *S. adamsonii* were used by the Houma, who also lived in Central America, as an eye lotion.

Key Constituents

- Lipid (fat) content includes phytosterols
- Flavonoids
- Polysaccharides

Key Actions

- Anti-inflammatory
- Antispasmodic
- Diuretic
- Male tonic

Research

- **Benign prostatic hypertrophy (BPH)** Extensive clinical research, mostly in Europe, has shown that a lipid or fat extract of saw palmetto is effective in reversing enlargement of the prostate gland. In the process, the extract reduces urinary retention and eases urine flow. In many European countries saw palmetto extract is a standard treatment for enlarged prostate. It is not clear how extracts of the herb work.
- **Combination with nettle root** In the late 1990s two clinical trials gave men with early stage BPH a combination of saw palmetto and nettle root. One trial compared the herbs with placebo, the other with finasteride, a standard conventional treatment for BPH. Results for the herb combination in both trials were very good, with a clear improvement in symptoms in respect to placebo, and similar outcomes for those taking the herbs or finasteride, but those taking the herbs experienced fewer side-effects.

Traditional & Current Uses

- **Urinary remedy** Saw palmetto has been nicknamed the "plant catheter". This is because it has the ability to strengthen the neck of the bladder, and to reduce an enlarged prostate gland. It can be equally useful in treating lower urinary tract symptoms, such as pain, frequency and urgency in urination. It is a useful remedy in cystitis and prostatitis (inflammation of the prostate gland).
- **Anabolic action** Saw palmetto is a tonic and is one of the few Western remedies that is considered to be anabolic – it strengthens and builds body tissues and encourages weight gain. Fruit pulp or tincture is given to those suffering from wasting illnesses and for general debility and failure to thrive.

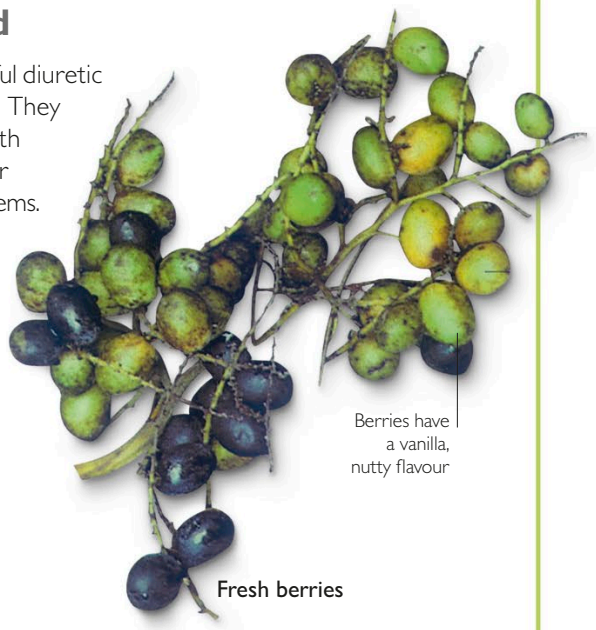
Self-help Use

- **Impotence & premature ejaculation**, p. 316.

Parts Used

Berries have powerful diuretic and tonic properties. They are a traditional North American remedy for a wide range of problems.

Dried berries



Fresh berries

Key Preparations & Their Uses

Cautions Do not use during pregnancy, while breast-feeding, if taking hormonal drugs, or if you have a hormone-dependent cancer.

Infusion (to make, p. 291) is a diuretic. For enlarged prostate, take 150 ml daily.

Tincture (to make, p. 292) can be taken as a long-term tonic for debility. Take 1 tsp with water daily.

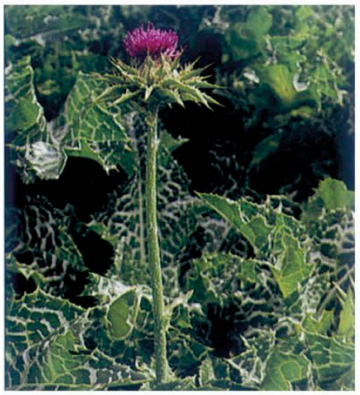
Remedy Make an infusion (see p. 291) with 2 tsp saw palmetto, 2 tsp horsetail, 1 tsp liquorice and 200 ml water. Take 100 ml as a tonic twice a day.

Silybum marianum syn. *Carduus marianus* (Asteraceae)

Milk Thistle, Mary thistle

Milk thistle
A spiny biennial, growing to 1.5 m (5 ft), with white-veined leaves and purple flowerheads.

Milk thistle has been used in Europe as a remedy for depression and liver problems for hundreds, if not thousands, of years. Recent research has confirmed traditional herbal knowledge, proving that the herb has a remarkable ability to protect the liver from damage resulting from alcoholic and other types of poisoning. Today, milk thistle is widely used in the West for the treatment of a range of liver conditions.



***Milk thistle** has distinctive white markings on its leaves caused, according to tradition, by the Virgin Mary's milk.*

Habitat & Cultivation

Native to the Mediterranean, milk thistle grows throughout Europe but is rare in Britain. It grows wild, thriving on wasteground, and is also cultivated as an ornamental plant. Milk thistle prefers a sunny position and self-seeds readily. The flowerheads are picked in full bloom in early summer and the seeds are collected in late summer.

Related Species

Other closely related herbs, including holy thistle (*Cnicus benedictus*, p. 191) and globe artichoke (*Cynara scolymus*, p. 199), protect the liver from toxicity and exert a positive restorative action on liver function.

Key Constituents

- Flavonlignans (1–4%) (known collectively as "silymarin")
- Bitter principles
- Polyacetylenes

Key Actions

- Liver protective
- Chemoprotective
- Anti-cancer
- Anti-allergenic
- Increases breast-milk production

Research

- **Silymarin** German research from the 1970s onwards has focused on silymarin, a substance contained in the seeds. This exerts a highly protective effect on the liver, maintaining its function and preventing damage from compounds that are normally highly toxic. It has been shown that severe liver breakdown, resulting from ingesting carbon tetrachloride or death cap mushrooms, can be prevented if silymarin is taken immediately before, or within 48 hours. In Germany, silymarin has been used successfully to treat hepatitis and liver cirrhosis.
- **Other research** In several clinical trials, silymarin extracts protected liver function in people taking chemotherapy for cancer, including, in one trial, children suffering from leukaemia. Research so far suggests that silymarin extracts support healthy liver function during chemotherapy and do not reduce the effectiveness of chemotherapy drugs. Laboratory research indicates that silymarin, particularly silybin, has significant anti-cancer properties. In a 2011 clinical trial in Iran, patients with allergic rhinitis experienced significantly fewer symptoms when taking a silymarin extract.

Traditional & Current Uses

- **Traditional uses** Milk thistle flowerheads, boiled and eaten like artichokes, were useful as a spring tonic after the winter months when people had been deprived of fresh vegetables. They were also taken to increase breast-milk production, and were considered excellent for *melancholia* (depression), which was traditionally associated with the liver. Gerard states in his *Herball* of 1597, "My opinion is that this [milk thistle] is the best remedy that grows against all melancholy diseases."
- **Liver disorders** Today, milk thistle is the main remedy used in Western herbal medicine to protect the liver and its many metabolic activities, and help renew its cells. The herb is used in the treatment of hepatitis and jaundice, as well as in conditions where the liver is under stress – whether from infection, excess alcohol, or from chemotherapy.

Parts Used

Flowerheads are eaten as a tonic food and can be used in remedies.

Dried flowerhead

Fresh flowerhead

Spiny, thistle-like leaves are grey-green

Seeds

Seeds contain silymarin, which protects the liver. They are the main part used in remedies.

Key Preparations & Their Uses

Cautions May cause allergic reactions in rare cases. Seek guidance from your health care practitioner, if planning to take alongside chemotherapy.

Decoction of seeds (to make, p. 291). For liver infections, take 75 ml a day.

Tincture of seeds may be taken to help hay fever.

Capsules of seeds (to make, p. 292). For a hangover, take a 500 mg capsule.

Tablets are prescribed for long-term treatment of liver disorders.

Symphytum officinale (Boraginaceae)

Comfrey, Knitbone

Comfrey
A perennial growing to 1 m (3 ft), with thick leaves and bell-like white to pink or mauve flowers.

Comfrey's names testify to its traditional use in mending broken bones. "Comfrey" is a corruption of *con firma*, meaning the bone is "made firm", *Symphytum* is derived from the Greek for "to unite" and knitbone speaks for itself. Comfrey is also a wound herb. K'Eogh in his *Irish Herbal* (1735) wrote that it "heals all inward wounds and ruptures". Today, it is still highly regarded for its healing properties.

Comfrey was known to the Greek physician Dioscorides in the 1st century CE who wrote about it in his Materia Medica.

Habitat & Cultivation

An indigenous European plant, comfrey grows in all temperate regions of the world, including western Asia, North America and Australia. It thrives in moist, marshy places. It can be grown from seed in spring or by root division in autumn, and the leaves and flowering tops are harvested in summer. The root is unearthed in autumn.

Key Constituents

- Allantoin (up to 4.7%)
- Mucilage (about 29%)
- Triterpenoids
- Phenolic acids (rosmarinic acid)
- Asparagine
- Pyrrolizidine alkaloids (0.02–0.07%)
- Tannins

Key Actions

- Demulcent
- Astringent
- Anti-inflammatory
- Heals wounds and bones

Research

- **Active constituents** Allantoin is a cell-proliferant that stimulates the repair of damaged tissue. The herb's anti-inflammatory activity is partly due to the presence of rosmarinic acid and phenolic acids.
- **Pyrrolizidine alkaloids** Research shows that, as isolated substances, certain pyrrolizidine alkaloids can be highly toxic to the liver. It is still unclear whether they are toxic in the context of the whole plant, as they are only present in minute amounts, often being completely absent from samples of dried aerial parts. The highest concentration is in the root, which should not be used internally. Skin applications, as well as the aerial parts of the plant, are considered safe.
- **Clinical research** In Germany and elsewhere in Europe, comfrey is widely used for sprains, bruises and sports injuries. Research, mostly in Germany, endorses the traditional knowledge of comfrey's wound healing ability. In a 2007 study, physicians rated the efficacy of a comfrey leaf cream in healing abrasions. The doctors rated its effectiveness as good or very good in 93% of cases, and complete healing took 4 days with comfrey and 7 days with placebo. Other studies indicate comfrey's value in promoting tissue repair and as an anti-inflammatory in conditions such as sprained ankle, osteoarthritis and lower back pain.

Traditional & Current Uses

- **Injuries** Comfrey's ability to promote the healing of bruises, sprains, fractures and broken bones has been known for thousands of years. It encourages ligaments and bones to knit together firmly. A comfrey compress applied immediately to a sprained ankle can significantly reduce the severity of the injury. The combination of tannins and mucilage helps to soothe bruises and grazes.
- **Other uses** Comfrey preparations have many other uses and can be applied to heal problems such as insect bites, scars, skin inflammation, acne and mastitis.

Parts Used

Root is harvested in autumn when the allantoin levels are highest.

Fresh root

Fresh aerial parts

Dried root

Aerial parts are rich in anti-inflammatory and astringent substances.

Dried aerial parts

Key Preparations & Their Uses

Cautions Do not use on dirty wounds as rapid healing can trap dirt or pus. Take internally only under professional supervision. Restricted in some countries. Do not take during pregnancy or while breast-feeding.

Infused oil of leaves (to make, p. 294). Apply to sprains.

Chopping leaves
For boils, apply as a poultice (see p. 295).

Ointment of leaves (to make, p. 295). Apply to bruises.

Tincture of root (to make, p. 292). Apply undiluted to acne.

Self-help Uses

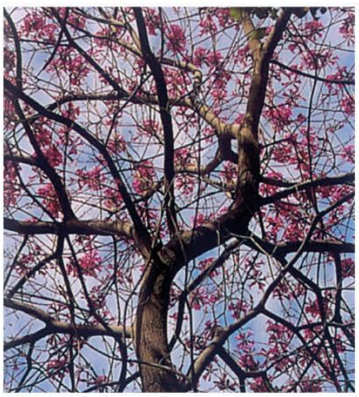
- **Acne & boils**, p. 305.
- **Fractures**, p. 312.
- **Fungal skin infections**, p. 304.
- **Healing wounds**, p. 304.
- **Inflamed skin rashes**, p. 303.
- **Stiff & aching joints**, p. 313.

Tabebuia spp. (Bignoniaceae)

Pau d'Arco (Portuguese), Lapacho (Spanish)

Pau d'arco
An evergreen tree (deciduous in cold climates) reaching 30 m (100 ft), with pink flowers.

Bark from the pau d'arco tree has been valued for centuries in traditional South American herbal medicine for its remarkable health benefits. Today, it is given as a remedy for inflammatory and infectious problems, including conditions such as chronic fatigue and candidiasis. It is also used for other conditions and has a mixed reputation as a treatment for cancer, including leukaemia.



***Pau d'arco** is valued for its durable wood and for its bark that has important therapeutic properties.*

Habitat & Cultivation

An indigenous South American tree, pau d'arco grows well in mountainous terrains. In Peru and Argentina it is found growing high up in the Andes. Pau d'arco is also found in low-lying areas (in Paraguay and Brazil), where it is thought to have originated. Many *Tabebuia* species are used in herbal medicine, so quality control of dried bark can be difficult. *T. avellanedae* is considered to be the most therapeutically effective species, while *T. impetignosa* is the species that is most commonly available. Pau d'arco is not normally cultivated – the prized inner bark is collected from trees growing in the wild, throughout the year.

Key Constituents

- Napthaquinones (lapachol)
- Anthraquinones
- Coumarins
- Flavonoids
- Iridoids
- Carnosol

Key Actions

- Antibacterial
- Antifungal
- Antiparasitic
- Immune-stimulant
- Anti-inflammatory
- Tonic
- Anti-tumour

Research

■ **Antibacterial and antifungal activity** A Colombian review (2013) of research data on *Tabebuia* species, much of which was undertaken in South America, highlighted pau d'arco's strong, direct activity against several key bacteria, notably *Staphylococcus aureus* and *Helicobacter pylori*, the latter being the principal cause of stomach ulcers. It also has broad-ranging activity against many fungal agents, including *Candida albicans*.

■ **Anti-tumour properties** Pau d'arco's anti-cancer action has been established in laboratory experiments, with many of its constituents suppressing the growth of cancer cells. Research in Brazil in the 1960s raised great hopes that pau d'arco might prove to be a major cancer treatment, but clinical research has failed to produce positive results.

Traditional & Current Uses

■ **Early cure-all** The Incas, the Callawaya in Brazil and other Native South American peoples all prized pau d'arco as a cure-all. They used it to treat a variety of conditions, including wounds, fever, dysentery, and intestinal inflammation, as well as certain types of cancer and snake bite.

■ **Infections** Given the large number of active constituents in pau d'arco it is not surprising that this beneficial herb is used in South America and by herbal practitioners throughout the world. It is an important, natural antibiotic for bacterial and viral infections, especially of the nose, mouth and throat, and is considered helpful for chronic conditions such as CFS (chronic fatigue syndrome). Pau d'arco is also used for fungal conditions, including ring-worm and thrush, and is considered especially useful for treating chronic candidiasis.

■ **Anti-inflammatory action** Pau d'arco reduces and relieves inflammatory problems, especially in the stomach and intestines. It is used to treat a wide range of other inflammatory conditions, including cystitis, inflammation of the cervix and prostatitis.

■ **Cancer remedy** Clinical experience in Brazil, combined with its worldwide use by herbalists as a cancer remedy, suggests that pau d'arco may be beneficial in the treatment of cancer, including leukaemia. However, more intensive research is needed into its therapeutic value.

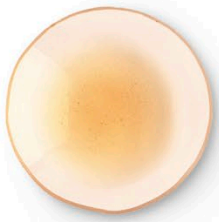
Parts Used

Inner bark is prized for its immune-stimulant properties. It is used to treat many inflammatory conditions.

Dried inner bark

Key Preparations & Their Uses

Caution If taking anticoagulant medication, take pau d'arco only on professional advice. Do not take during pregnancy. Avoid if trying to conceive.



Decoction (to make, p. 291) is a traditional preparation in South America. For candidiasis, drink 150 ml 3 times a day.

Tincture (to make, p. 292) is suitable for long-term use. For CFS, take 2 ml with water 3 times a day.

Ointment (to make, p. 295). For wounds, apply freely.

Tanacetum parthenium (Asteraceae)

Feverfew

Feverfew
A herbaceous perennial growing to 60 cm (2 ft), with numerous daisy-like flowerheads.

Feverfew's main traditional use was as a woman's herb. Nicholas Culpeper in *The English Physitian* (1652) sings its praises as "a general strengthener of [the] womb ... it cleanseth the womb, expelleth the after-birth and doth the woman all the good she can desire of a herb." Feverfew is now used principally as a treatment for migraine, but has also long been thought of as a herb for arthritis and rheumatism.

Feverfew has daisy-like flowers that bloom all summer.

Habitat & Cultivation

Originally from south-eastern Europe, feverfew is now common throughout Europe, Australia and North America. It can be propagated from seed or cuttings, and prefers well-drained soil and sun. The leaves are picked as required and the aerial parts as a whole are harvested in summer when the plant is in flower.

Related Species

Feverfew is a close relative of tansy (*Tanacetum vulgare*, p. 274), and the chrysanthemum and chamomile species.

Key Constituents

- Volatile oil (alpha-pinene)
- Sesquiterpene lactones (parthenolide)
- Sesquiterpenes (camphor)

Key Actions

- Anti-inflammatory
- Analgesic
- Reduces fever
- Antirheumatic
- Promotes menstrual flow

Research

- **Migraine** When, in 1973, the wife of a Welsh doctor ended her 50-year history of migraine with a course of feverfew, a detailed scientific investigation got underway. In clinical trials in Britain during the 1980s the herb was shown to be an effective remedy for migraine. Further clinical trials across Europe, including one in 2006 that combined feverfew and willow bark (*Salix alba*, p. 129), attest to feverfew's ability to treat migraine. The trials indicate feverfew may need to be taken long term (for 6 months or more) for full effect.
- **Rheumatoid arthritis** Feverfew's effectiveness in the treatment of rheumatoid arthritis is being investigated.

Traditional & Current Uses

- **Fevers** As its name implies, feverfew may be used to lower temperature and cool the body.
- **Gynaecological uses** The herb has been used since Roman times to induce menstruation. It is also given in childbirth to aid expulsion of the placenta.
- **Migraine & headaches** In small quantities, feverfew is now used as a preventative for migraine. It has to be taken regularly, and at the first signs of an attack. It is useful for migraine associated with menstruation, and for headaches.
- **Arthritis remedy** The herb can help arthritic and rheumatic pain, especially with other herbs.

Self-help Use

- **Migraine prevention**, p. 309.

Parts Used

Dried aerial parts

Fresh aerial parts

Key Preparations & Their Uses

Cautions Eating fresh leaves may cause mouth ulcers. Do not take feverfew if taking warfarin or other blood-thinning drugs. Do not take during pregnancy. Can cause allergic reactions in rare cases.

Fresh leaves To prevent migraine, eat 2–3 leaves daily on a piece of bread.

Tincture (to make, p. 292). For long-term prevention of migraine, take 10 drops a day.

Capsules (to make, p. 292). For symptomatic relief of headaches take a 100 mg capsule daily.

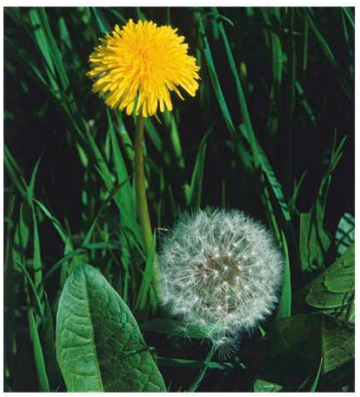
Tablets often contain other herbs. Take for headaches.

Taraxacum officinale (Asteraceae)

Dandelion

Dandelion
A perennial growing to 50 cm (20 in), with ragged basal leaves, hollow stalks and golden flowers.

Known principally as a weed, dandelion has an astonishing range of health benefits. In Western folk medicine, the leaves, which can be eaten in salads, have long been used as a diuretic. They were recommended in the works of Arab physicians in the 11th century, and in a herbal written by the physicians of Myddfai in Wales in the 13th century. The root, which has a shorter history of medicinal use, is good for the liver.



***Dandelion's** name, which is a corruption of the Latin* dens leonis, *meaning "lion's teeth", derives from the appearance of its flowers.*

Habitat & Cultivation

Dandelion grows wild in most parts of the world and is cultivated in Germany and France. It is propagated from seed in spring. The young leaves are picked in spring for tonic salads, and later as a medicine. The root of 2-year-old plants is unearthed in autumn.

Related Species

Pu gong ying (*T. mongolicum*) is used in Chinese herbal medicine to "clear heat" and relieve toxicity, especially of the liver.

Key Constituents

- Sesquiterpene lactones
- Triterpenes
- Polysaccharides

Leaf only:

- Coumarins
- Carotenoids
- Minerals (especially potassium)

Root only:

- Taraxacoside
- Phenolic acids
- Minerals (potassium, calcium)

Key Actions

- Diuretic
- Detoxifying
- Bitter

Research

- **Leaves** Research published in the journal *Planta Medica*, in 1974, confirmed that dandelion leaves are a powerful diuretic, though their exact mode of action is not understood. Many other small-scale studies have confirmed this diuretic, or more accurately, aquaretic effect of dandelion leaf. Aquaretic refers to the fact that many herbal diuretics stimulate just the elimination of water and potassium. As dandelion leaf has very high levels of potassium, it is thought that no net loss of this mineral occurs on taking the leaf.
- **Root** A 2004 laboratory study reported dandelion root had marked anti-cancer activity. It significantly increased tumour necrosis factor and apoptosis (programmed cell death).

Traditional & Current Uses

- **Diuretic** Dandelion leaf is used as a diuretic and treats high blood pressure by reducing the volume of fluid in the body.
- **Detoxifying remedy** Dandelion root is a key detoxifying herb that gently stimulates the liver and gall bladder's capacity to clear waste products from the body. This action makes it valuable in the many health conditions that involve chronic toxicity, whether this toxicity is linked to inflammation, infection or dietary or environmental factors. The root is typically taken to treat constipation, skin problems, such as eczema, and arthritic conditions, where improved clearance of waste products can reduce local inflammation.
- **Other uses** Dandelion root is a good prebiotic, supporting the health of the gut flora. It has traditionally been used in the early stages of late-onset diabetes, stimulating insulin release from the pancreas and supporting stable blood sugar levels.

Parts Used

Leaves are juiced, eaten raw in salads or dried for use in herbal preparations.

Dried leaves

Root is harvested after 2 years and is dried or roasted.

Fresh root

Dried root

Fresh leaves

Key Preparations & Their Uses

Tonic salad made with dandelion leaves. Eat regularly for its cleansing benefits.

Tablets have a diuretic effect. Take for fluid retention.

Tincture of root (to make, p. 292). For eczema, take ½ tsp diluted with 100 ml water 3 times a day.

Decoction of root (p. 291). For acne, take 75 ml 3 times a day.

Infusion of leaves (p. 291). For swollen ankles, take 500 ml daily.

Juice made from leaves. For fluid retention, take 20 ml 3 times a day.

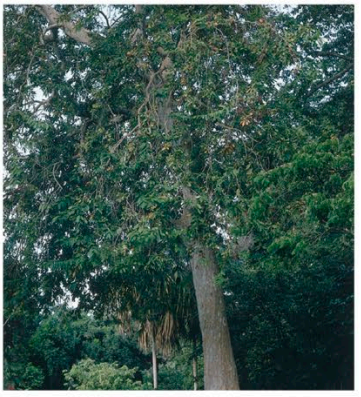
Self-help Uses

- **Acne & boils**, p. 305.
- **Constipation**, p. 307.
- **Detoxification for hangover**, p. 309.
- **Fluid retention**, p. 315.
- **Nettle rash**, p. 303.

Terminalia arjuna (Combretaceae)

Arjun

The bark of the arjun tree has been used in Indian herbal medicine for at least 3,000 years, and has always been valued as a remedy for the heart. The first person credited with prescribing arjun for heart disease was Vagbhata, an Indian physician of the 7th century CE. Arjun is an example of a herb for which the traditional use has been confirmed by modern pharmacological research.



***Arjun** is a handsome evergreen tree. Its bark is prescribed to help heart and circulation problems.*

Habitat & Cultivation

Arjun is found throughout most of the Indian sub-continent, from Sri Lanka to the foothills of the Himalayas. It thrives in wet, marshy areas and on riverbanks. The tree is grown from seed and the bark is cut in late winter.

Related Species

A number of other *Terminalia* species are also used medicinally, notably beleric myrobalan and chebulic myrobalan (*T. belerica* and *T. chebula*, p. 275). Both are close relatives of arjun and are among the most used herbal medicines in India.

Key Constituents

- Tannins
- Triterpenoid saponins
- Flavonoids
- Phytosterols

Key Actions

- Cardiac tonic
- Lowers blood pressure
- Reduces cholesterol levels

Research

- **Cardiac tonic** Research has been going on into arjun in India since the 1930s. The results have been highly conflicting, with some studies indicating that it increases heart rate and blood pressure, and others suggesting the reverse. It seems that the herb is best used to treat conditions where the blood supply to the heart is poor, for example in ischaemic heart disease and angina. In a 2002 clinical trial in India, 58 men with angina were given arjun. Results were very positive, with those taking arjun experiencing a marked reduction in angina symptoms and an increased capacity to exercise.
- **Cholesterol** Indian research has demonstrated that arjun reduces blood cholesterol levels.

Traditional & Current Uses

- **Traditional heart remedy** In Indian herbal medicine, arjun has always been taken as a heart tonic. It has a long history of treating heart failure and oedema (a condition in which fluid accumulates in the ankles and legs because the heart is not pumping adequately).
- **Ayurvedic medicine** Ayurvedic physicians use arjun to restore balance when any of the 3 humours, *kapha*, *pitta* or *vata* (see p. 37), is present in excess. As a decoction, the bark is given to treat diarrhoea and dysentery. Powdered bark is part of a traditional Ayurvedic treatment for asthma. Arjun is also given in Ayurveda for bile duct problems, as well as for poisoning and scorpion stings.
- **Modern heart remedy** Arjun is beneficial for angina and poor coronary circulation. It is also of benefit if the heart's rate and rhythm are abnormal. By lowering blood cholesterol levels, reducing blood pressure and supporting normal heart function, arjun improves the health of the circulation and reduces the risk of developing a serious heart problem.

Arjun
An evergreen tree reaching 30 m (100 ft), with pale yellow flowers and cone-shaped leaves.

Parts Used

Bark has constituents that lower blood pressure and reduce cholesterol levels.

Key Preparations & Their Uses

Caution Take only under professional supervision.

Decoction is used by herbalists to treat poor circulation to the heart.

Tincture is a valuable cardiac tonic. Herbalists prescribe it to treat angina.

Powder is a traditional Ayurvedic remedy, prescribed for asthma.

Thymus vulgaris (Lamiaceae)

Thyme, Garden Thyme

Thyme
An aromatic shrub growing to 40 cm (16 in), with woody stems, small leaves and pink flowers.

Thyme was praised by the herbalist Nicholas Culpeper (1616–1654) as "a notable strengthener of the lungs, as notable a one as grows; neither is there a better remedy growing for that disease in children which they commonly call chin-cough [whooping cough]". Thyme is an excellent antiseptic and tonic, and today it is still used as a respiratory remedy, as well as being important for a variety of other ailments.

***Thyme's** pink flowers attract bees in profusion and give a distinctive flavour to the honey.*

Habitat & Cultivation

Thyme is a cultivated variety of the wild thyme (*T. serpyllum*, p. 276) of southern Europe and is now grown worldwide. It is raised from seed or by root division in spring and prefers light, chalky soils. The aerial parts are harvested in summer.

Related Species

There are many *Thymus* species, each with a different volatile oil content. Wild thyme (*T. serpyllum*, p. 276) is often used in the same way as thyme.

Key Constituents

- Volatile oil (mostly thymol and carvacrol)
- Flavonoids
- Phenolic acids

Key Actions

- Antiseptic
- Tonic
- Relieves muscle spasms
- Expectorant
- Expels worms
- Antioxidant

Research

- **Volatile oil** Thyme's volatile oil is strongly antiseptic – the constituent thymol, in particular, is a most effective antifungal. The oil is also expectorant and it expels worms.
- **Anti-ageing** Research in the 1990s in Scotland suggests that thyme and its volatile oil have a markedly tonic effect, supporting the body's normal function and countering the effects of ageing. More recent research indicates that thyme is strongly antioxidant and may help maintain higher levels of essential fatty acids within the brain.
- **Stomach ulcers** Extracts of the herb have shown strong antibacterial activity against *H. pylori*, a bacterium often associated with stomach ulcers.
- **Menstrual pain** Many compounds within thyme relieve muscle cramps. A 2014 Iranian clinical trial compared the ability of thyme and ibuprofen to relieve period pains. The findings showed both treatments to be effective.

Traditional & Current Uses

- **Infections** The antiseptic and tonic properties of thyme make it a useful tonic for the immune system in chronic, especially fungal, infections, as well as an effective remedy for throat and chest infections.
- **Asthma & hay fever** Thyme is prescribed with other herbs for asthma, especially in children. Its invigorating qualities balance the sedative effect of many herbs used for asthma. Thyme is also helpful in hay fever.
- **Worms** Thyme is often used to treat worms in children.
- **External uses** Applied to the skin, thyme relieves bites and stings, and is used for sciatica and rheumatic pains. It helps ringworm, athlete's foot, thrush and other fungal infections as well as scabies and lice. Thyme infusion and diluted oil are also massaged into the scalp to encourage hair growth and reverse hair loss.

Parts Used

Aerial parts, harvested in summer, contain antiseptic volatile oil.

Fresh leaves

Leaves have an aromatic, bitter taste

Dried aerial parts

Fresh aerial parts

Key Preparations & Their Uses

Cautions Do not take the essential oil internally. Do not use the essential oil externally during pregnancy.

Essential oil for acne, dilute to 5% and dab on to inflamed spots.

Infusion (to make, p. 291). For colds, take 100 ml 3 times daily.

Syrup (to make, p. 293) is a traditional cough remedy. Take 20 ml 3 times a day.

Tincture (to make, p. 292). For thrush, apply 2 ml 2–3 times daily.

Self-help Uses

- **Allergic rhinitis**, p. 300.
- **Back pain**, p. 313.
- **Bites & stings**, p. 303.
- **Colds & flu**, p. 311.
- **Coughs & bronchitis**, p. 310.
- **Earache**, p. 312.
- **Fungal infections**, pp. 304 & 314.
- **Maintaining vitality**, p. 319.
- **Mild asthma**, p. 301.
- **Tired & aching muscles**, p. 312.

Turnera diffusa syn. *T. diffusa* var. *aphrodisiaca* (Passifloraceae)

Damiana

Damiana
An aromatic shrub growing to 2 m (6½ ft), with smooth, pale green leaves and small, single yellow flowers.

Damiana is a traditional aphrodisiac of the Maya people in Central America. It continues to be considered valuable as an aphrodisiac and general tonic, and its stimulant, tonic action also makes it a valuable remedy for those suffering from mild depression. Damiana has a strongly aromatic, slightly bitter taste. The leaves are used to flavour liqueurs and are taken in Mexico as a substitute for tea.

Damiana is an excellent tonic herb for physical weakness and nervous exhaustion.

Habitat & Cultivation

Damiana is native to the Gulf of Mexico, southern California, the northern Caribbean Islands, and Namibia. It is also cultivated in these areas. Damiana is grown from seed in spring and prefers a hot, humid climate. The leaves are harvested when the herb is in flower in summer.

Related Species

T. opifera and *T. ulmifolia* are used as tonics in Brazil and Central America respectively.

Key Constituents

- Volatile oil (about 0.5–1%), including caryophylene, thymol and cadinene
- Flavonoids
- Hydroquinones (arbutin)
- Tannins

Key Actions

- Tonic
- Nerve tonic
- Aphrodisiac
- Mild stimulant
- Mild antidepressant
- Mild laxative and diuretic

Research

- **Initial research** The first study into the aphrodisiac activity of damiana (published in 1999) found that male rats with low sexual activity became more sexually active when given damiana extract. One cannot generalize from animals to humans but this does correspond with traditional views of the herb. Other recent research suggests that damiana helps to prevent raised blood sugar levels in diabetics.

Traditional & Current Uses

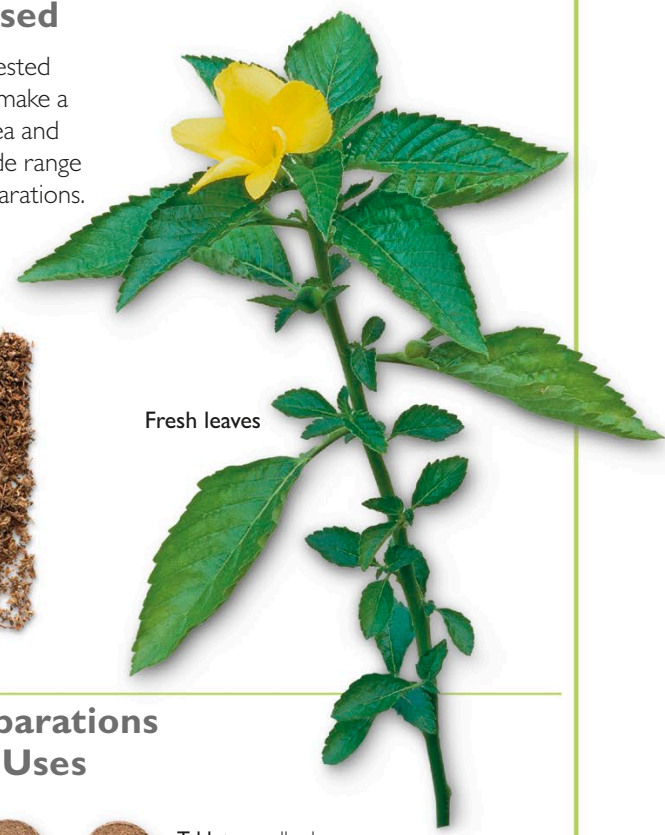
- **Tonic** Damiana is a tonic and restorative for the nervous system, and has always been considered an aphrodisiac. Its tonic action is partly due to the constituent thymol, which is antiseptic and tonic.
- **Antidepressant** Technically, damiana is a thymoleptic (having a stimulating action on the body and mind). It is given to people suffering from mild to moderate depression or nervous exhaustion. Its stimulating and restorative properties make it valuable when anxiety and depression happen together.
- **Sexual restorative** Due to its reputed testosterogenic activity, damiana has always been seen as a herb for men, helpful in treating premature ejaculation and impotence. It is, however, beneficial for both men and women, being considered restorative to the reproductive organs of both sexes.
- **Gynaecological problems** Damiana is often given for painful and delayed periods, and is used specifically for headaches connected to menstruation.
- **Urinary antiseptic** Being a diuretic and urinary antiseptic, damiana is useful in the treatment of urinary infections such as cystitis and urethritis. This action is partly due to the constituent arbutin, which is converted into hydroquinone, a strong urinary antiseptic, in the urinary tubules. This constituent is also found in a number of other plants, notably uva-ursi (*Arctostaphylos uva-ursi*, p. 170).
- **Laxative** Damiana is a mild laxative, useful in the treatment of constipation due to poor bowel muscle tone.

Self-help Use

- **Anxiety, depression & tension**, p. 308.

Parts Used

Leaves are harvested in summer. They make a pleasant-tasting tea and are used for a wide range of medicinal preparations.



Fresh leaves

Dried leaves

Key Preparations & Their Uses

Tablets usually also contain other herbs. Take as a relaxing tonic.

Tincture (to make, p. 292) is a nerve tonic and antidepressant. For mild depression, take 30 drops with water 4 times a day.

Infusion (to make, p. 291) is a tonic and is useful for urinary infections. Drink 150 ml daily as a general tonic.

Ulmus rubra (Ulmaceae)

Slippery Elm

Slippery elm
A large tree growing to 18 m (59 ft) with a brown trunk and rough grey-white bark on the branches.

This marvellous herb is a gentle and effective remedy for irritated states of the mucous membranes of the chest, urinary tubules, stomach and intestines. It was used in many different ways by Native Americans – as a poultice for wounds, boils, ulcers and inflamed eyes, and internally for fevers, colds and bowel complaints. Slippery elm has a strongly mucilaginous "slippery" taste and texture.

***Slippery elm** produces red-brown fruit, each consisting of a single seed, in summer.*

Habitat & Cultivation

Slippery elm is a native of the US and Canada, and is most commonly found growing in the Appalachian Mountains. The tree thrives on high ground and dry soil. The inner bark of the trunk and branches is collected in spring.

Related Species

White elm (*U. americana*) is used in a similar way to slippery elm, and was taken for coughs by the Mohicans. In Europe, the dried bark of elm (*Ulmus* spp.) was used as a demulcent, and was first mentioned by Dioscorides in the 1st century CE.

Key Constituents

- Mucilage
- Starch
- Tannins

Key Actions

- Demulcent
- Emollient
- Nutritive
- Laxative

Research

- **Mucilage** There is limited research into slippery elm, but its action as a herb with large quantities of mucilage is well understood. When the herb comes into direct contact with inflamed surfaces such as the skin or the intestinal membranes, it soothes and coats the irritated tissue, protects it from injury and draws out toxins or irritants.
- **Reflex action** When slippery elm is taken internally it is thought likely that it causes a reflex stimulation of nerve endings in the stomach and intestines that leads to secretion of mucus by the membranes of the urinary tract.

Traditional & Current Uses

- **Nourishing** Taken regularly, slippery elm is a nutritious and soothing food that acts as a prebiotic, supporting beneficial bacterial growth within the gut. It is excellent as a baby food and during convalescence.
- **Digestive disorders** Slippery elm is a particularly soothing herb and can bring instant relief to acidity, diarrhoea and gastroenteritis. It will also help alleviate conditions such as colic, inflammation of the gut, constipation, haemmorhoids, diverticulitis and irritable bowel syndrome.
- **Urinary problems** This herb is a useful remedy for urinary problems such as chronic cystitis.
- **Respiratory conditions** Slippery elm has been used to treat all manner of chest conditions and has a soothing effect on everything from coughs and bronchitis to pleurisy and tuberculosis.
- **External uses** Applied externally, the herb softens and protects the skin. It also works very well as a "drawing" poultice for boils and splinters.

Parts Used

Inner bark of 10-year-old slippery elm trees is collected in spring and powdered.

Key Preparations & Their Uses

Infusion Mix 1 heaped tsp with 750 ml of warm water. Infuse for 5 minutes. For diarrhoea, drink a whole dose 1–2 times a day.

Poultice For wounds, add several drops of marigold tincture to 1 tsp of powder. Mix into a paste and apply (see p. 295).

Capsules (to make, p. 292) For bronchitis, take a 200 mg capsule 2–3 times a day.

Powder For acid indigestion, take 1 tsp with water 2–3 times daily.

Tablets Take for diarrhoea.

Self-help Uses

- **Acidity & indigestion**, p. 307.
- **Acne & boils**, p. 305.
- **Constipation in children**, p. 318.
- **Haemorrhoids**, p. 302.

Urtica dioica (Urticaceae)

Nettle

Nettle
A perennial growing to 1.5 m (5 ft), with lance-shaped leaves and green flowers with yellow stamens.

Known for its sting, nettle has long been appreciated for its medicinal uses. In the 1st century CE, the Greek physician Dioscorides listed a range of uses – the fresh chopped leaves as a plaster for septic wounds, the juice for nosebleeds, and the cooked leaves mixed with myrrh to stimulate menstruation. Today, nettle is used for hay fever, arthritis, anaemia, and, surprisingly, even for nettle rash.

Nettle can be cooked as a vegetable and tastes like spinach.

Habitat & Cultivation

Nettle grows in temperate regions worldwide. The shoots are picked in spring for use as a tonic and a vegetable. Aerial parts are picked in summer when the plant is in flower. The root is harvested in autumn.

Related Species

The annual nettle (*U. urens*) is used in similar ways to *U. dioica*. Roman nettle (*U. pilulifera*) was the species most used by the Romans for "urtication" (beating with nettles to encourage blood to the surface), which they did to keep themselves warm.

Key Constituents

Aerial parts:
- Flavonoids (quercitin)
- Amines (histamine, choline, acetylcholine, serotonin)
- Glucoquinone
- Minerals (calcium, potassium, silicic acid, iron)

Root:
- Plant sterols (stigmast-4-en-zone and stigmasterol)
- Phenols

Key Actions

- Diuretic
- Tonic
- Astringent
- Prevents haemorrhaging
- Anti-allergenic
- Reduces prostate enlargement (root)
- Anti-inflammatory

Research

- **Root** Clinical trials over the past 20 years have supported the root's use in treating an enlarged prostate and easing lower urinary tract symptoms, though several tested it in combination with saw palmetto (*Serenoa repens*, p. 136) rather than on its own.
- **Anti-arthritic** Studies into nettle's benefit in osteoarthritis have had mixed results, though a 2009 French trial found it reduced patient's required daily intake of anti-inflammatories when combined with Vitamin E, zinc and fish oil.
- **Seeds** Results of a 2009 Iranian laboratory study suggested that the seeds are antioxidant and protect liver function.

Traditional & Current Uses

- **Cleansing** Nettle's key traditional use is as a cleansing, detoxifying herb. It has a diuretic action, possibly due to its flavonoids and high potassium content, and increases urine production and the elimination of waste products. It helps many skin conditions and arthritic problems.
- **Astringent** Nettle slows or stops bleeding from wounds and nosebleeds, and is good for heavy menstrual bleeding.
- **Allergies** Nettle is anti-allergenic. It treats hay fever, asthma, itchy skin conditions and insect bites. The juice can be used as a treatment for nettle stings.
- **Enlarged prostate** Following research, nettle root has now become a common treatment for symptoms linked to having an enlarged prostate.

Parts Used

Aerial parts are eaten as a tonic vegetable and used to make medicinal preparations.

Dried aerial parts

High levels of nutrients are concentrated in the leaves

Fresh aerial parts

Root has important diuretic properties that make it useful for prostate problems.

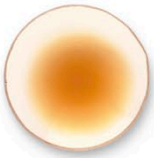
Fresh root

Dried root

Seeds are thought to act to protect the liver.

Seeds

Key Preparations & Their Uses



Decoction of root (to make, p. 291). For enlarged prostate, drink 150 ml daily.

Ointment of leaves (to make, p. 295). For eczema, rub liberally.

Soup with nettle leaves, carrots and onions is rich in iron. Drink regularly.

Capsules of leaf, (to make, p. 292). For enlarged prostate take a 300 mg capsule 2–4 times a day. For heavy periods, take a 100 mg capsule 3 times a day.

Infusion of leaves (to make, p. 291). Drink 200 ml daily as a tonic.

Tincture of root (to make, p. 292) helps allergies and skin conditions. For hay fever, take 1 tsp diluted with 100 ml water twice a day.

Self-help Uses

- **Allergic rhinitis including hay fever**, p. 300.
- **Anaemia due to heavy menstrual bleeding**, p. 301.
- **Bites & stings**, p. 303.
- **Mild asthma**, p. 301.
- **Nappy rash**, p. 318.
- **Nettle rash**, p. 303.
- **Nosebleeds**, p. 310.

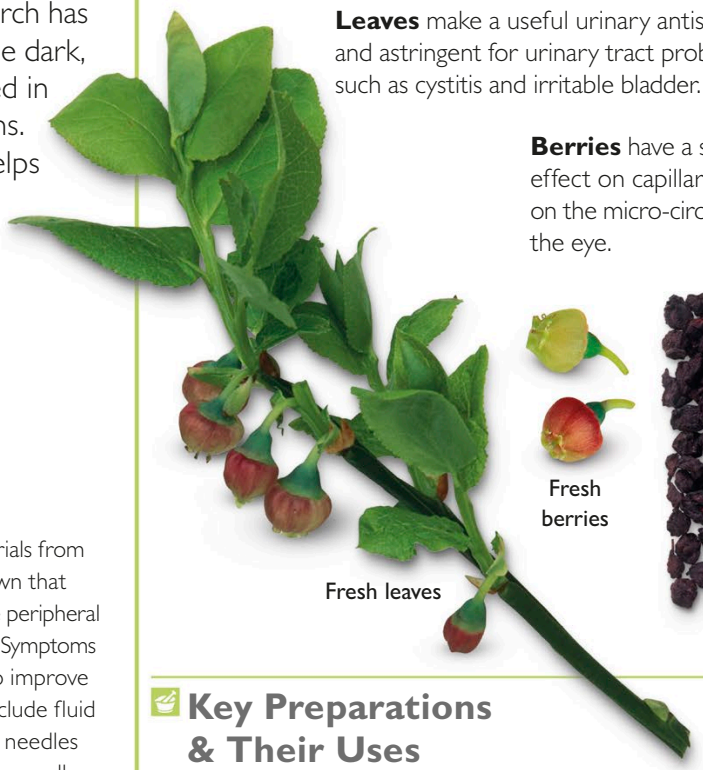
Vaccinium myrtillus (Ericaceae)

Bilberry, Blueberry

Bilberry
A deciduous shrub, growing to 40 cm (16 in) tall, with white or pink flowers and purple-black berries.

Bilberry fruit first came to attention in the Second World War (1939–45) when pilots found that their night vision improved on eating bilberry jam. Since then research has shown that bilberries help the eyes to adjust to the dark, and stimulate the part of the retina most involved in seeing clearly, especially in dim or dark conditions. There is also the suggestion that bilberry fruit helps to correct short-sightedness.

Parts Used



Leaves make a useful urinary antiseptic and astringent for urinary tract problems such as cystitis and irritable bladder.

Berries have a strong healing effect on capillaries, especially on the micro-circulation within the eye.

Key Preparations & Their Uses

Caution If taking anti-coagulants or diagnosed with a bleeding disorder, take medicinal doses on professional advice only.

Capsules Take up to 4 x 500 mg capsules a day to improve circulation within the eye.

Tincture (to make, p. 292). Take ½ tsp a day for poor circulation.

Decoction (to make, p. 291) is pleasant-tasting and useful for short-term treatment of diarrhoea in children.

Tablets, like capsules, are convenient for long-term use.

Bilberry fruit can be used as a natural antioxidant supplement.

Habitat & Cultivation

Bilberry thrives in moist undergrowth on moors, hillsides and heathland, throughout temperate regions of the northern hemisphere – Asia, Europe, and North America. Widely cultivated around the world, bilberry is propagated from seed in autumn, or from cuttings. The leaves are collected in summer, the fruit when ripe in late summer or early autumn.

Related Species

Other members of the Ericaceae, such as bearberry (*Arctostaphyllos uva-ursi*, p. 170), cowberry (*V. vitis-idaea*) and cranberry (*V. macrocarpon*, p. 280) are used principally as urinary antiseptics.

Key Constituents

- Tannins (approximately 7%)
- Proanthocyanins
- Flavonoids
- Fruit acids
- Phenolic acids
- Pectin
- Vitamin B_2, C and carotene

Key Actions

- Circulatory tonic
- Antioxidant
- Anti-inflammatory
- Astringent
- Urinary antiseptic

Research

■ **Circulation** Clinical trials from 1964 onwards have shown that bilberry fruits protect the peripheral circulation and capillaries. Symptoms that have been shown to improve with bilberry extracts include fluid retention, pain, pins and needles (paraesthesia) and cramps – all resulting from impaired peripheral blood flow.

■ **Eyesight** Different trials have also shown improvement to eyesight in the short-sighted, in those with retinal damage due to diabetes, and to high blood pressure in patients taking bilberry extracts, beta-carotene and retinol. Other conditions such as period pain and recovery from haemorrhoid operations may improve with bilberry.

Traditional & Current Uses

■ **Digestive problems** Bilberry fruit has long been used as a mild laxative (because of its sugars), and to relieve diarrhoea (due to the tannins). It is also moderately antibacterial and, since it tastes pleasant, is useful for treating diarrhoea and indigestion in children.

■ **Circulatory disorders** Many circulatory disorders will benefit from the fruit's ability to improve capillary function and heal inflammation. These include intermittent claudication, Raynaud's disease, varicose veins, haemorrhoids, easy bruising, and all conditions impairing blood flow to the eyes, particularly diabetes and high blood pressure.

■ **Antioxidant** The fruit is used to protect against tissue damage (it may prevent cataract formation) and to promote tissue healing, for example in the gastro-intestinal tract or in rheumatoid or osteoarthritis.

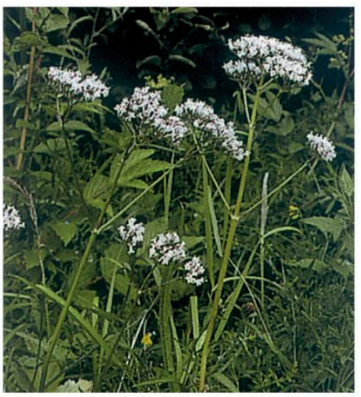
■ **Antiseptic** The leaves have a marked antiseptic effect within the bladder and urinary tubules, and can be used to treat urinary infections such as cystitis.

■ **Anti-diabetic** The leaves and fruit have anti-diabetic activity, helping especially in pre-diabetic states. There is growing evidence that the fruit can help to promote weight loss.

Valeriana officinalis (Valerianaceae)

Valerian

Valerian has been used as a sedative and relaxant at least since Roman times. It was known to Dioscorides in the 1st century CE, who named it *phu*, the sound of the word reflecting its unpleasant smell. Valerian helps relieve stress and has become an increasingly popular remedy in recent decades. It is a safe, non-addictive relaxant that reduces nervous tension and anxiety and promotes restful sleep.



***Valerian** helps reduce stress. Its name is thought to be derived from the Latin* valere, *"to be well".*

Habitat & Cultivation

Native to Europe and northern Asia, valerian grows wild in damp conditions. It is cultivated in central and eastern Europe. The plant is grown from seed in spring, and the root and rhizome of 2-year-old plants are unearthed in autumn.

Related Species

V. capensis is given in South Africa for hysteria and epilepsy; *V. hardwickii*, found in China and Indonesia, is taken as an antispasmodic; *V. ulginosa* was used for cramps and menopausal symptoms by the Menominee people in North America; and *V. wallichi* is used in the Himalayas in almost exactly the same way as valerian.

Key Constituents

- Volatile oil (up to 1.4%), including bornyl acetate, beta-caryphyllene
- Iridoids (valepotriates) – valtrate, isovaltrate
- Alkaloids

Key Actions

- Sedative
- Relaxant
- Relieves muscle spasms
- Relieves anxiety
- Lowers blood pressure

Research

- **Therapeutic properties**

Extensive research in Germany and Switzerland has endorsed the use of valerian to aid sleep, improve sleep quality and lower blood pressure. A German trial carried out during 2002 that tested valerian and oxazepam (a conventional sleep treatment) found both to be effective – 83% of those taking valerian rated the treatment as very good compared to 73% of those taking oxazepam.

Traditional & Current Uses

- **Historical uses** Known as "all-heal" in the Middle Ages, valerian was credited with many virtues, in particular with healing epilepsy. In 1592, Fabius Calumna published a detailed work on herbal medicine in which he claimed to have cured his epilepsy with the herb.
- **Stress-related disorders** Valerian reduces mental over-activity and nervous excitability, helping people who find it hard to "switch off". It is beneficial for almost any stress-related condition, and, in general, has a calming, rather than directly sedative, effect on the mind.
- **Anxiety & insomnia** Many symptoms of anxiety, including tremors, panic, palpitations and sweating, can be relieved with valerian. It is a useful remedy for insomnia, whether caused by anxiety or over-excitement.
- **Effective relaxant** Valerian relaxes over-contracted muscles, and is helpful for shoulder and neck tension, asthma, colic, irritable bowel syndrome, period pain and muscle spasms.
- **High blood pressure** Valerian is used with other herbs in remedies for high blood pressure caused by stress and anxiety.

Valerian
Erect perennial growing to 1.2 m (4 ft), with pinnate divided leaves and pink flowers.

Parts Used

Root and rhizome are harvested in autumn when they contain the highest level of active ingredients.

Key Preparations & Their Uses

Cautions Can cause drowsiness. Do not take valerian if already taking sleep-inducing drugs.

Tablets often also contain other herbs. Take for stress or anxiety.

Powder can be taken as capsules (to make, p. 292). For insomnia, take 1–2 doses of 500 mg at night.

Tincture (to make, p. 292). For anxiety, take 20 drops in hot water up to 5 times a day.

Decoction (to make, p. 291). Take 25–100 ml as a sedative at night.

Self-help Uses

- **Chronic anxiety**, p. 308.
- **Insomnia**, p. 309.
- **Nervous exhaustion**, p. 309.
- **Pre-menstrual tension**, p. 315.
- **Sleeplessness due to backache**, p. 313.

Verbena officinalis (Verbenaceae)

Vervain, Ma Bian Cao (Chinese)

Vervain has long been credited with magical properties and was used in ceremonies by the Druids of ancient Britain and Gaul. It is a traditional herbal medicine in both China and Europe. Dioscorides in the 1st century CE called vervain the "sacred herb", and for many centuries it was taken as a cure-all. It has tonic, restorative properties, and is used to relieve stress and anxiety, and to improve digestive function.

Vervain
A slender perennial growing to 1 m (3 ft), with stiff, thin stems and spikes of small lilac flowers.

Parts Used

Aerial parts have a tonic effect on the nervous system and the digestion, and have been used medicinally for thousands of years in Europe and China.

Dried aerial parts

Fresh aerial parts

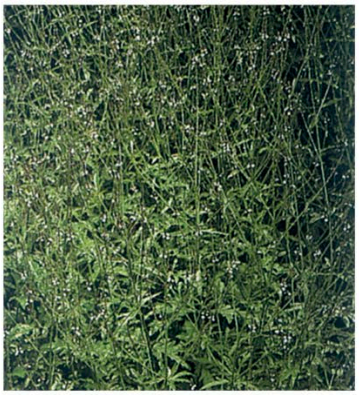
Key Preparations & Their Uses

Cautions Do not exceed the stated dose. Vervain can cause vomiting if taken in excess. Do not take during pregnancy.

Tincture (to make, p. 292) is a relaxing, calming tonic. For stress and anxiety, take ½ tsp diluted in a glass of water 3 times a day.

Infusion (to make, p. 291) helps stimulate the digestion and improves effective absorption of food. Drink 150 ml regularly, particularly after heavy meals.

Powder can be used as a toothpaste. Rub on the teeth regularly to clean and protect them.



***Vervain** was carried in the Middle Ages to bring good luck.*

Habitat & Cultivation

Vervain grows wild throughout much of Europe and North Africa as well as in China and Japan. It is propagated from seed in spring or autumn and thrives in well-drained soil in a sunny position. The aerial parts are harvested in summer when the plant is in flower.

Related Species

Blue vervain (*V. hastata*), which is native to North America, is used medicinally in the same way as vervain.

Key Constituents

- Bitter iridoids (verbenin, verbenalin)
- Volatile oil
- Alkaloids
- Triterpenes (beta-sitosterol)
- Flavonoids

Key Actions

- Nervine
- Tonic
- Mild bitter
- Mild antidepressant

Research

- **Hormonal effects** Early indications from research into vervain are that it has both oestrogenic and progestogenic activity. It also stimulates the muscles of the womb, and production of breast-milk.
- **Lack of research** For a herb with such long traditional use, surprisingly little research into vervain has occurred to date. Laboratory studies indicate that vervain has significant anti-inflammatory activity. It may also have antiviral and liver protective properties. Verbenalin, an active compound within vervain, is strongly bitter, may cause vomiting at high doses and stimulates contraction of the womb.

Traditional & Current Uses

- **Digestive tonic** Vervain improves the function of the digestive system and absorption of food.
- **Nervous system** Vervain is prized as a restorative for the nervous system and is especially helpful for nervous tension. It is thought to have a mild antidepressant action, and is used specifically to treat anxiety and the nervous exhaustion that follows long-term stress.
- **Convalescence** By aiding the digestion and restoring the nervous system, vervain is an ideal tonic for people recovering from chronic illness.
- **Headaches & migraines** Vervain alleviates headaches and in Chinese herbal medicine it is used for migraines connected with the menstrual cycle.
- **Other uses** Among its other medicinal uses, vervain is given for jaundice, gallstones, asthma, insomnia, pre-menstrual tension, flu and fevers.

Self-help Uses

- **Nervous exhaustion**, p. 309.
- **Pre-menstrual tension**, p. 315.

Viburnum opulus (Caprifoliaceae)

Cramp Bark, Guelder Rose

Cramp bark
A deciduous shrub or tree growing to 4 m (13 ft), with lobed leaves, white flowers and red oval fruit.

Native to both North America and Europe, cramp bark was recognized as recently as 1960 in the *US National Formulary* as a sedative remedy for nervous conditions and as an antispasmodic in the treatment of asthma. As its name implies, the herb's primary medicinal use is to relieve cramps and other conditions, such as colic or painful menstruation, caused by over-contraction of muscles.

Parts Used

Bark is peeled off the tree in strips during spring and summer. Care must be taken to leave enough bark for the tree to stay alive.

Dried bark

Fresh bark

Key Preparations & Their Uses

Decoction (to make, p. 291). For period pain, take 75 ml every 3 hours.

Tincture (to make, p. 292) is used for long-term treatment of muscular tension. For irritable bowel syndrome, take ½ tsp diluted with hot water twice a day.

Lotion (to make, p. 296) relieves aching muscles. Rub into tense neck and shoulders.

Cramp bark *has distinctive bright red berries in autumn.*

Habitat & Cultivation

Cramp bark grows in woodlands, hedges and thickets in Europe and eastern North America. It is propagated from seed sown in autumn. Bark from the branches is collected in spring and summer, when the plant is in flower.

Related Species

Black haw (*V. prunifolium*, p. 281) is often used interchangeably with cramp bark, but it is thought to have a more specific action on the uterus.

Key Constituents

- Hydroquinones (arbutin)
- Coumarins (scopoletin)
- Tannins (3%)
- Proanthocyanidins
- Polysaccharides

Key Actions

- Antispasmodic
- Sedative
- Astringent
- Relaxant

Research

- **Active constituents** To date, cramp bark has been poorly researched, and there is also some confusion over which active constituents it contains and which occur in the closely related black haw (*V. prunifolium*).

Traditional & Current Uses

- **Native American remedy** Cramp bark has a history of use in Native American herbalism. The Meskwaki people took cramp bark for cramps and pains throughout the body, while the Penobscot used it to treat swollen glands and mumps.
- **Muscle relaxant** Cramp bark is effective at relieving any over-tense muscle, whether smooth muscle in the intestines, airways or uterus, or striated muscle (attached to the skeleton) in the limbs or back. It may be taken internally, or applied topically to relieve muscle tension. The herb also treats symptoms arising from excess muscle tension, including breathing difficulties in asthma, and menstrual pain caused by excessive contraction of the uterus. For night cramps and back pain, lobelia (*Lobelia inflata*, p. 110) is often mixed with cramp bark. The herb also relieves constipation, colic and irritable bowel syndrome, as well as the physical symptoms of nervous tension.
- **Arthritis** In some cases of arthritis, where joint weakness and pain have caused muscles to contract until they are almost rigid, cramp bark can bring remarkable relief. As the muscles relax, blood flow to the area improves, waste products such as lactic acid are removed and normal function can return.
- **Other uses** Cramp bark is commonly used in treatments for high blood pressure and other circulatory conditions.

Self-help Uses

- **Back pain**, p. 313.
- **Breathing difficulties**, p. 301.
- **Cramps & muscle spasms**, p. 312.
- **Period pain**, p. 315.
- **Poor circulation to the hands & feet**, p. 302.
- **Spastic constipation**, p. 307.
- **Stomach spasm**, p. 305.

Vitex agnus-castus (Verbenaceae)

Chaste Tree, Agnus Castus

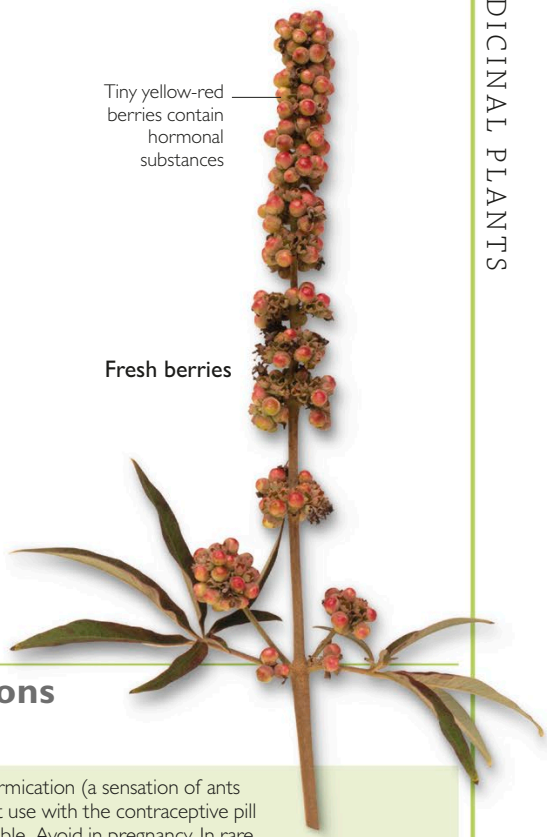
Chaste tree
A deciduous aromatic tree growing to 7 m (23 ft), with palm-shaped leaves and small lilac flowers.

Chaste tree was well known in ancient times and featured in Homer's 6th-century BCE epic, the *Iliad*, as a symbol of chastity capable of warding off evil. As the name "chaste tree" implies, it was thought to reduce sexual desire and traditionally it was chewed by monks to reduce unwanted libido. Research has confirmed that chaste tree has a hormonal action and today it is used for menstrual problems and infertility.

Parts Used

Berries, harvested in autumn, are used to treat female fertility problems.

Dried berries

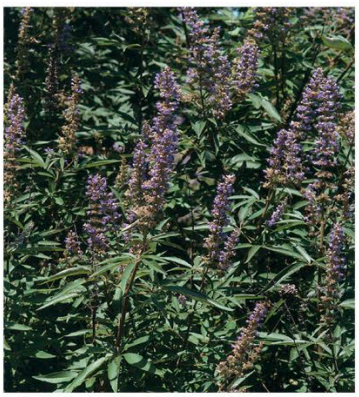


Key Preparations & Their Uses

Caution Excess can cause formication (a sensation of ants crawling on the skin). Concurrent use with the contraceptive pill or fertility treatment is not advisable. Avoid in pregnancy. In rare cases may cause gastro-intestinal upset, headache or dizziness.

Tablets Take for pre-menstrual syndrome.

Tincture (to make, p. 292). For an irregular cycle, take 40 drops with water daily for 3 months.



Chaste tree *has small, fragrant, lilac flowers in summer which grow in whorls on long spikes.*

Habitat & Cultivation

Chaste tree is native to the Mediterranean region and western Asia. It is cultivated in sub-tropical areas around the world, and has become naturalized in many regions. It is grown from seed in spring or autumn. The ripe berries are collected in autumn.

Related Species

As a member of the Verbenaceae genus, chaste tree is a distant relative of vervain (*Verbena officinalis*, p. 149) and lemon verbena (*Lippia citriodora*, p. 228).

Key Constituents

- Volatile oil (cineol)
- Flavonoids (casticin)
- Iridoids (aucubin, agnoside, eurostoside)
- Diterpenes

Key Actions

- Regulates hormones
- Progesterogenic
- Increases breast-milk production
- Aids sleep

Research

- **Hormonal properties** The berries are thought to induce subtle hormonal effects within the brain, leading to increased levels of the neurotransmitters, dopamine and melatonin. These changes are thought to promote better hormonal regulation of the menstrual cycle, notably through raised progesterone levels. In some people, the raised melatonin levels may aid sleep quality. The diterpenes are thought to be chiefly responsible for these effects.
- **Gynaecological problems** Clinical research by and large supports the use of chaste tree in many female hormonal problems, including pre-menstrual syndrome (PMS), irregular menstruation, breast tenderness and infertility. A 2001 clinical trial tested chaste berry against placebo in 178 women with PMS. After 3 months, those taking chaste tree had a 50% reduction in symptoms compared to placebo.
- **Sleep aid** Since researchers found that chaste berry increases melatonin levels, chaste berry has been thought of as a possible sleep aid. Some small studies indicate that chaste berry might help people with insomnia due to unhealthy melatonin levels, such as shift workers or those who are jet lagged.

Traditional & Current Uses

- **Menstrual problems** Chaste tree is probably the most used herb in Western herbal medicine for regulating the menstrual cycle. With its progesterogenic action, chaste tree is often helpful in relieving pre-menstrual symptoms, including irritability and lowered mood, headache, acne spots and breast tenderness. Chaste tree also promotes greater menstrual regularity, and this use extends to more significant hormonal problems including polycystic ovary syndrome, fibroids and endometriosis.
- **Irregular periods** The herb helps to regulate irregular periods, tending to shorten a long cycle and lengthen a short one.
- **Infertility** Chaste tree can be of help some women trying to conceive if infertility is due to low progesterone levels.
- **Difficulty in breast-feeding** The berries are taken to increase breast-milk production.
- **Acne** Though rarely used on its own, chaste tree can be extremely helpful in treating acne in both men and women. Used in combination with herbs such as echinacea (*Echinacea* spp., p. 92), it will often reduce the frequency and intensity of acne spots where hormonal imbalance is a major factor.

Self-help Uses

- **Aiding conception**, p. 316.
- **Decreased oestrogen & progesterone levels**, p. 316.
- **Irregular cycle**, p. 315.

Withania somnifera (Solanaceae)

Ashwagandha

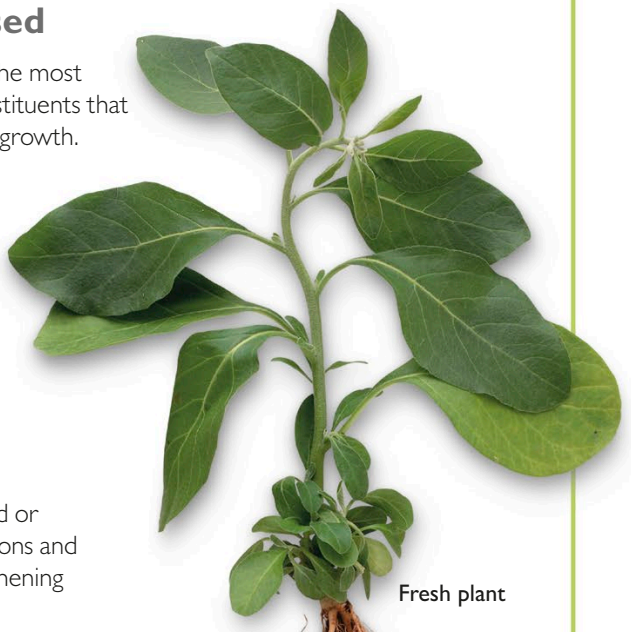
Ashwagandha
A stout shrub growing to 1.5 m (5 ft), with oval leaves and greenish or lurid yellow flowers.

Ashwagandha has been called "Indian ginseng" as it is used in Ayurveda in much the same way that ginseng is used in Chinese medicine: to improve vitality and to aid recovery after chronic illness. Today, ashwagandha seems to be a herb designed to deal with the busy nature of modern life. It invigorates when fatigued, eases the impact of stress and anxiety, and aids sleep – all traditional uses largely supported by clinical research.

Parts Used

Leaves contain the most withanolides, constituents that inhibit cancer cell growth.

Dried leaves



Fresh plant

Root is powdered or made into decoctions and taken as a strengthening and calming tonic.

Dried root

Fresh root

Berries are chewed in India to help in convalescence.

Fresh berries

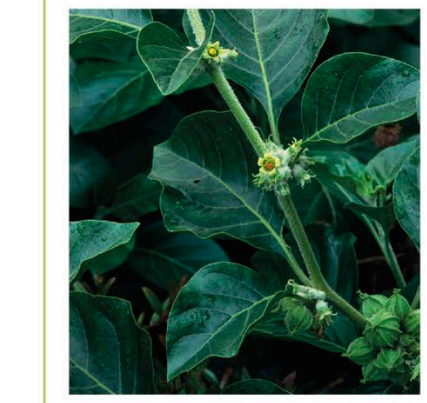
Dried berries

Key Preparations & Their Uses

Decoction of the root (to make, p. 291). For stress, decoct 5 g with 100 ml water and take over 2 days.

Powder made from the leaves. For anaemia, take ½ tsp in a little water once a day.

Capsules of powdered root (to make, p. 292). For nervous exhaustion, take 1–2 g a day with water.



Ashwagandha has powerful medicinal properties proven by research.

Habitat & Cultivation

Ashwagandha is found in India, the Mediterranean and the Middle East. It is propagated from seed or cuttings in spring. The leaves are harvested in spring, and the fruit and root in autumn.

Key Constituents

- Alkaloids
- Steroidal lactones (withanolides)
- Iron

Key Actions

- Adaptogenic
- Tonic
- Mild sedative

Research

■ **Chronic stress** Clinical research has been wide-ranging and examined many aspects of ashwagandha's potential medicinal uses, many linked to the withanolides, compounds similar to the body's own steroid hormones. A 2012 Indian clinical trial noted that those taking withania had lower stress levels and an increased sense of well-being, as well as lower cortisol and blood pressure levels.

■ **Anxiety and tension** Ashwagandha has been proven to reduce anxiety and tension in at least 6 clinical trials. In a 2009 Canadian trial, ashwagandha, paired with dietary advice and a multivitamin supplement, was found more effective in decreasing anxiety than psychotherapy and a placebo. Those taking ashwagandha also reported improved concentration and less fatigue.

■ **Male fertility** Two clinical trials testing ashwagandha's role as a male sexual tonic indicate that the herb markedly improves semen quality. Another clinical trial failed to find any benefit in aiding erectile dysfunction.

■ **Other actions** Ashwagandha has also been researched for its use as a tonic suitable for children, to improve muscle strength and mental function in the elderly, for arthritis and to enhance immune function. Ashwagandha is thought to have anti-cancer activity.

Traditional & Current Uses

■ **Ayurvedic tonic** Ashwagandha has always been valued in Ayurveda for its tonic, strengthening, and relaxing properties. Robert Svoboda in *Ayurveda: Life, Health and Longevity* states that it "clarifies the mind, calms and strengthens the nerves, and promotes sound restful sleep".

■ **Restorative** Today, the herb is still prized as a tonic, but valued also for its unusual combination of actions. As a tonic, it strengthens and supports physical and mental performance, yet at the same time it relieves anxiety and, as its botanical name suggests, encourages better sleep quality. It is an excellent herb for convalescence.

■ **Inflammatory conditions** Ashwagandha can be a useful addition to treatment for chronic inflammatory diseases such as rheumatoid arthritis and psoriasis.

■ **Long-term stress** By reducing over-activity and encouraging rest and relaxation, ashwagandha is useful in countering the debility that accompanies long-term stress.

■ **Anaemia** Aswagandha's high iron content makes it useful in anaemia.

Self-help Uses

- **Long-term stress & convalescence**, pp. 308 & 319.
- **Male fertility**, p. 316.

Zanthoxylum americanum (Rutaceae)

Northern Prickly Ash, Toothache Tree

Northern prickly ash A deciduous shrub growing to 3 m (10 ft), with thorny grey branches and compound leaves.

Indigenous to North America, northern prickly ash is a warming, stimulating herb for the circulation. It was held in high regard by Native North Americans for its medicinal properties and both the bark and berries were chewed to alleviate rheumatism and toothache. Today, northern prickly ash is mainly given for arthritic and rheumatic conditions, but it is also helpful for certain digestive problems and for leg ulcers.

***Northern prickly ash** is anti-rheumatic and improves the circulation.*

Habitat & Cultivation

Northern prickly ash is native to southern Canada and northern, central and western parts of the US, preferring moist, shady sites such as woodlands. It is propagated from seed in autumn. The bark is harvested in spring and the berries are collected in summer.

Related Species

Southern prickly ash (*Z. clava-herculis*) grows in central and southern US where it is used interchangeably with prickly ash. *Chuan jiao* (*Z. bungeanum*) is given in Chinese herbal medicine for "cold" patterns of illness causing abdominal pain. *Z. capense* is taken for colic in South Africa. *Z. zanthoxyloides* is a traditional West African herb for rheumatic conditions.

Key Constituents

- Isoquinoline alkaloids
- Furanocoumarins
- Lignans
- Volatile oil
- Tannins

Key Actions

- Circulatory stimulant
- Increases sweating
- Anti-rheumatic
- Antifungal

Research

- **Antifungal** Research into northern prickly ash is limited, though a 2005 study found extracts from northern prickly ash fruit and leaf demonstrated antifungal activity.

Traditional & Current Uses

- **North American herb** Northern prickly ash was a Native American remedy for toothache and rheumatism. It was used in the US during the 19th century as a circulatory stimulant and to treat arthritis.
- **Arthritic conditions** Western herbalists regard northern prickly ash as a prime remedy for rheumatic and arthritic problems. It stimulates blood flow to painful and stiff joints, promoting the supply of oxygen and nutrients to the area and removing waste products.
- **Circulation** The herb improves circulation in intermittent claudication and Raynaud's disease, conditions where the arteries of the limbs have narrowed, preventing sufficient blood reaching the hand or leg muscles.
- **Other uses** Northern prickly ash relieves wind, flatulence and diarrhoea, and tones the digestion. It is applied topically to treat leg ulcers and chronic pelvic inflammatory disease.

Self-help Uses

- **Back pain**, p. 313.
- **Poor circulation**, p. 302

Parts Used

Bark is considered to have a stronger effect than the berries. It is used in preparations to stimulate blood flow.

Fresh plant

Fresh bark

Berries are made into remedies for poor circulation.

Berries and bark were chewed for toothache

Dried chopped bark

Dried berries

Key Preparations & Their Uses

Cautions Avoid in pregnancy and while breast-feeding.

Tincture of bark (to make, p. 292). For arthritis, take 20 drops with water 3 times a day.

Decoction For poor circulation, decoct 3 tsp ginger and 3 tsp northern prickly ash berries with 750 ml water (see p. 291). Take 150 ml twice a day.

Tablets Take tablets, which often contain other herbs, for arthritis and rheumatism.

Lotion For poor circulation in the legs, make a decoction of bark (p. 291) and apply.

Zea mays (Poaceae)

Maize, Cornsilk, Indian Corn, Yu Mi Shu (Chinese)

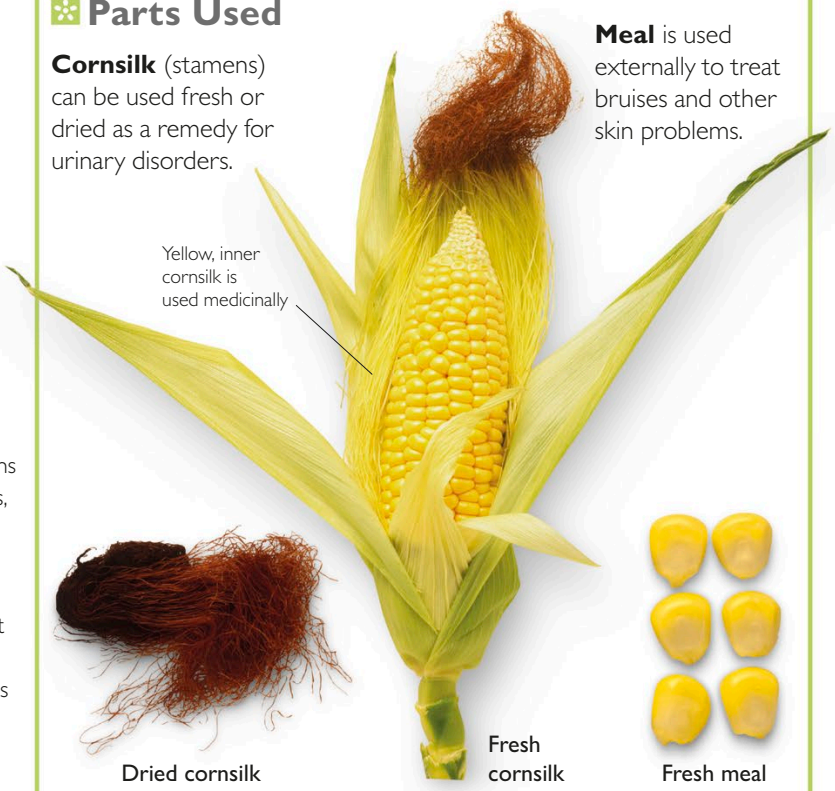
Maize
An annual grass reaching 3 m (10 ft), with plume-like male flowers. Female flowers produce cobs.

The staple food of Central and South America for at least 4,000 years, maize is also used medicinally in countless different ways. The Aztecs gave a maize meal decoction for dysentery, "heat in the heart" and to increase breast-milk production. Cornsilk (the silky fronds wrapped around the cob) has always been the part most used medicinally, and it is of particular value in treating urinary conditions.

Parts Used

Cornsilk (stamens) can be used fresh or dried as a remedy for urinary disorders.

Meal is used externally to treat bruises and other skin problems.



Key Preparations & Their Uses

Infusion of cornsilk (to make, p. 291) is soothing. For cystitis, drink 500 ml daily.

Decoction of meal (to make, p. 291). Apply as a poultice (see p. 295) to sores and boils.

The outer leaves of maize are stripped to reveal the cornsilk and meal.

Capsules of cornsilk (to make, p. 292). For oedema, take 2 g daily.

Tincture of cornsilk (to make, p. 292). For cystitis, combine 80 ml with 20 ml of buchu tincture and take 1 tsp with water 3 times a day.

Maize's Latin name reflects its value – zea means "cause of life" and mays means "our mother".

Habitat & Cultivation

Cultivated almost universally as a food crop, maize is native to the Andes and Central America, possibly originating in Peru. It is propagated from seed in spring. The cornsilk is harvested with the ripe cob in summer, then separated and dried.

Related Species

Cornsmut (*Ustilago zeae*), a fungus that grows on maize, is used by the Zuni of New Mexico to speed childbirth and stop uterine haemorrhage.

Key Constituents

- Flavonoids
- Carotenoids

Cob:

- Anthocyanins (purple corn)

Cornsilk:

- Carotenoids
- Volatile oil
- Sterols

Key Actions

- Urinary demulcent
- Diuretic
- Mildly stimulates bile secretion
- Gently lowers blood pressure

Research

- **Purple corn** Purple corn contains unusually high levels of anthocyanins, dark red or blue plant pigments that have strong antioxidant and protective effects within the body. A 2007 paper reported that, weight for weight, purple corn contained nearly four times more anthocyanins than blueberries, suggesting that purple corn could be a key dietary source of anthocyanins.
- **Carotenoids** Corncob and cornsilk contain high levels of carotenoids (including lutein and zeaxanthin), compounds that are thought to protect the eye from oxidative damage. Zeaxanthin in particular is thought to protect against age-related macular degeneration.

Traditional & Current Uses

- **Traditional herb** Maize meal has been used by Native Americans for a wide range of ailments. It makes an effective poultice and has been given in Mayan, Incan and American medicine to treat bruises, swellings, sores, boils and similar conditions. Virgil J. Vogel writes that "the Chickasaw Indians treated itching skin, followed by sores when scratched, by burning old corncobs and holding the affected part over the smoke".
- **Urinary remedy** Cornsilk is a gentle-acting diuretic with mild antibiotic activity. It can help in acute and chronic cases of cystitis and is commonly used in prostate disorders. It may also prove useful in frequent urination and bladder irritability.
- **Kidney stones** Cornsilk is thought to have a beneficial effect on the kidneys, reducing kidney stone formation and relieving some of the symptoms of existing stones.
- **Chinese remedy** In China, cornsilk is used to treat fluid retention and jaundice.

Self-help Uses

- **Fluid retention in pregnancy**, p. 317.
- **Urinary infections**, p. 314.

Zingiber officinale (Zingiberaceae)

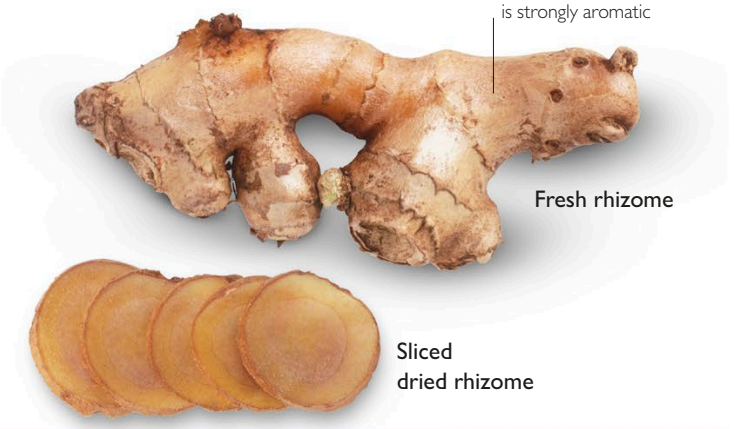
Ginger, Sheng Jian (Chinese), Singabera (Sanskrit)

Ginger
A perennial growing to 60 cm (2 ft), with lance-shaped leaves and spikes of white or yellow flowers.

Familiar as a spice and flavouring, ginger is also one of the world's best medicines. It has been revered in Asia since the earliest times, and in medieval Europe it was thought to have derived from the Garden of Eden. Ginger's warming and anti-inflammatory properties can bring relief to problems as varied as headache and migraine, joint pain, indigestion, travel sickness and morning sickness. Fresh ginger has a pungent, slightly lemony taste.

Parts Used

Rhizome contains high levels of a volatile oil that is warming and stimulating.



Key Preparations & Their Uses

Cautions Do not take ginger in medicinal doses if suffering from peptic ulcers. Do not take the essential oil internally except under professional supervision. Maximum recommended dose in pregnancy and if taking anticoagulants is 2 g dried (4 g fresh) root a day.

Infusion (to make, p. 291). For nausea, drink 150 ml 3 times a day.

Essential oil For arthritic aches and pains, dilute 5 drops in 20 drops carrier oil and apply (see p. 297).

Capsules (to make, p. 292). For morning sickness, take a 75 mg capsule every hour.

Tincture (to make, p. 292). To improve the digestion, take 30 drops with water twice a day.

Ginger, widely used as a spice, is also an important digestive remedy.

Habitat & Cultivation

Native to Asia, ginger is grown throughout the tropics. It is propagated by dividing the rootstock. Ginger flourishes in fertile soil and needs plenty of rain. The rhizome is unearthed when the plant is 10 months old. It is washed, soaked and sometimes boiled and peeled.

Related Species

Various *Zingiber* species are used medicinally, but no other has benefits equal to ginger. Turmeric (*Curcuma longa*, p. 90) is a close relative.

Key Constituents

- Volatile oil (1–3%)
  – zingiberene (20–30%)
- Oleoresin (4–7.5%)
  – gingerol, shogaols

Key Actions

- Anti-inflammatory
- Circulatory stimulant
- Anti-emetic
- Antiviral
- Digestive stimulant

Research

- **Digestive health** Ginger speeds up the rate of gastric emptying and aids the absorption of nutrients from the digestive tract. By improving iron absorption, it helps to treat anaemia. Clinical trials indicate that it can relieve nausea and vomiting.
- **Morning sickness** A 2013 Australian review of clinical trials using ginger to relieve morning sickness concluded that "The best available evidence suggests that ginger is a safe and effective treatment for PNV".
- **Pain relief** Several small-scale research studies have found that ginger reduces muscle pain, for example, after exercise. This is because of a potent anti-inflammatory action. One study found that after 2 months of treatment, ginger was as effective in relieving menstrual cramps as mefenamic acid (an aspirin-type painkiller). A 2014 Iranian clinical trial compared the effects of ginger and sumatripan (a painkiller) in relieving migraine, and reported that the two treatments were similarly effective.

Traditional & Current Uses

- **Digestive problems** Ginger is thought to be helpful for almost all digestive complaints. It is an excellent remedy for symptoms such as indigestion, nausea, wind, bloating and cramps – whether taken as an infusion, juice, tincture, powder or with food. Its antiseptic activity makes it valuable in all gastro-intestinal infections, including food poisoning.
- **Circulatory stimulant** Ginger stimulates the circulation, and helps blood to flow to the surface, making it an important remedy for chilblains and poor circulation to the hands and feet. Juice squeezed from fresh ginger root can be applied to chilblains (and cold sores), bringing quick relief.
- **Respiratory conditions** Ginger has antiviral activity and makes an and is a first-rate remedy for coughs, colds, flu and other respiratory problems. Despite its warming properties, ginger stimulates sweating and helps to cool and control fevers.

Self-help Uses

- **Chilblains**, p. 302.
- **Colds, flu & fevers**, p. 311.
- **Cold sores**, p. 304.
- **Constipation**, p. 307.
- **Digestive upsets, wind & colic**, p. 318.
- **High blood pressure & arteriosclerosis**, p. 301.
- **Morning sickness**, p. 317.
- **Nausea & travel sickness**, p. 306.

OTHER MEDICINAL PLANTS

The index of Other Medicinal Plants features in Latin name order over 450 plants that have played a significant role in herbal medicine worldwide. They include familiar plants such as oats (*Avena sativa*, p.175) and exotic herbs like ylang-ylang (*Cananga odorata*, p. 182). Some are well researched, while others are known only within their native region. A number of medicinal plants included have fallen out of favour but remain historically significant. In addition, the index features plants such as eucommia bark (*Eucommia ulmoides*, p. 207) that research shows have the potential for a more prominent medicinal role in the future.

PLANT NAMES
The Latin name given is the one by which the plant is most generally known in medical herbalism. Latin synonyms are also provided. The first part of the Latin name designates the plant's genus (sub-family). The second part specifies the species name. In brackets after the Latin name(s) comes the plant's family name, the broader class to which the genus belongs. The plant's common name(s) are beneath the family name. If more than one common name is in popular use, they are listed in order of importance. Where appropriate, the origins of common names are given in brackets.

DESCRIPTION
Lists significant botanical information including whether the plant is evergreen or deciduous and whether it is annual, biennial or perennial. Gives identifying characteristics of the plant.

HABITAT & CULTIVATION
Includes the plant's origins, its distribution, preferred growing conditions, and the seasons when it is propagated and harvested.

PARTS USED
Lists those parts of the plant that are used medicinally in order of importance.

CONSTITUENTS
Gives the key active constituents of the plant in order of significance. Sometimes includes details of a constituent's specific medicinal action on the body. *Note* To find out more about constituents and their actions, see *How Medicinal Plants Work*, pp. 10–16.

HISTORY & FOLKLORE
Provides information such as the derivation of the herb's name, traditional lore, and quotations from old herbals showing how the plant was regarded in the past, and how it was used medicinally. Also includes details of the plant's other uses.

MEDICINAL ACTIONS & USES
Encompasses both the confirmed and presumed actions of the whole plant (as opposed to isolated active constituents). Discusses the symptoms and illnesses that the plant is used to treat and the varying ways that the herb is used medicinally in different herbal traditions.

RESEARCH
Gives details of scientific research into the plant, its constituents and its extracts, including the results of any clinical trials.

RELATED SPECIES
Provides information on related species that have a medicinal use. Gives a cross-reference to those species that have an entry in the Encyclopedia.

CAUTIONS
Gives cautions about using the herb medicinally and about the plant in general. States if the plant, its constituents or its extracts are legally restricted.

Considered safe as a medicine but potentially harmful if used inappropriately. Particular safety issues are listed. Where a plant is listed as 'Take only under professional supervision' it is not suitable for home use.

Known to be toxic or unsafe as a medicine. Do ***not*** *self-medicate with these plants. Some plants with this symbol may be safely prescribed by experienced healthcare practitioners within a very narrow dosage range. At a higher dose such plants will be poisonous.*

SELF-HELP USES
Cross-refers to the self-help treatments in *Remedies for Common Ailments*. *Note* Always read the cautions about the herb and the information on pp. 290 & 298–299 before attempting a self-help use.

Abies balsamea (Pinaceae)

Balsam Fir

Description Conical evergreen tree growing to 27 m (90 ft). Has aromatic needle-like leaves and purple fir cones.
Habitat & Cultivation Native to North America, balsam fir is commercially grown for its timber. The resin is tapped from 60- to 80-year-old trees in spring.
Parts Used Oleo-resin, leaves.
Constituents Balsam fir leaves contain a liquid oleo-resin.
History & Folklore Balsam fir resin, often known as Canada balsam, was used for many illnesses by both Native Americans and settlers. The Penobscot smeared the resin on burns, cuts and sores, while others applied it to the chest and back for colds and chest problems. The Pillagers used the aromatic needles in their sweat lodges, inhaling smoke from the burning leaves. Dr Wooster Beech (1794–1868), founder of the Eclectic healing movement, regarded balsam fir as stimulating and laxative when taken internally, emollient and cooling when used externally. The leaves, cones and resin are commonly added to pot-pourri.
Medicinal Actions & Uses Balsam fir is antiseptic and stimulant, and has been used in North America and Europe for catarrh, chest infections such as bronchitis, and urinary tract conditions such as cystitis and frequent urination. Externally, balsam fir was rubbed on the chest or applied as a plaster for respiratory infections. It is little used in herbal medicine today.

Abrus precatorius (Fabaceae)

Jequirity

Description Deciduous climber growing to 4 m (13 ft). Has compound leaves, clusters of pink flowers, and seed pods containing scarlet or (rarely) white seeds.
Habitat & Cultivation Jequirity is native to India, and now grows in hedges and amongst bushes in all tropical regions.
Parts Used Root, leaves, seeds.
Constituents Jequirity seeds contain abrin, indole alkaloids, triterpenoid saponins and anthocyanins. The root and leaves contain glycyrrhizin and traces of abrin. Abrin is extremely toxic.
History & Folklore Jequirity seeds have been used since ancient times in India to help weigh precious materials, including the famous Koh-i-noor diamond. The seeds are notorious as a poison.
Medicinal Actions & Uses Jequirity seeds have been used medicinally in the past as a contraceptive, abortifacient (to induce a miscarriage) and as a treatment for chronic conjunctivitis. However, they are so poisonous that even external application can be fatal. In laboratory experiments, extracts of the seeds had a strong anti-fertility effect on sperm production and fertility. The ground root is traditionally taken to treat worm infestation.
Cautions Never use the seeds. Use the leaves and roots only under professional supervision. Jequirity is subject to legal restrictions in some countries.

Jequirity *seeds were used medicinally in former times, but are also extremely poisonous.*

Abutilon indicum (Malvaceae)

Kanghi,
Indian Mallow

Description Upright, woody shrub growing to 1.5 m (5 ft). Has a downy, slightly oily surface, single yellow flowers, and kidney-shaped seeds.
Habitat & Cultivation Kanghi grows throughout much of India in addition to South-East Asia.
Parts Used Root, bark, leaves, seeds.
Constituents Kanghi contains mucilage, tannins and asparagine. Asparagine is diuretic.
Medicinal Actions & Uses Also known as Indian mallow, kanghi is used in much the same way as marshmallow (*Althaea officinalis*, p. 165), one of the main European demulcent herbs. The root, leaves and bark of kanghi are mucilaginous and are used to soothe and protect the mucous membranes of the respiratory and urinary systems. A decoction of the root is given for chest conditions such as bronchitis. The mucilaginous effect benefits the skin; an infusion, poultice or paste made from the powdered root or bark is applied to wounds and used for conditions such as boils and ulcers. A decoction of the root can also be used to good effect as a mouthwash for toothache and sore and infected gums. The seeds are laxative and "useful in killing threadworms, if the rectum of the affected child be exposed to the smoke of the powdered seeds" (*Herbs that Heal*, H. K. Bakhru, 1992). The plant has an antiseptic effect within the urinary tract.
Related Species *A. trisulcatum*, native to Central America, is used to treat asthma in children, and is applied as a poultice for treating cancerous sores and ulcers, especially of the mouth and cervix.

Acacia catechu syn. *Senegalia catechu* (Fabaceae)

Black Catechu,
Cutch

Description Tree growing to 15 m (49 ft) with thorny branches and divided, feathery leaves.
Habitat & Cultivation Native to India, Myanmar (Burma), Sri Lanka and East Africa, this tree is cultivated for its timber. It grows to altitudes of 1,500 m (4,900 ft).
Parts Used Bark, heartwood, leaves, shoots.
Constituents The shiny, black-brown extract of leaves and young shoots, which is called "cutch", becomes a brittle solid when dried, and is the form in which black catechu is generally sold. Cutch contains 25–60% tannins, 20–30% mucilage, flavonoids and resins.

Black catechu *is an astringent and antiseptic.*

Medicinal Actions & Uses Black catechu is a strong astringent and clotting agent. It helps reduce excess mucus in the nose, the large bowel or vagina. It is also used to treat eczema, haemorrhages, diarrhoea and dysentery. It may be used as an infusion, tincture, powder or ointment. A small piece of cutch dissolved in the mouth is an excellent remedy for bleeding gums and mouth ulcers. The powder and tincture are also applied

to infected gums and have been used to clean the teeth. In Ayurvedic medicine, decoctions of the bark and heartwood are used for sore throats.
Research Cutch has been shown to lower blood pressure.
Related Species See also babul (*A. nilotica, following entry*).
Cautions Do not take for more than 2–3 weeks at a time, or if suffering from kidney inflammation. There are some countries where cutch is subject to legal restrictions.
Self-help Use Diarrhoea, p. 307.

Acacia nilotica syn. *A. arabica* (Fabaceae)

Babul

Description Tree growing to 20 m (65 ft) with hard, rust-brown bark and feathery leaves. Small, bright yellow flowerheads produce pods up to 15 cm (6 in) long.
Habitat & Cultivation Babul is native to North Africa. Today it is commonly found in Egypt and is cultivated in India.
Part Used Bark.
Constituents Babul contains tannins (12–20%), mucilage and flavonoids.
History & Folklore In ancient Egypt, the wood of the babul tree was used to make dwellings, wheels and tool handles. The leaves, flowers and pods were used to expel worms, to heal wounds, alleviate diarrhoea and suppress the coughing up of blood.
Medicinal Actions & Uses Strongly astringent, babul is used to contract and toughen mucous membranes throughout the body in much the same way as does witch hazel (*Hamamelis virginiana*, p. 102) or oak bark (*Quercus robur*, p. 260). Babul may be made into a variety of preparations, for instance, a lotion for treating bleeding gums, a gargle for easing the irritation of sore throats, a wash for eczema, an eyewash for conjunctivitis and other eye problems, and a douche for excessive vaginal discharge. It is also taken internally to treat diarrhoea.
Research Research published in 1993 concluded that babul may be clinically effective in periodontal infections. Another study indicates that the gum stimulates insulin release from the pancreas and lowers blood sugar levels.
Related Species Australian wattle (*A. decurrens*), native to Australia, is used in much the same way as babul. See also black catechu (*A. catechu, preceding entry*).
Cautions Do not take babul internally for more than 2–3 weeks. *Acacia* species are subject to legal restrictions in some countries.

Acanthus mollis (Acanthaceae)

Acanthus,

Bear's Breeches

Description Perennial growing to 1 m (3 ft). Has a black, branched taproot, white, purple or blue flowers, and dark green basal leaves up to 1 m (3 ft) in length.
Habitat & Cultivation Native to Europe, acanthus is most commonly found as a garden plant. It prefers damp sites and low-lying ground. The leaves are gathered in early summer and the roots in autumn.
Parts Used Leaves, roots.
Constituents Acanthus contains large quantities of mucilage and tannin.
History & Folklore Acanthus was well known in the ancient world. Callimacus, a Greek architect of the 5th century BCE, reputedly created the decorative pattern of foliage at the top of Corinthian columns after being inspired by the perfect symmetry of acanthus leaves. The description of acanthus in *Materia Medica*, written in the 1st century CE by the Greek physician Dioscorides, is one of the most accurate botanical descriptions to survive from the ancient world. Dioscorides recommended the roots in the form of a plaster to treat burns and to wrap around dislocated joints. As an infusion, acanthus was thought to be diuretic. It was also used to relieve wind and spasms and to soothe damaged nerves.
Medicinal Actions & Uses The herb's appreciable quantities of mucilage and tannin substantiate its traditional use as a treatment for dislocated joints and burns. Its emollient properties make it useful in the treatment of irritated mucous membranes in the digestive and urinary tracts. Acanthus is similar to marshmallow (*Althaea officinalis*, p. 165) in that it can be used externally to ease irritation, and internally to heal and protect.

***Acanthus** flowers blossom on a tall spike.*

Achyranthes bidentata (Amaranthaceae)

Chaff flower,

Huai Niu Xi (Chinese)

Description Erect perennial herb growing to 1 m (3 ft). Has slender, rambling branches, elliptical leaves, and greenish-white flowers on terminal spikes.
Habitat & Cultivation Chaff flower is found in China at the edge of forests, along streams and amid bushes. Grown commercially in the eastern provinces, the root is unearthed in winter once the foliage has died back.
Part Used Root.
Constituents *Achyranthes* species contain triterpenoid saponins and sterones.
History & Folklore Chaff flower's potent ability to bring on menstruation led the 13th-century Chinese gynaecologist Chen Ziming to prohibit its use during pregnancy to avoid causing miscarriage.
Medicinal Actions & Uses In traditional Chinese medicine, chaff flower is believed to invigorate blood flow. It is used to stimulate menstruation when a period is delayed or scanty. The herb is also prescribed to ease period pain. Chaff flower is used to relieve pain in the lower back, especially where the discomfort is attributable to kidney stones. The herb is also taken as a treatment for mouth ulcers, toothache, bleeding gums and nosebleeds.
Research Research suggests that chaff flower may lower blood pressure by reducing heart rate and dilating the peripheral arteries.
Related Species *A. aspera*, found in tropical areas worldwide, is used in Ayurvedic medicine to treat chest conditions and a range of digestive problems.
Caution Do not take chaff flower during pregnancy.

Aconitum napellus (Ranunculaceae)

Aconite,
Monkshood

Description Perennial herb growing to 1.5 m (5 ft). Has dark green lobed leaves with violet or blue delphinium-like flowers on long spikes.
Habitat & Cultivation Aconite grows mainly in southern and central Europe. It prefers damp and shady sites, and is cultivated as a garden plant. The root is unearthed in autumn.
Part Used Root.
Constituents Aconite contains 0.3–2% terpenoid alkaloids, principally aconitine.
History & Folklore *Aconitum* species have traditionally been used as arrow poisons.
Medicinal Actions & Uses Aconite is poisonous in all but the smallest doses, and is rarely prescribed for internal use. More commonly, it is applied to unbroken skin to relieve pain from bruises or neurological conditions. In Ayurvedic medicine, aconite is used to treat neuralgia, asthma and heart weakness. Aconite is also used extensively in homeopathy as an analgesic and sedative.
Related Species Chinese aconite (*A. carmichaelii*) is used in China for shock and to support the circulatory system in emergencies. Trials in China indicate that it is helpful in congestive heart failure.
Cautions Aconite is highly toxic and is subject to legal restriction in some countries. Use only under professional supervision.

Adhatoda vasica (Acanthaceae)

Malabar Nut,
Vasaka

Description Evergreen shrub growing to 3 m (10 ft), with lance-shaped leaves, white or purple flowers and 4-seeded fruit.
Habitat & Cultivation Native to tropical India, malabar nut grows in low-lying regions up to the Himalayan foothills.
Parts Used Leaves, root, flowers, fruit (nut).
Constituents Malabar nut contains pyrroloquinoline alkaloids and an unidentified volatile oil.
History & Folklore The highly bitter-tasting malabar nut is a traditional Ayurvedic remedy for chest problems.
Medicinal Actions & Uses Due to its expectorant qualities, malabar nut is useful for bronchitis and other chest conditions. An Ayurvedic preparation that includes malabar flowers is used to treat tuberculosis. All parts of the plant are used to expel worms. A poultice of the fresh leaves is applied to wounds and to inflamed joints.
Caution Do not take during pregnancy.

Adiantum capillus-veneris (Polypodiaceae)

Maidenhair Fern

Description Fern with delicate fronds growing to 30 cm (1 ft) long.
Habitat & Cultivation Native to Europe, Asia, most of the Americas and Australasia.
Parts Used Aerial parts.
Constituents Maidenhair fern contains flavonoids (including rutin and isoquercitin), terpenoids (including adiantone), tannin, proanthocyanidins and mucilage.
History & Folklore Maidenhair fern has been used since ancient times. Pliny the Elder (23–79 CE) states that the herb "is of singular efficacy in expelling and breaking calculi of the bladder".
Medicinal Actions & Uses Commonly used in Latin America and occasionally in Europe, a decoction or tincture of maidenhair fern is used as an expectorant to treat coughs, bronchitis, sore throat and chronic nasal catarrh. The plant has a long-standing reputation as a remedy for conditions affecting the hair and scalp.
Related Species *A. caudatum* has been shown to act as an antispasmodic and could be useful in the treatment of asthma.

***Maidenhair fern** is used for chest complaints.*

Adonis vernalis (Ranunculaceae)

False Hellebore,
Yellow Pheasant's Eye

Description Perennial herb growing to 20 cm (8 in). Has a scaly stem and feathery compound leaves. Stem bears large, bright yellow flowers up to 8 cm (3 in) across.

***False hellebore's** cardiac glycosides help to slow down heart rate.*

Habitat & Cultivation Originating from the steppes of Russia and from the Black Sea region, this herb is native to much of Europe but not to Britain. It grows in mountain pasture undergrowth. It is rare and legally protected in Western Europe.
Parts Used Aerial parts.
Constituents False hellebore contains cardiac glycosides, including adonitoxin.
History & Folklore False hellebore's botanical name refers to Adonis, a figure in Greek mythology associated with the seasonal renewal of plant life.
Medicinal Actions & Uses False hellebore contains cardiac glycosides similar to those found in foxglove (*Digitalis purpurea*, p. 202). These substances improve the heart's efficiency, increasing its output while at the same time slowing its rate. Unlike foxglove, however, false hellebore's effect on the heart is slightly sedative, and it is generally prescribed for patients with hearts that are beating too fast or irregularly. False hellebore is also recommended as a treatment for certain cases of low blood pressure. In common with other plants containing cardiac glycosides, false hellebore is strongly diuretic and can be used to counter water retention, particularly in cases of poor circulatory function. False hellebore is used in homeopathic medicine as a treatment for angina.
Cautions Take only under professional supervision. Gathering wild plants and their medicinal use are subject to legal restrictions in some countries.

Aegle marmelos (Rutaceae)

Bael,

Bengal Quince

Description Thorny deciduous tree growing to 8 m (26 ft). Has aromatic oval- to lance-shaped leaves, greenish-white flowers and yellow plum-shaped fruit.
Habitat & Cultivation Native to India, bael grows throughout much of South-East Asia in dry forests. It is also cultivated throughout the region.
Parts Used Fruit, leaves, root, twigs.
Constituents Bael contains coumarins, flavonoids, alkaloids, tannins, caretinoids and volatile oil.
History & Folklore The bael tree is sacred to the Hindu deities Lakshmi (the goddess of wealth and good fortune) and Shiva (the god of health), and it is commonly planted near temples. Its medicinal virtues are described in the *Charaka Samhita*, a herbal written *c.* 400 BCE.
Medicinal Actions & Uses The astringent half-ripe bael fruit reduces irritation in the digestive tract and is excellent for diarrhoea and dysentery. The ripe fruit is demulcent and laxative, with a significant vitamin C content. It eases stomach pain and supports the healthy function of this organ. Bael's astringent leaves are taken to treat peptic ulcers. The tree's most unusual application is for earache. A piece of dried root is dipped in the oil of the neem tree (*Azadirachta indica,* p. 70) and set alight. Oil from the burning end is dripped into the ear. (This is not a recommended practice.)
Self-help Use Diarrhoea, p. 307.

Agastache rugosa (Lamiaceae)

Korean Mint,

Huo Xiang (Chinese)

Description Aromatic perennial or biennial herb growing to 1.2 m (4 ft). Has a square stem, triangular leaves and purple flowers growing in dense spikes.
Habitat & Cultivation Native to China and also found in Japan, Korea, Laos and Russia, Korean mint grows wild on slopes and roadsides. It is cultivated throughout China, and gathered in summer.
Parts Used Aerial parts.
Constituents Korean mint contains a volatile oil, including methylchavicol, anethole, anisaldehyde and limonene.
History & Folklore Korean mint was first mentioned in a Chinese medicinal text in Tao Hongjing's revision of the *Divine Husbandman's Classic (Shen'nong Bencaojing)*, which he wrote in about 500 CE.
Medicinal Actions & Uses The acrid Korean mint is considered a warming herb in Oriental herbal medicine (see pp. 40–43) and is used to treat "dampness" within the digestive system. In Korea, as its name suggests, the leaves are eaten as a condiment to aid digestion. The herb stimulates and warms the digestive tract, relieving symptoms such as abdominal bloating, indigestion, nausea and vomiting. It is commonly used to relieve vomiting and morning sickness. Korean mint is used to treat the early stages of viral infections that feature symptoms such as stomach ache and nausea. A lotion containing Korean mint may be applied to fungal conditions such as ringworm.
Research Laboratory experiments indicate that Korean mint has marked activity against fungal infections.
Related Species In southern China and Taiwan, *Pogostemon cablin* is used interchangeably with Korean mint. *P. cablin* is a close relative of the Indian plant *P. patchouli*, from which patchouli oil is produced.

***Korean mint** is used to treat fungal infections such as ringworm.*

Agave americana (Agavaceae)

Agave,

Century Plant

Description Succulent perennial with large rosette of 30–60 fleshy, sharply toothed leaves that reach a height of 2 m (6½ ft). After 10 years or more, clusters of yellow flowers, growing to 7 cm (2¾ in) across, bloom on a pole-like stem 8–9 m (26–30 ft) tall.
Habitat & Cultivation Agave is native to deserts of Central America. It is now grown as an ornamental plant in tropical and sub-tropical areas around the world.
Part Used Sap.
Constituents Agave sap contains oestrogen-like isoflavonoids, alkaloids, coumarins and vitamins pro-A, B_1, B_2, C, D and K.
History & Folklore Unlike Europeans at the time of the Spanish conquest of America, the Aztec and Maya people were skilled in wound healing. They used agave sap (often with egg-white) to bind powders and gums in pastes or poultices to be applied to wounds. The *Badianus Manuscript* (1552 CE), which was the first herbal to list the plants of the New World, describes an Aztec treatment for diarrhoea and dysentery, in which agave juice, combined with freshly ground maize (*Zea mays*, p. 154) and extract of bladderwort (*Utricularia* species), is given as an enema, using a syringe made from the bladder of a small animal and a hollow bone or reed. Both tequila and mescal, popular Mexican alcoholic drinks, are distilled from the fermented sap or juice of agaves.
Medicinal Actions & Uses Demulcent, laxative and antiseptic, agave sap is a soothing and restorative remedy for many digestive ailments. It is used to treat ulcers and inflammatory conditions affecting the stomach and intestines, protecting these parts from infection and irritation and encouraging healing. Agave has also been employed to treat many other conditions, including constipation, jaundice, liver disease and tuberculosis.
Related Species Agave is a fairly close relative of aloe (*Aloe vera*, p. 60). The two plants have similar medicinal uses. The sisal agave (*A. sisalana*) is cultivated in sub-tropical America and in Kenya as a source of hecogenin, the substance that is the starting point in the production of corticosteroids (steroid hormones).
Cautions Do not use during pregnancy. Do not exceed the dose as this may cause digestive irritation and eventual liver damage. External use may cause skin irritation.

Agrimonia eupatoria (Rosaceae)

Agrimony

Description Erect, downy and slightly aromatic perennial growing to 1 m (3 ft). Has paired leaves, green above and silvery-green beneath, and small 5-petalled yellow flowers growing on terminal spikes.
Habitat & Cultivation Agrimony is a native European herb commonly found in marshes, wet meadows and on wasteground. It is harvested when in flower in summer.
Parts Used Aerial parts.
Constituents Agrimony contains tannins, coumarins, flavonoids, including luteolin, a volatile oil and polysaccharides.
History & Folklore The species name *Eupatoria* has regal associations. Mithridates Eupator (d. 63 BCE), King of Pontus in northern Turkey, was said to have had a profound knowledge of plant lore and antidotes to poisons.
Medicinal Actions & Uses Agrimony has long been used by herbalists to heal wounds because it staunches bleeding and encourages clot formation. An astringent and mild bitter, it is also a helpful remedy for diarrhoea and a gentle tonic for the digestion as a whole. Combined with other herbs such as cornsilk (*Zea mays*, p. 154), it is a valuable remedy for cystitis and urinary incontinence, and has also been used for kidney stones, sore throats, hoarseness, rheumatism and arthritis.
Research Agrimony's blood-staunching and anti-inflammatory properties have been established by experiments in China.
Related Species *Xian he cao* (*A. pilosa*) is used in China for comparable conditions.
Self-help Uses Diarrhoea, p. 307; Diarrhoea in children – p. 318.

***Agrimony** is gentle and suitable for children.*

Agropyron repens syn. *Elymus repens* (Graminaceae)

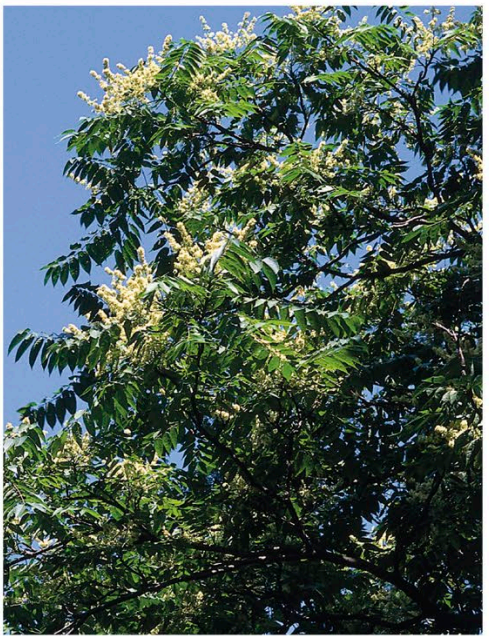
Couch Grass

Description Vigorous perennial growing to 80 cm (32 in). Has a long, creeping rhizome, slender leaves and erect spikes bearing green flowers aligned in two rows.
Habitat & Cultivation Found in Europe, the Americas, northern Asia and Australia, couch grass is an invasive weed. It is harvested throughout the year.
Parts Used Rhizome, seeds, root.
Constituents Couch grass contains polysaccharides (such as triticin), a volatile oil (mainly agropyrene), mucilage and nutrients. Agropyrene has antibiotic properties.
History & Folklore In classical times, both Dioscorides (40–90 CE) and Pliny (23–79 CE) recommended couch grass root for poor urine flow and kidney stones. In 1597, the herbalist John Gerard wrote that "Couch-grasse be an unwelcome guest to fields and gardens, yet his physicke virtues do recompense those hurts; for it openeth the stoppings of the liver and reins [ureters] without heat." In times of famine, the root has been roasted and ground as a substitute for coffee and flour.
Medicinal Actions & Uses A gentle, effective diuretic and demulcent, couch grass is most commonly used for urinary tract infections such as cystitis and urethritis. It both protects the urinary tubules against infection and irritants, and increases the volume of urine, thereby diluting it. It can be taken, usually with other herbs, to help treat kidney stones, reducing the irritation and laceration they cause. Couch grass is also thought to dissolve kidney stones (in so far as this is possible), and in any case will help to prevent their further enlargement. Both an enlarged prostate and prostatitis (infection of the prostate gland) will benefit from a couch grass decoction taken over the course of several months. In German herbal medicine, heated couch grass seeds are used in a hot and moist pack that is applied to the abdomen for peptic ulcers. Juice from the roots of couch grass has been advocated for treating jaundice and other liver complaints.

Ailanthus altissima syn. *A. glandulosa* (Simaroubaceae)

Tree of Heaven, Chun Pi

Description Deciduous tree growing to 20 m (65 ft). Has large leaves with up to 12 lance-shaped leaflets, and small greenish-yellow flowers. It has an unpleasant odour.
Habitat & Cultivation Native to China and India, tree of heaven is now naturalized in some parts of Europe, Australia and North America. It is cultivated as a garden tree. The bark and root bark are harvested in spring.



***Tree of heaven** has an unpleasant, bitter taste.*

Parts Used Bark, root bark.
Constituents The bark contains quassinoids (such as ailanthone and quassin), alkaloids, flavonols and tannins. Quassinoids are intensely bitter, antimalarial and act against cancerous cells.
Medicinal Actions & Uses In Chinese herbal medicine, tree of heaven is used to treat diarrhoea and dysentery, especially if there is blood in the stool. The bark of the tree has been used in Asian and Australian medicine to counter worms, excessive vaginal discharge, gonorrhoea and malaria, and it has also been given for asthma. Tree of heaven has marked antispasmodic properties and acts on the body as a cardiac depressant.
Research Chinese researchers gave tree of heaven to 82 patients with acute dysentery, and cured 81. Abdominal pain generally eased within 2 days. The anti-cancer properties of quassinoids are being extensively investigated. Laboratory research indicates that the whole plant has a marked antimalarial activity.

Related Species *A. malabrica* is used in herbal medicine in South-East Asia for its tonic properties and to reduce fever.
Caution Use tree of heaven only under professional supervision.

Ajuga reptans (Lamiaceae)
Bugle

Description Low-growing, creeping perennial up to 30 cm (1 ft) in height. Has rooting runners, erect hairy stems, oblong to oval leaves and purplish-blue flowers.
Habitat & Cultivation Native to Europe, North Africa and parts of Asia, bugle has become naturalized in North America. It prefers damp woods and grassy and mountainous areas, and is usually gathered when in flower in early summer.
Parts Used Aerial parts.
Constituents Bugle contains iridoid glycosides, diterpene bitters, phytoecdysone and caffeic acids.

Bugle *was once thought to be a remedy for hangovers.*

History & Folklore In the European tradition, bugle has long been valued as a wound-healing herb. Nicholas Culpeper praised it in 1652: "The decoction of the leaves and flowers made in wine and taken, dissolveth the congealed blood in those that are bruised inwardly by a fall or otherwise, and is very effectual for any inward wounds, thrusts or stabs into the body or bowels." The herbalist Mrs Grieve, writing in 1931, reported that it lowers the pulse rate and "equalizes the circulation".
Medicinal Actions & Uses Bugle is bitter, astringent and aromatic, but opinion varies as to its value as a medicine. It has mild analgesic properties, and it is still used occasionally as a wound healer. It is also mildly laxative and traditionally has been thought to help cleanse the liver.
Related Species Ground pine (*A. chamaepitys*) is used to treat gout and rheumatism. It is believed to have diuretic, menstruation-inducing and stimulant properties. *A. decumbens* is used in Chinese medicine as an analgesic.

Albizzia lebbeck (Fabaceae)
Albizzia,
Siris Tree, Pit Shirish

Description Deciduous tree growing to 20 m (65 ft). Has compound leaves, white fragrant flowers and long, shiny, pale yellow seed pods.
Habitat & Cultivation Native to the Indian sub-continent, albizzia grows in moist teak-bearing forests. It is also cultivated.
Parts Used Stem bark; also flowers and seeds.
Constituents Albizzia contains saponins, cardiac glycosides, tannins and flavonoids.
History & Folklore Albizzia has been used for several thousand years within Ayurvedic medicine to treat allergies, skin eruptions, glandular disorders and poisoning.
Medicinal Actions & Uses Albizzia bark has anti-allergenic properties and is used orally (and topically) to relieve problems such as eczema, urticaria, hay fever and asthma. The herb helps to lower cholesterol and may be useful as part of a broad approach to treating disordered fat levels in the blood. It is usually taken as a decoction or tincture. In Ayurveda, the bark is given for *pitta* (fire) and *kapha* (water) conditions such as asthma; the flowers for coughs and bronchitis; and the seeds for skin diseases.
Research Laboratory research has shown that the plant helps to reduce allergic sensitivity, and one clinical study has indicated potential value in the treatment of asthma. In another clinical study, weeping eczema improved significantly with a topical application of albizzia. Extracts of the plant also have antifungal and antibacterial activity. Saponins from the seed pods have spermicidal and antiprotozoal actitivy.

Alchemilla vulgaris (Rosaceae)
Lady's Mantle

Description Herbaceous perennial growing to 30 cm (1 ft). Has a basal rosette of lobed leaves and insignificant green flowers 3–5 mm (⅛–¼ in) across in loose clusters.
Habitat & Cultivation Lady's mantle is native to Britain and continental Europe. It is gathered in summer.
Parts Used Aerial parts, root.
Constituents Lady's mantle contains tannins, a glycoside and salicylic acid.

Lady's mantle *is chiefly used to reduce heavy menstrual bleeding.*

History & Folklore Andres de Laguna's translation (1570) of Dioscorides' *Materia Medica* recommends two preparations of lady's mantle – the root, powdered and mixed with red wine, for internal and external wounds, and an infusion of the aerial parts, for "greenstick" fractures and broken bones in babies and young children. When taken regularly for 15 days, lady's mantle was said to reverse sterility due to "slipperiness" of the womb. The plant's astringent effect is sufficiently marked that the infusion was used to contract the female genitalia, and it was "a thousand times sold" to those wishing to appear to be virgins!
Medicinal Actions & Uses Lady's mantle has always been prized as a wound healer. Its astringency ensures that blood flow is staunched and the first stage of healing soon gets under way. As the name implies, it is a valuable herb for women's complaints and is thought to have a progesterogenic action. It is commonly taken to reduce heavy menstrual bleeding, to relieve menstrual cramps and to aid menstrual regularity. Lady's mantle is also prescribed for fibroids and endometriosis. It has been used to facilitate childbirth, and is thought to act as a liver

decongestant. Its astringent properties make it a useful herb for the treatment of diarrhoea and gastroenteritis.
Research Russian research indicates that lady's mantle reduces blood viscosity.
Caution Do not use lady's mantle when pregnant.

Aletris farinosa (Liliaceae)

Star Grass,

True Unicorn Root, Colic Root

Description Perennial growing to 1 m (3 ft). Has a flowering stem, smooth lance-shaped leaves and white bell-shaped flowers that appear to be covered with frost.
Habitat & Cultivation Native to eastern North America, star grass grows mainly in swamps and wet sandy woodland, especially near the seashore. It is harvested commercially in Virginia, Tennessee and North Carolina.
Parts Used Rhizome, leaves.
Constituents Star grass contains steroidal saponins based on diosgenin, as well as a bitter principle, volatile oil and a resin.
History & Folklore The North American Catawba used a cold-water infusion of star grass leaves for stomach ache. Star grass was also advocated for snake bite.
Medicinal Actions & Uses It is difficult to gain a clear picture of star grass's medicinal value. Due to its oestrogenic action, it is employed chiefly for gynaecological problems, particularly at the menopause. It is also given for period pain and irregular periods. Some authorities hold that it prevents threatened miscarriage. Star grass is also a good digestive herb, proving beneficial in treating loss of appetite, indigestion, flatulence and bloating.
Cautions Use only under professional supervision. The dried, and especially the fresh, rhizome can be toxic when taken in overdose, causing colic, diarrhoea and vomiting.

Allium cepa (Liliaceae)

Onion

Description Bulbous perennial growing to 1 m (3 ft). Has hollow stems and leaves, and white or purple flowers.
Habitat & Cultivation Native to the northern hemisphere, onion has been cultivated in the Middle East for millennia. It is now grown worldwide as a vegetable.
Part Used Bulb.
Constituents Onion contains a volatile oil with sulphur-containing compounds such as allicin (an antibiotic) and alliin, flavonoids, phenolic acids and sterols.
History & Folklore Authorities throughout the ancient world recommended onion for a variety of health problems. Bunches were hung on doors to ward off the plague in medieval Europe. Wild onion (*A. sibiricum*) was also used extensively by Native North Americans to treat stings and help relieve colds.
Medicinal Actions & Uses Onion boasts a long list of medicinal actions – diuretic, antibiotic, anti-inflammatory, analgesic, expectorant, and antirheumatic. It is also beneficial to the circulation. Onions are taken the world over for colds, flu and coughs, much like garlic (*A. sativum*, p. 59). Onion offsets tendencies to angina, arteriosclerosis, and heart attack. It is also useful in preventing oral infection and tooth decay. The warmed juice can be dropped into the ear for earache, and baked onion is used as a poultice to drain pus from sores. Onion has a long-standing reputation as an aphrodisiac, and it is also used cosmetically to stimulate hair growth.

***Onion** juice is mixed with honey as a remedy for colds.*

Related Species In Chinese herbal medicine, the scallion (*A. fistulosum*) is given to encourage sweating, to unblock the nose and to relieve bloating. It is also used to help drain boils and abscesses.
Self-help Use Mild fever, p. 311.

Allium ursinum (Liliaceae)

Ramsons

Description Bulbous perennial smelling strongly of garlic, growing to 28 cm (11 in). Has a triangular stem and broad elliptical leaves. Clusters of white, star-like flowers grow from a common stem.
Habitat & Cultivation Ramsons are native to Europe and Asia. They carpet shady sites in damp woods and by streams. The plants are gathered in early summer.
Parts Used Bulb, aerial parts.
Constituents Ramsons contain volatile oil, aldehydes, vinyl sulphide and vitamin C.
History & Folklore Ramsons (and many other onion-like plants) have been highly regarded as preventative medicines, as an old English rhyme attests: "Eat leeks in Lide and ramsons in May/And all the year after physicians may play!" More prosaically, Gerard (1597) wrote that the leaves "maye very well be eaten in April and Maie with butter [by those of] a strong constitution."
Medicinal Actions & Uses Used mainly as a folk remedy and as a food, ramsons are similar to garlic (*A. sativum*, p. 59) but weaker in action. They lower high blood pressure and help to prevent arteriosclerosis. As ramsons ease stomach pain and are tonic to the digestion, they have been used for diarrhoea, colic, wind, indigestion and loss of appetite.
The whole herb is used in an infusion against threadworms, either ingested or given as an enema. Ramsons are also thought to be beneficial for asthma, bronchitis and emphysema. The juice is used as an aid to weight loss.

Alnus glutinosa syn. *A. rotundifolia* (Betulaceae)

Alder

Description Small tree with fissured bark, growing to 20 m (65 ft). Has notched oval leaves and male and female catkins.
Habitat & Cultivation Alder is native to Europe, Asia and North Africa. It thrives in damp places and along riverbanks. The bark and leaves are gathered in spring.
Parts Used Bark, leaves.
Constituents Alder contains lignans, tannin (10–20%), emodin (an anthraquinone) and glycosides.

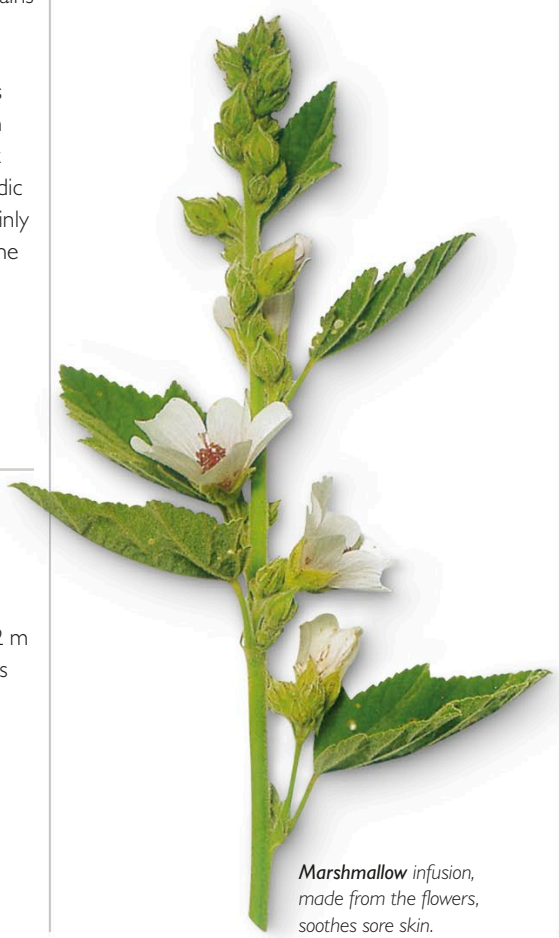
History & Folklore Water-resistant, alder was used in the construction of Venice. Wooster Beech (1794–1868), founder of the Eclectic healing movement, used a decoction of the bark to "purify the blood".
Medicinal Actions & Uses Alder is most often used as a mouthwash and gargle for tooth, gum and throat problems. The drying action of a decoction of the bark helps to contract the mucous membranes and reduce inflammation. A decoction may also be used to staunch internal or external bleeding, and to heal wounds. It is also used as a wash for scabies. In Spain, alder leaves are smoothed and placed on the soles of the feet to relieve aching. Leaves are used to help reduce breast engorgement in nursing mothers.

Alstonia spp. (Apocynaceae)
Fever Bark

Description Evergreen trees growing to 15 m (49 ft). Have glossy oblong leaves and creamy-white, star-shaped flowers.
Habitat & Cultivation *A. constricta* is native to Australia, and *A. scholaris* to Australia and South-East Asia. Both are now found in tropical regions around the world.
Parts Used Stem bark, root bark.
Constituents The bark of both species contains indole alkaloids. *A. constricta* contains reserpine, a powerful hypotensive.
Medicinal Actions & Uses Fever bark has been taken to treat malarial fever (and has been called Australian quinine), but its efficacy against malaria remains unclear. The bark is antispasmodic and lowers blood pressure, and is now used mainly to reduce high blood pressure. Strongly bitter, the bark is also taken to treat diarrhoea.
Cautions Take only under professional supervision. Fever bark is toxic in large doses. The herb is subject to legal restrictions in some countries.

Althaea officinalis (Malvaceae)
Marshmallow

Description Downy perennial growing to 2.2 m (7 ft). Has thick white roots, heart-shaped leaves and pink flowers.
Habitat & Cultivation Native to Europe, marshmallow is naturalized in the Americas. It prefers marshy fields and tidal zones and is cultivated for medicinal use. The aerial parts are gathered in summer as the plant begins to flower and the root is unearthed in autumn.
Parts Used Root, leaves, flowers.
Constituents Marshmallow root contains about 37% starch, 11% mucilage, 11% pectin, flavonoids, phenolic acids, sucrose and asparagine.
History & Folklore The philosopher Theophrastus (*c.* 372–286 BCE) reported that marshmallow root was taken in sweet wine for coughs. Marshmallow was once a key ingredient in the sweets of the same name.
Medicinal Actions & Uses Useful whenever a soothing effect is needed, marshmallow protects and soothes the mucous membranes. The root counters excess stomach acid, peptic ulceration and gastritis. Marshmallow is also mildly laxative and beneficial for many intestinal problems, including regional ileitis, colitis, diverticulitis and irritable bowel syndrome. The leaves treat cystitis and frequent urination. Marshmallow's demulcent qualities bring relief to dry coughs, bronchial asthma, bronchial catarrh and pleurisy. The flowers are applied to help soothe inflamed skin. The root is used in an ointment for boils and abscesses, and in a mouthwash for inflammation. The peeled root may be given as a chewstick to teething babies.
Other Species Hollyhock (*A. rosea*) and common mallow (*Malva sylvestris*, p. 232) are used in a similar fashion.
Self-help Uses Allergic rhinitis with catarrh, p. 300; Earache due to chronic catarrh, p. 312; Urinary infections, p. 314.



***Marshmallow** infusion, made from the flowers, soothes sore skin.*

Amaranthus hypochondriacus (Amaranthaceae)
Amaranth

Description Sturdy, upright annual growing to about 1 m (3 ft). Has deeply veined, lance-shaped, purple-green leaves that grow to 15 cm (6 in) and tufts of small, deep crimson flowers on long spikes.

***Amaranth's** long-lasting flowers gave rise to its name, meaning "unwithering" in Greek.*

Habitat & Cultivation Native to India, amaranth grows wild in many countries, including the US. A common garden plant, it is harvested when in flower in late summer and early autumn.
Parts Used Aerial parts.
Constituents Amaranth contains tannins, including a red pigment used to dye foods and medicines.
History & Folklore Amaranth comes from the Greek word meaning "unwithering". The amaranth was sacred to the goddess Artemis, worshipped at Ephesus, and was thought to have special healing powers. As a symbol of immortality, it was used to decorate tombs and images of the gods.
Medicinal Actions & Uses Amaranth is an astringent herb that is used primarily to reduce blood loss and to treat diarrhoea. A decoction of amaranth is taken as a remedy in cases of heavy menstrual bleeding, excessive vaginal discharge, diarrhoea and dysentery. It is also used as a gargle to soothe inflammation of the pharynx and to hasten the healing of mouth ulcers.
Related Species Quinoa (*A. caudatus*, also known as Inca wheat) is a nutritious Andean grain. It is used to make bread and is eaten in salads. The seeds of *A. grandiflorus* are used as a foodstuff by Australian Aborigines.

Ammi majus (Apiaceae)
Bishop's Weed

Description Erect annual herb growing to 80 cm (32 in), with tangled leaflets and umbels of small white flowers.

Bishop's weed, *like most members of the carrot family, has highly aromatic seeds.*

Habitat & Cultivation Bishop's weed is native to the Mediterranean region and as far east as Iran. It is cultivated for its seeds, which are harvested in late summer.
Parts Used Seeds.
Constituents The seeds contain furanocoumarins (including bergapten), flavonoids and tannins.
History & Folklore Bishop's weed has been grown as a medicinal plant since the Middle Ages, but has been less often used than visnaga (*A. visnaga*, p. 62).
Medicinal Actions & Uses Bishop's weed produces strongly aromatic seeds. In an infusion or as a tincture, they calm the digestive system. They are also diuretic, and, like visnaga, have been used to treat asthma and angina. Bishop's weed reputedly helps treat patchy skin pigmentation in vitiligo. It has also been used for psoriasis.
Cautions Bishop's weed increases sensitivity to sunlight and can provoke sunburn and sunlight-related allergic reactions. Side effects can include nausea, vomiting and headaches. It is subject to legal restrictions in some countries.

Anacardium occidentale (Anacardiaceae)
Cashew

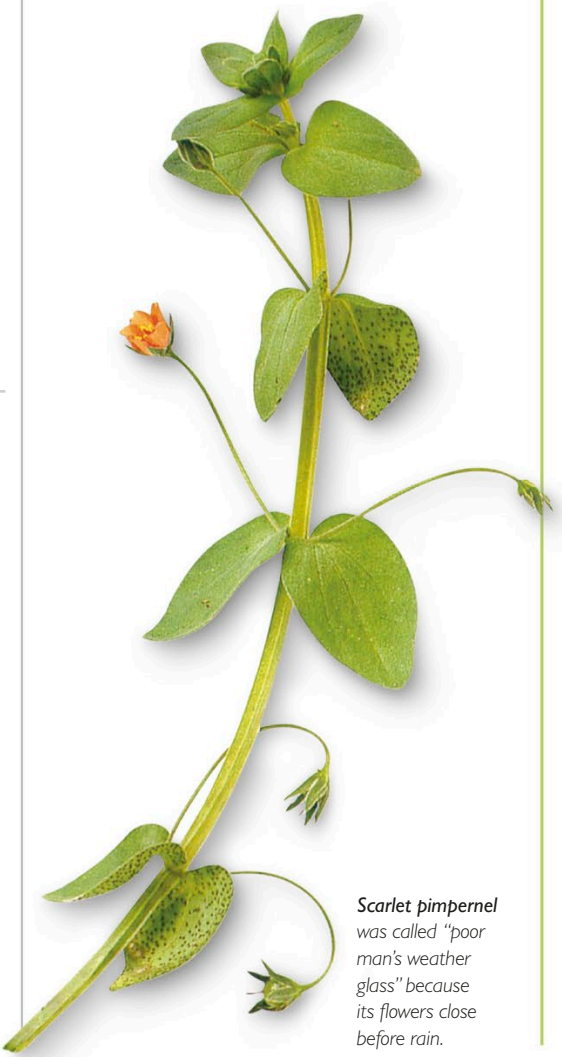
Description Evergreen tree growing to a height of 15 m (49 ft). Has large oval leaves and pink-streaked yellow flowers on long spikes. Its greenish-grey "fruit" or "apple" is in fact a thickened stem. The true fruit hangs just below this stem and contains the nut, which is encased in red or yellow flesh.
Habitat & Cultivation This tree is native to tropical American forests and grasslands. It is now cultivated for its highly prized nuts throughout the tropics, especially in India and eastern Africa.
Parts Used Nuts, leaves, bark, root, gum.
Constituents The gum contains anacardic acid, which is bactericidal, fungicidal, and kills worms and protozoa.
History & Folklore The "apple" is made into jams, and, in Brazil, into a liquor called *cajuado*. The gum exuded by the stem wards off ants and other insects.
Medicinal Actions & Uses Though many parts of the plant are used medicinally, cashew nut is chiefly a food – after removal of its toxic lining. The nut is highly nutritious, containing 45% fat and 20% protein. The leaves are used in Indian and African herbal medicine for toothache and gum problems, and in West Africa for malaria. The bark is used in Ayurvedic medicine to detoxify snake bite. The roots are purgative. The gum is applied externally for skin conditions such as corns and fungal infection. The oil between the outer and inner shells of the nut is caustic and causes an inflammatory reaction even in small doses.
In folk medicine in the tropics, the oil is used very sparingly to eliminate warts, corns, ringworm and ulcers.
Research Research at the University of Berkeley (California) has shown anacardic acids to have significant antibacterial activity against *Heliobacter pylori*, the bacterium thought to be the main cause of stomach ulcers.
Caution The shell oil and its vapour are highly irritant – do not use in any form.

Anacyclus pyrethrum (Asteraceae)
Pellitory

Description Perennial herb growing to 30 cm (1 ft). Has smooth alternate leaves and large white flowers with yellow centres.
Habitat & Cultivation Pellitory is native to the Mediterranean region as far east as the Middle East. It is cultivated in Algeria, and the root is unearthed in autumn.
Parts Used Root, essential oil.
Constituents Pellitory contains anacycline, inulin and volatile oil.
History & Folklore The herbalist Nicholas Culpeper wrote in 1652 that pellitory "purgeth the brain of phlegmatic humours… easing pains in the head and teeth". It has been listed in the *British Pharmacopoeia* and was used in the form of lozenges to relieve dryness of the mouth. It was also taken to help ease neuralgia and paralysis of the tongue or lips.
Medicinal Actions & Uses Pellitory root is taken as a decoction or chewed to relieve toothache and increase saliva production. The decoction may also be used as a gargle to soothe sore throats. In Ayurvedic medicine, pellitory root is considered tonic and is used to treat paralysis and epilepsy. Diluted pellitory essential oil is used in mouthwashes and to treat toothache.
Caution Do not take the oil internally except under professional supervision.

Anagallis arvensis (Primulaceae)
Scarlet Pimpernel

Description Creeping annual growing to 5 cm (2 in) with oval- to lance-shaped leaves and salmon-red flowers on long stems.
Habitat & Cultivation Scarlet pimpernel is found in Europe and in temperate regions generally. It prefers wasteland and untended sandy ground, and is gathered in summer towards the end of its flowering period.



Scarlet pimpernel *was called "poor man's weather glass" because its flowers close before rain.*

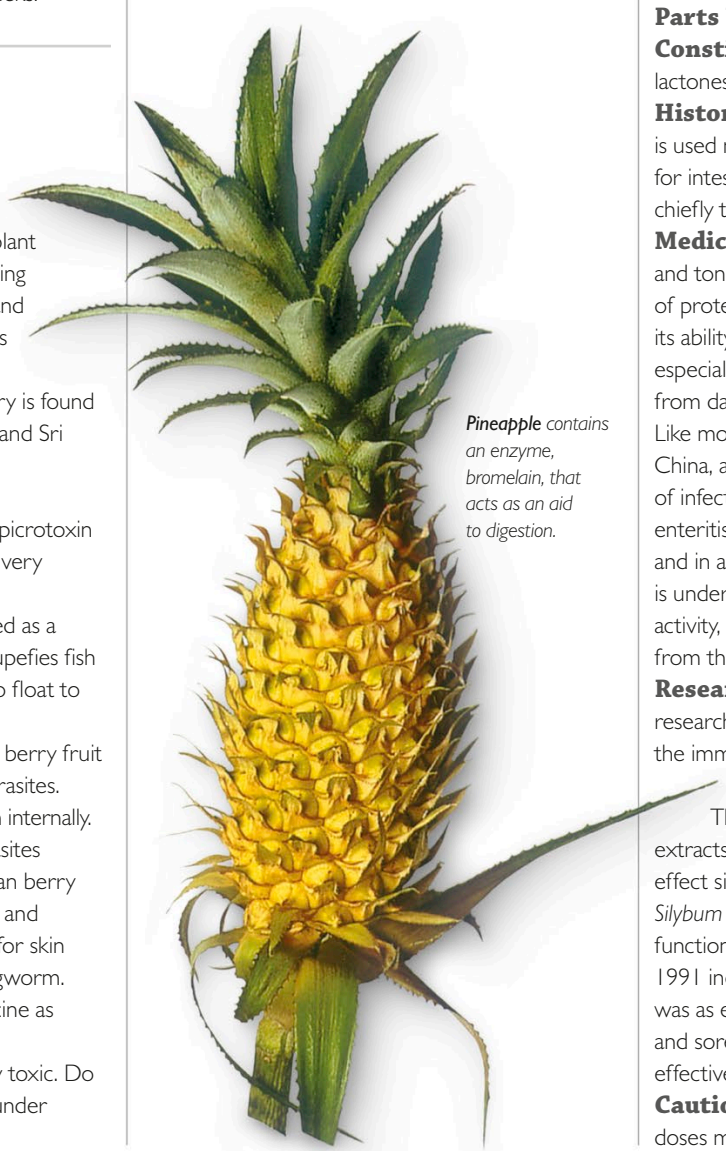
Parts Used Aerial parts.
Constituents The herb contains saponins (including anagalline), tannins and cucurbitacins. The latter are cytotoxic (damaging to cells).
History & Folklore Classical Greek writers believed scarlet pimpernel helped melancholy. In her *Modern Herbal* (1931), Mrs Grieve quotes an old saying: "No heart can think, no tongue can tell/The virtues of the pimpernel." It has been employed in European folk medicine as a treatment for gallstones, liver cirrhosis, lung problems, kidney stones, urinary infections, gout and rheumatism. This pattern of use suggests a detoxifying action for the plant.
Medicinal Actions & Uses Little used by medical herbalists today, scarlet pimpernel has diuretic, sweat-inducing and expectorant properties. As an expectorant, it was used to stimulate the coughing up of mucus and help recovery from colds and flu. It has been used to treat epilepsy and mental problems for 2,000 years but there is little evidence to support its efficacy.
Caution Scarlet pimpernel is not recommended for medicinal use for more than 2–3 weeks.

Anamirta cocculus (Menispermaceae)
Indian Berry

Description Large woody climbing plant with alternate oval leaves and long hanging clusters of greenish flowers. Has male and female flowers on separate plants. Bears red-brown kidney-shaped fruit.
Habitat & Cultivation Indian berry is found in forests in South-East Asia from India and Sri Lanka across to Indonesia.
Parts Used Leaves, fruit.
Constituents Indian berry contains picrotoxin (up to 5%) and alkaloids. Picrotoxin is a very powerful poison and nerve stimulant.
History & Folklore The fruit is used as a fish poison. Scattered in the water, it stupefies fish in the surrounding area, causing them to float to the surface.
Medicinal Actions & Uses Indian berry fruit is sold commercially as a remedy for parasites. The plant is so toxic that it is rarely taken internally. It is mainly applied externally to kill parasites such as lice. In Ayurvedic medicine, Indian berry fruit is classified as astringent, antifungal and anthelmintic (de-worming) and is used for skin ulcers and fungal conditions such as ringworm. The herb is used in homeopathic medicine as a remedy for heart conditions.
Cautions Indian berry is highly toxic. Do not take internally. Use externally only under professional supervision.

Ananas comosus (Bromeliaceae)
Pineapple

Description Herbaceous perennial growing to 1 m (3 ft). Has a short sturdy stem, spiny lance-shaped leaves and succulent reddish-yellow fruit.
Habitat & Cultivation Pineapple is native to South America. It is cultivated throughout the tropics for its fruit and, to a lesser extent, its leaf fibre.
Parts Used Fruit, leaves.
Constituents Pineapple fruit contains bromelain, a protein-splitting enzyme that aids digestion. It has significant levels of vitamins A and C.
Medicinal Actions & Uses The sour, unripe fruit improves digestion, increases appetite and relieves dyspepsia. In Indian herbal medicine, it is thought to act as a uterine tonic. The ripe fruit cools and soothes, and is used to settle wind and reduce excessive gastric acid. Its significant fibre content makes it useful in relieving constipation. The juice of the ripe fruit is both a digestive tonic and a diuretic. The leaves are considered to be useful in encouraging the onset of menstrual periods and easing painful ones.



Pineapple contains an enzyme, bromelain, that acts as an aid to digestion.

Andrographis paniculata (Acanthaceae)
Andrographis,
Green Chiretta, Kiratatiktah (Sanskrit)

Description Upright, branched annual, growing to 90 cm (3 ft), with lance-shaped leaves, spotted, pale brown or purple flowers, and long, thin seed capsules containing numerous yellow-brown seeds.
Habitat & Cultivation Andrographis grows throughout India, on plains and as undergrowth in forests. It is commonly cultivated for medicinal use in northern India and China, and is also grown as a garden plant.
Parts Used Aerial parts.
Constituents Contains bitter diterpene lactones, diterpene glucosides and flavonoids.
History & Folklore In Ayurveda, andrographis is used mainly for the liver, to treat infection and for intestinal worms. In the past it has been used chiefly to treat malaria.
Medicinal Actions & Uses A classically bitter and tonic herb, andrographis exerts a wide range of protective effects on the body – mostly through its ability to stimulate the immune system, especially macrophages, and to protect the liver from damage, whether by infection or poisoning. Like most bitters, it will help to counter fever. In China, andrographis is used to treat a wide range of infections including bacillary dysentery and enteritis. It may be taken for chronic infection, and in any situation where the immune system is under-performing. Though it has no antiviral activity, andrographis can speed up recovery from the common cold.
Research In mostly Indian and Chinese research, the herb has been shown to stimulate the immune system, particularly helping to protect against poisoning (such as from snake bite).
The glucosides are strongly antioxidant, and extracts of the whole herb have demonstrated an effect similar to, or better than, silymarin (from *Silybum marianum*, p. 137) in supporting the function of the liver. Thai research published in 1991 indicated that 6 g per day of andrographis was as effective as paracetamol in relieving fever and sore throat. The herb also has reported effectiveness against fertility.
Cautions Do not take during pregnancy. High doses may cause nausea and vomiting.

Anemarrhena asphodeloides (Liliaceae)

Zhi Mu

Description Perennial herb with a thick rhizome, thin leaves up to 70 cm (28 in) long and clusters of small white or light purple flowers.
Habitat & Cultivation Native to northern China, *zhi mu* grows wild on exposed slopes and hills. It is cultivated in the northern and north-eastern provinces.
Part Used Rhizome.
Constituents Contains steroidal saponins, lignans, phenolic compounds and xanthones.
History & Folklore *Zhi mu* is first mentioned in the 1st-century CE herbal, the *Divine Husbandman's Classic (Shen'nong Bencaojing)*.
Medicinal Actions & Uses *Zhi mu* has a bitter taste and a "cold" temperament and is used in Chinese herbal medicine for "excess heat" – fever, night sweats and coughs. It has been shown to have significant antibacterial activity and is commonly used to treat sores and mouth ulcers.

Anemone pulsatilla syn. *Pulsatilla vulgaris* (Ranunculaceae)

Pasque Flower

Description Hairy perennial growing to 15 cm (6 in). Has feathery leaves, and large, purple-blue bell-shaped flowers, with bright yellow anthers.
Habitat & Cultivation Native to Europe, this herb thrives in dry grassland in central and northern parts of the continent, preferring chalky soil. The aerial parts are harvested when it flowers in spring.
Parts Used Dried aerial parts.
Constituents Pasque flower contains the lactone protoanemonin (which on drying forms anemonin), triterpenoid saponins, tannins and volatile oil.
History & Folklore In Greek mythology, the goddess Flora was jealous of her husband's attentions to the nymph Anemone and so transformed her into a flower, at the mercy of the North Wind. Anemone literally means "daughter of the wind" in Greek. The name "pasque flower" derives from the French name for Easter, when the plant is often in flower.
Medicinal Actions & Uses Pasque flower is less commonly used now in herbal medicine than in the past, though it is still considered a valuable remedy for cramping pain, menstrual problems and emotional distress. It is considered a specific treatment for spasmodic pain of the reproductive system, both male and female, and is given quite frequently for premenstrual tension and period pain, especially when these are accompanied by nervous exhaustion. In France, it has traditionally been used for treating coughs and as a sedative for sleep difficulties. Pasque flower is also used to treat eye problems such as cataracts. The fresh plant is not used because it is strongly irritant. Pasque flower is one of the most commonly used of all homeopathic remedies.
Related Species The meadow anemone (*A. pratensis*) is used interchangeably with pasque flower; wood anemone (*A. nemorosa*) is now rarely used in herbal medicine.
Cautions Take only under professional supervision. Do not take during pregnancy. Do not take the fresh plant, which is toxic.

Anethum graveolens syn. *Peucedanum graveolens* (Apiaceae)

Dill

Description Aromatic annual that grows to a height of 75 cm (30 in). Has an erect hollow stem, feathery leaves and numerous yellow flowers in umbels. Fruit is very lightweight and pungent.
Habitat & Cultivation Dill is native to southern Europe and central and southern Asia, growing wild on wasteground. It is also widely cultivated, notably in England, Germany and North America. The leaves are picked as a culinary herb. The seeds are harvested in late summer.
Parts Used Seeds, essential oil, leaves.
Constituents Dill seeds contain up to 5% volatile oil (about half of which is alpha-phellandrene), flavonoids, coumarins, xanthones and triterpenes.
History & Folklore An ancient Egyptian remedy in the Ebers papyrus (*c.* 1500 BCE) recommends dill as one of the ingredients in a pain-killing mixture. The ancient Greeks are believed to have covered their eyes with fronds of the herb to induce sleep. Dill was commonly used as a charm against witchcraft in the Middle Ages, when it was burned to clear thunderclouds. Its name comes from the Norse *dylla* – meaning "to soothe".
Medicinal Actions & Uses Dill has always been considered a remedy for the stomach, relieving wind and calming the digestion. Dill's essential oil relieves intestinal spasms and griping and helps to settle colic, hence it is often used in gripe water mixtures. Chewing the seeds improves bad breath. Dill makes a useful addition to cough, cold and flu remedies, and is a mild diuretic. Like caraway (*Carum carvi*, p. 184), it can be used with antispasmodics, such as cramp bark (*Viburnum opulus*, p. 150), to relieve period pain. Dill increases milk production, and when taken regularly by nursing mothers, helps to prevent colic in their babies.
Caution Take the essential oil internally only under professional supervision.

Dill was used as a remedy by the ancient Greeks to encourage a good night's sleep.

Angelica archangelica (Apiaceae)

Angelica

Description Aromatic biennial herb growing to 2 m (6½ ft). Has ridged upright hollow stems, large bright green leaves and greenish-white flowers in umbels.
Habitat & Cultivation Angelica grows in temperate regions as far apart as western Europe, the Himalayas and Siberia. It prefers damp sites and is often found near running water. Leaves and stems are harvested in early summer, seeds as they ripen in late summer, and roots in late autumn after one year's growth.
Parts Used Root, leaves, stems, seeds.

Constituents Angelica root contains a volatile oil (consisting mainly of beta-phellandrene), lactones and coumarins. An extract of the root has been shown to be anti-inflammatory.
History & Folklore The *British Flora Medica* (1877) reports that "the Laplanders considered this plant as one of the most important productions of the soil … They are subject to a severe kind of colic, against which the root of angelica is one of their chief remedies." The stems are candied for culinary use.
Medicinal Actions & Uses Angelica is a warming and tonic remedy, having a role to play in a wide range of illnesses. All parts of the plant will help relieve indigestion, wind and colic. Angelica can also be useful in cases of poor circulation, as it improves blood flow to the peripheral parts of the body. It is considered a specific treatment for Buerger's disease, a condition that narrows the arteries of the hands and feet. By improving blood flow and stimulating the coughing up of phlegm, angelica's warm, tonic properties bring relief from bronchitis and debilitating conditions affecting the chest. For respiratory conditions, the roots are most commonly used, but the stems and seeds may be employed as well.
Caution Do not take as a medicine during pregnancy.
Self-help Use Stomach spasm, p. 305.

Angelica dahurica (Apiaceae)
Bai Zhi

Description Aromatic perennial growing to 2.5 m (8 ft). Has a hollow stem, large 3-branched leaves, and umbels bearing many white flowerheads.
Habitat & Cultivation Grows wild in thickets in China, Japan, Korea and Russia. Cultivated mainly in central and eastern regions of China.
Part Used Root.
Constituents *Bai zhi* contains a volatile oil and the coumarins imperatorin, marmesin and phellopterin.
History & Folklore *Bai zhi* is first mentioned in Chinese herbal medicine in the *Divine Husbandman's Classic* (*Shen'nong Bencaojing*) of the 1st century CE. The famous military physician Zhang Congzheng (1150–1228) classified *bai zhi* as a sweat-inducing herb able to counter harmful external influences on the skin, such as cold, heat, dampness and dryness.
Medicinal Actions & Uses The pungent, bitter *bai zhi* is used for headaches and aching eyes, nasal congestion and toothache. Like its cousins angelica (*A. archangelica, see preceding entry*) and Chinese angelica (*A. sinensis*, p. 63), it is warming and tonic, and it is still given for problems attributed to "damp and cold" conditions, such as sores, boils and ulcers affecting the skin. *Bai zhi* also appears to be valuable in treating the facial pain of trigeminal neuralgia.
Caution Do not take during pregnancy.

Annona squamosa (Annonaceae)
Custard Apple

Description Tree growing to 10 m (33 ft). Has oblong- to lance-shaped leaves, greenish flowers and segmented green fruit.
Habitat & Cultivation Native to tropical America and the Caribbean, this herb is cultivated throughout the tropics.
Parts Used Leaves, bark, fruit, seeds.
Constituents Custard apple contains fruit sugars and mucilage.
Medicinal Actions & Uses In the West Indies, the young shoots are used with peppermint (*Mentha × piperita*, p. 114) to relieve colds and chills. In Cuban medicine, the leaves are taken to reduce uric acid levels. The leaves, bark and unripe fruit are all strongly astringent and are used to treat diarrhoea and dysentery. The crushed seeds are mixed with an inert powder and employed as an insecticide.
Research Custard apple has been shown to have antiprotozoal and anthelmintic (worm-repelling) activity.

Anthemis cotula (Lamiaceae)
Mayweed,
Stinking Mayweed

Description Annual or perennial resembling German chamomile (*Chamomilla recutita*, p. 77). Has slightly hairy stems and large solitary daisy-type flowers. As the name stinking mayweed suggests, this plant has an unpleasant smell and taste.
Habitat & Cultivation This herb commonly grows wild in Europe, the Americas, Australia, New Zealand and Siberia. The flowers and leaves are gathered in summer.
Parts Used Flowers, leaves.
Constituents Mayweed contains sesquiterpene lactones (including anthecotulide).
History & Folklore In his *Irish Herbal* of 1735, the herbalist K'Eogh states that mayweed is "good for women with the falling down of the womb, if they but wash their feet with a decoction of it."
Medicinal Actions & Uses Although it looks similar to German chamomile, mayweed is far less effective as a medicine. It has been used as an antispasmodic and to induce menstruation, and was traditionally employed for supposedly hysterical conditions relating to the uterus.
Cautions The whole plant can cause blistering if applied fresh to the skin. Do not take during pregnancy or if breast-feeding.

Anthriscus cerefolium (Apiaceae)
Chervil

Description Annual herb growing to 60 cm (2 ft). Has finely grooved stems, opposite leaves and many small white flowers arranged in compound umbels.
Habitat & Cultivation Native to Europe, Asia Minor, Iran and the Caucasus, chervil grows freely on wasteground. It is cultivated throughout the world. The herb is gathered when in flower in summer.
Parts Used Aerial parts.
Constituents Chervil contains a volatile oil, coumarins and flavonoids.

***Chervil** is an aromatic herb that plays a role in healing as well as in cookery.*

History & Folklore A basket of chervil seeds was one of the items found in Tutankhamun's tomb. The herb is traditionally used as a "spring tonic" in central Europe. Chervil is aromatic and is used extensively in cooking.
Medicinal Actions & Uses Chervil is a good remedy for settling the digestion. It is also used to "purify the blood" and to help lower blood pressure, as well as being considered a diuretic. Juice from the fresh plant is applied to various skin conditions, including wounds, eczema and abscesses.

Aphanes arvensis (Rosaceae)
Parsley Piert

Description Prostrate, hairy annual growing to 10 cm (4 in). Has small wedge-shaped leaves and tiny green flowers in tufts.
Habitat & Cultivation Parsley piert is native to Europe, North Africa and North America. It grows to an altitude of 500 m (1,600 ft), thriving in dry sites, including the top of walls. The herb is harvested when in flower in summer.
Parts Used Aerial parts.
Constituents Parsley piert contains tannins.
Medicinal Actions & Uses Astringent, diuretic and demulcent, parsley piert is used to treat kidney and bladder problems, especially kidney stones. It is also frequently used in the treatment of bladder stones (gravel), which cause pain and irritation and obstruct urine flow. Best taken in an infusion, the herb is also a useful remedy for cystitis and recurrent urinary infections.

Aralia racemosa (Araliaceae)
American Spikenard

Description Aromatic perennial bush growing to 2 m (6½ ft). Has thick fleshy roots, large leathery leaves, small greenish-white flowers and red or purple berries.
Habitat & Cultivation American spikenard is native to North America. The root is unearthed in summer or autumn.
Part Used Root.
Constituents American spikenard contains a volatile oil, tannins and diterpene acids.
History & Folklore The Cherokee made a tea for backache from American spikenard, and the cure was later adopted by New World settlers. The Shawnee used it for flatulence, coughs, asthma and breast pain; the Menominee as a cure for blood poisoning. The plant was included in the *US National Formulary* from 1916 to 1965.
Medicinal Actions & Uses Many of American spikenard's current uses come directly from Native American precedents. The herb encourages sweating, is stimulant and detoxifying. It is taken for rheumatism, asthma and coughs. Applied externally as a poultice, the herb is used to treat a number of different skin conditions, including eczema.
Related Species Wild sarsaparilla (*A. nudicaulis*) is a North American relative used medicinally in much the same way as American spikenard. The leaves and stalks of two East Asian *Aralia*, *A. chinensis* and *A. cordata*, are eaten as vegetables.
Cautions Do not take during pregnancy.

Arbutus unedo (Ericaceae)
Strawberry Tree

Description Evergreen shrub growing to 6 m (20 ft). Has an upright stem with reddish bark, leathery serrated leaves, white or pink bell-shaped flowers and round warty red fruit resembling strawberries.
Habitat & Cultivation Native to Mediterranean coasts, strawberry tree also grows in western Ireland, Australia and Africa. The leaves are gathered in late summer and the fruit in autumn.
Parts Used Leaves, fruit.
Constituents Strawberry tree contains up to 2.7% arbutin, methylarbutin and other hydroquinones, a bitter principle, and tannins. Arbutin is powerfully antiseptic in the urinary system.
History & Folklore The fruit of strawberry tree is used in preserves but it is not palatable fresh. The Latin *unedo* comes from *un ede*, meaning "[only] one I eat".

***Strawberry tree's** leaves and fruit are astringent and antiseptic.*

Medicinal Actions & Uses Strawberry tree is valued as an astringent and antiseptic herb. Its antiseptic action within the urinary tract makes it a useful remedy for treating cystitis and urethritis. Strawberry tree's astringent effect has been put to use in the treatment of diarrhoea and dysentery.
Cautions Do not take during pregnancy or if suffering from kidney disease.

Arctostaphylos uva-ursi (Ericaceae)
Uva-ursi,
Bearberry

Description Low-lying evergreen shrub growing to 50 cm (20 in). Has long trailing stems, dark green leaves that are glossy on the upper side, bell-shaped pink flowers and small glossy red berries.
Habitat & Cultivation Uva-ursi is native to Europe, and naturalized throughout the northern hemisphere up to the Arctic. It grows in damp conditions in undergrowth, heathland and grassland. The leaves are gathered in autumn.
Parts Used Leaves, berries.
Constituents The leaves of uva-ursi contain hydroquinones (mainly arbutin, up to 17%), tannins (up to 15%), phenolic glycosides and flavonoids. Arbutin and other hydroquinones have an antiseptic effect in the urinary tract.
History & Folklore The name uva-ursi means "bear's grape" in Latin. Bears are fond of the fruit. The plant is first documented in *The Physicians of Myddfai*, a 13th-century Welsh herbal.
Medicinal Actions & Uses Uva-ursi is one of the best natural urinary antiseptics. It has been used extensively in herbal medicine to disinfect and astringe the urinary tract in cases of acute and chronic cystitis and urethritis. However, it is not a suitable remedy if there is a simultaneous infection of the kidneys.
Research Experiments have shown that uva-ursi extracts have an antibacterial effect. This action is thought to be stronger in alkaline urine – thus the efficacy of uva-ursi is likely to increase if it is taken in combination with a vegetable-based diet.
Cautions Do not take during pregnancy or with kidney disease. Unsuitable for children under 12. It is generally advisable to take uva-ursi for no more than 7–10 days at a time.

Arenaria rubra (Carophyllaceae)
Sandwort,
Sand Spurrey

Description Herbaceous, low-growing, sticky and hairy annual. Has small thin leaves and pale pink flowers growing to 6 mm (¼ in) across.

Habitat & Cultivation Found in the wild throughout Europe, Asia and Australia, sandwort thrives in sandy and gravelly places, especially close to the sea.
Parts Used Aerial parts.
Medicinal Actions & Uses Sandwort is a diuretic herb that is thought to relax the muscle walls of the urinary tubules and bladder. Sandwort is most commonly taken in the form of an infusion to treat kidney stones, acute and chronic cystitis, and other conditions of the bladder.
Related Species Seabeach sandwort (*A. peploides*), a closely related northern plant, is eaten by the Inuit of Alaska as a fresh, pickled or oil-preserved vegetable. In Iceland, this plant is fermented and eaten in the same way as sauerkraut. Rupturewort (*Herniaria glabra*, p. 219), which is a European plant, has medicinal properties that are similar to those of sandwort.

Argemone mexicana (Papaveraceae)
Mexican Poppy, Chicalote

Description Prickly annual growing to 1 m (3 ft). Has spiny white-veined leaves and large yellow flowers with delicate petals.
Habitat & Cultivation Mexican poppy grows in tropical regions from the southernmost US to South America. It favours dry soil and is often found in tobacco fields.
Parts Used Aerial parts, latex, seeds.
Constituents Mexican poppy contains isoquinoline alkaloids similar to those in the opium poppy (*Papaver somniferum*, p. 244).
History & Folklore Like most poppies, this plant exudes a milky latex, which was traditionally used in Ecuador to treat cataracts.
Medicinal Actions & Uses Commonly used through much of Latin America, the whole plant acts as a mild painkiller and sedative, and is taken to relieve muscle ache, toothache and neuralgic pain. The fresh latex contains protein-dissolving properties and is traditionally applied to warts and cold sores. The flowers and seeds are mildly expectorant and can be used to treat irritable coughs and asthma.
Related Species In Hawaii, the latex of *A. glauca* is also used to treat warts.
Cautions Excessive use can cause glaucoma. Use only under professional supervision.

Mexican poppy *flowers have expectorant properties and are useful for treating coughs.*

Arisaema spp. (Araceae)
Tian Nan Xing

Description Perennial herb growing to 1 m (3 ft). Has star-shaped leaves and purple-white or green pitcher-like bracts.
Habitat & Cultivation *Tian nan xing* grows wild in eastern Asia, especially in China, where it is widely cultivated. The rhizome is unearthed in autumn or winter.
Part Used Dried rhizome.
Constituents *Tian nan xing* contains triterpenoid saponins and benzoic acid.
Medicinal Actions & Uses In Chinese herbal medicine, *tian nan xing* is thought to encourage the coughing up of phlegm. The dried rhizome is used principally for chest problems. When prescribed internally it is always combined with fresh ginger root (*Zingiber officinale*, p. 155). The fresh rhizome is only ever used externally, for ulcers and other skin conditions.
Related Species Jack-in-the-pulpit or Indian turnip (*A. triphyllum*), a North American species, is a treatment for chest conditions.
Cautions Take only under professional supervision. The fresh rhizome is very toxic; use only the dried rhizome internally.

Aristolochia clematitis (Aristolochiaceae)
Birthwort

Description Unpleasant-smelling perennial with heart-shaped leaves and tubular yellow flowers with flattened lips.
Habitat & Cultivation Native to central and southern Europe, birthwort is also found in south-western Asia. The root is unearthed in spring or autumn.
Parts Used Root, aerial parts.
Constituents Birthwort contains aristolochic acids, a volatile oil and tannins. While stimulating white blood cell activity, aristolochic acid is carcinogenic and toxic to the kidneys (*see Research*).
History & Folklore *Aristolochia* means "excellent birth", and refers to the traditional use of the fresh juice to induce labour. Theophrastus (*c.* 372–286 BCE) records that the plant was used to treat disorders of the uterus, reptile bites and sores on the head.
Medicinal Actions & Uses No longer in use today and banned in Europe and North America, birthwort was formerly used to treat wounds, sores and snake bite. It has been taken after childbirth to prevent infection and is also a potent menstruation-inducing herb and a (very dangerous) abortifacient. A decoction was taken to encourage healing of ulcers. Birthwort has also been used for asthma and bronchitis.
Research Birthwort illustrates the fact that though a plant is natural, this has no bearing on its safety. Aristolochic acid (present within birthwort) is a kidney toxin that induces kidney failure and cancer within the kidneys and urinary tract. However, the slow rate of development of symptoms has meant that in the past no connection was made between these kidney symptoms and the herb. These toxic effects apply to birthwort and all *Aristolochia* species that contain aristolochic acid. Kidney failure and death from aristolochic acid is relatively rare in the West but is "reaching potentially epidemic proportions in the East", according to research published in Taiwan in 2013. Many species of *Aristolochia* continue to be used in Oriental herbal medicine in countries such as China, Japan and Taiwan. All species of *Aristolochia* are banned in most Western countries.
Caution Under no circumstance use birthwort or any *Aristolochia* species as medicines.

Armoracia rusticana syn. *Colchlearia armoracia* (Brassicaceae)
Horseradish

Description Perennial with a deep tap root, leaves up to 50 cm (20 in) long and clusters of 4-petalled white flowers.
Habitat & Cultivation Native to Europe and western Asia, this herb is widely cultivated for its root, unearthed in autumn.
Parts Used Root, leaves.
Constituents Horseradish root contains glucosilinates (mainly sinigrin), flavonoids, asparagine, resin and vitamin C. On being crushed, sinigrin produces allyl isothiocyanate, an antibiotic substance. The flavonoids have been shown to be antioxidant.
History & Folklore Pliny (23–79 CE) probably had horseradish in mind when describing a plant that warded off scorpions, but for most of its long history, horseradish has been used mainly as a diuretic herb. It is a popular condiment, particularly in Britain and central Europe.

Medicinal Actions & Uses Now undervalued as a medicinal herb, horseradish has many healing properties. It strongly stimulates the digestion, increasing gastric secretions and appetite. It is a good diuretic and promotes perspiration, making it useful in fevers, colds and flu. It is also expectorant and mildly antibiotic, and can be of use in both respiratory and urinary tract infections. A sandwich of freshly grated root is a home remedy for hay fever. Externally, a poultice of the root can soothe chilblains.
Cautions Over-consumption of horseradish may irritate the gastro-intestinal tract. The plant should be avoided by those with low thyroid function. A horseradish poultice may cause blistering.

Arnica montana (Asteraceae)
Arnica

Description Aromatic perennial growing to 30 cm (1 ft). Has downy egg-shaped leaves and bright yellow daisy-like flowers.
Habitat & Cultivation Arnica grows in mountain woods and pastures in central Europe, the Pyrenees, Siberia and north-western US and Canada. Its flowers are harvested when in full bloom; the rhizomes after the plant has died back in autumn.
Parts Used Flowers, rhizome.
Constituents Arnica contains sesquiterpene lactones, flavonoids, a volatile oil that includes thymol, mucilage and polysaccharides.
History & Folklore Arnica has been used extensively in European folk medicine. Johann Wolfgang von Goethe (1749–1832), the German philosopher and poet, drank arnica tea to ease his angina in old age.
Medicinal Actions & Uses Best known as an effective ointment and compress for bruises, sprains and muscle pain, arnica improves the local blood supply and accelerates healing. It is anti-inflammatory and increases the rate of reabsorption of internal bleeding. Generally the plant is now taken internally only at a homeopathic dilution, principally for shock, injury and pain. If taken as a decoction or tincture, it stimulates the circulation and is valuable in the treatment of angina and a weak or failing heart, but it can be toxic even at low dosage and thus is rarely used in this way.
Related Species In North America *A. fulgens* is used.
Cautions Do not take internally. Do not apply arnica preparations to broken skin. External use may cause dermatitis. Arnica is subject to legal restrictions in some countries.
Self-help Uses Bruises, p. 304; Sprains, p. 312; Tired & aching muscles, p. 312.

Artemisia abrotanum (Asteraceae)
Southernwood

Description Strongly aromatic, shrubby perennial, growing to 1 m (3 ft). Has woody stems, feathery silver-green leaves and yellow flowers.
Habitat & Cultivation Native to southern Europe, this herb is rare in the wild but is cultivated for the perfume industry and, to a lesser extent, for herbal medicine. The aerial parts are harvested in late summer.

Southernwood *leaves were traditionally placed amongst clothing to repel moths.*

Parts Used Aerial parts.
Constituents Southernwood contains a volatile oil, abrotanin and tannins.
History & Folklore Much prized during the Middle Ages and the Renaissance, southernwood is now used infrequently in herbal medicine. The closely related wormwood (*A. absinthium*, p. 66) is considered superior. Like wormwood, southernwood contains a strong volatile oil that repels insects, and the leaves are placed amongst clothes to repel moths. Mrs Grieve (*A Modern Herbal*, 1931) reports that in England "even in the early part of the last century a bunch of southernwood and rue [*Ruta graveolens*, p. 265] was placed next to the prisoner in the dock as a preventive from the contagion of jail fever".
Medicinal Actions & Uses Southernwood is a bitter tonic. It strengthens and supports digestive function by increasing secretions in the stomach and intestines. An infusion of southernwood has been given to children as a treatment for worms, but this is not recommended without professional supervision. Like other *Artemisias*, southernwood stimulates menstruation and is commonly taken to encourage the onset of irregular or absent periods.
Cautions Do not take during pregnancy. Not suitable for children under 12 unless prescribed professionally.

Artemisia capillaris (Asteraceae)
Yin Chen Hao

Description Medium-sized perennial herb with an erect stem, thin feathery leaves and clusters of small composite flowers.
Habitat & Cultivation Native to South-East Asia, *yin chen hao* is cultivated in China and other Far Eastern countries. The young plants are gathered in spring.
Parts Used Aerial parts.
Constituents *Yin chen hao* contains a volatile oil and coumarins. The volatile oil is antifungal.
History & Folklore *Yin chen hao* has been used in Chinese herbal medicine for more than 2,000 years. Its medicinal properties were first listed in *Divine Husbandman's Classic* (*Shen'nong Bencaojing*), written in the 1st century CE.
Medicinal Actions & Uses *Yin chen hao* is an effective remedy for liver problems, being specifically helpful for treating hepatitis with jaundice. Traditional Chinese medicine (see pp. 40–43) holds that it is bitter and cooling, clearing "damp heat" from the liver and gall ducts and relieving fevers. *Yin chen hao* is also anti-inflammatory and diuretic. It was formerly applied in the form of a plaster to treat headaches.
Research Investigation undertaken in China indicates that like many *Artemisia* species, *yin chen hao* has a tonic and strengthening effect on the liver, gallbladder and digestive system.
Cautions Do not take during pregnancy. Unsuitable for children under 12 unless prescribed professionally.

Artemisia cina (Asteraceae)
Levant Wormwood

Description Shrubby perennial with long thin leaves and tiny round tufts of flowers.
Habitat & Cultivation This herb is native to the region stretching from the eastern Mediterranean to Siberia. The unopened flowerheads are gathered from wild and cultivated plants.
Parts Used Flowerheads.
Constituents Levant wormwood contains santonin (a sesquiterpene lactone), artemisin and a volatile oil (with up to 80% cineole). Santonin is directly toxic to roundworms and, to a lesser extent, threadworms.
History & Folklore Levant wormwood was known to the classical Greek world as a remedy for intestinal worms, and it has been used for this

purpose ever since. Its active constituent, santonin, was first isolated in 1830, and is now more commonly employed than the plant itself.
Medicinal Actions & Uses Used almost exclusively to expel worms, Levant wormwood is strongly bitter and aromatic and has a tonic and stimulant effect on the digestion. The dried flowerheads are occasionally mixed with honey to disguise their bitterness.
Cautions Do not take during pregnancy. Use only under professional supervision, especially in the case of children under 12.

Artemisia dracunculus (Asteraceae)

Tarragon

Description Aromatic perennial growing to 1 m (3 ft). Has narrow lance-shaped leaves and small greenish flowerheads in long drooping clusters.
Habitat & Cultivation Native to Russia, western Asia and the Himalayas, tarragon is now cultivated as a culinary herb in gardens around the world. The aerial parts are picked in summer.
Parts Used Aerial parts, root.
Constituents Tarragon contains tannins, coumarins and flavonoids, and up to 0.8% volatile oil, consisting of up to 70% methylchervicol, which is toxic and potentially carcinogenic.

***Tarragon** sweetens the breath and helps to stimulate the digestion.*

History & Folklore Tarragon is widely used as a herb in cooking. In French, it is sometimes known as *herbe au dragon*, because of its reputed ability to cure serpent bites.
Medicinal Actions & Uses While tarragon stimulates the digestion, it is reputed to be a mild sedative and has been taken to aid sleep. With its mild menstruation-inducing properties, it is taken if periods are delayed. The root has traditionally been applied to aching teeth.
Cautions Do not take during pregnancy. Do not exceed the standard dose and do not take for longer than 4 weeks at a time.

Artemisia vulgaris (Asteraceae)

Mugwort

Description Shrubby perennial growing to about 1 m (3 ft). Has dark green deeply indented leaves and numerous clusters of small reddish or yellow flowerheads.
Habitat & Cultivation Mugwort is found in temperate regions of the northern hemisphere. It flourishes on wasteground and in hedgerows, and is gathered in late summer just before flowering.
Parts Used Leaves, root.
Constituents Mugwort contains a volatile oil (mainly caryophyllene), a sesquiterpene lactone, flavonoids, coumarin derivatives and triterpenes.
History & Folklore Known as *Mater Herbarum* (mother of herbs), mugwort was used from the earliest times in Europe and Asia. Roman centurions reputedly placed it in their sandals to keep the soles of their feet in good shape. The Greek physician Dioscorides (1st century CE) recounts that the goddess Artemis (who inspired the plant's genus name) was believed to give succour to women in childbirth. The 13th-century Welsh herbal *The Physicians of Myddfai* recommends: "If a woman be unable to give birth to her child let the mugwort be bound to her left thigh. Let it be instantly removed when she has been delivered, lest there should be haemorrhage." An 18th-century Spanish herbalist, Diego de Torres, recommends the application of a mugwort plaster below the navel as an effective method of inducing labour. In the Isle of Man (UK), sprigs of mugwort are worn at the annual open-air parliamentary assembly, held on Tynwald Hill. In China, mugwort has been valued for millennia. It is the principal ingredient of *moxa* and is used in moxibustion, a process in which heat from a burning, cigar-shaped roll of chopped leaves is applied to acupuncture points.
Medicinal Actions & Uses A digestive and tonic herb, mugwort has a wide variety of traditional uses. Milder in action than most other *Artemisia* species, it can be taken over the long term at a low dose to improve appetite, digestive function and absorption of nutrients. In addition, it can be taken to encourage the elimination of worms. Mugwort also increases bile flow and mildly induces the onset of menstruation. The European conception of mugwort as a uterine stimulant is contradicted by Chinese usage, in which it is prescribed to prevent miscarriage and to reduce or stop menstrual bleeding. Mugwort is also antiseptic, and has been used in the treatment of malaria.
Caution Do not take mugwort during pregnancy.

Asclepias tuberosa (Asclepiadaceae)

Pleurisy Root

Description Perennial, upright herb growing to 1 m (3 ft). Has narrow lance-shaped leaves and spikes of numerous 5-petalled orange or yellow flowers.
Habitat & Cultivation This herb is native to the southern US. The root is unearthed in spring.
Part Used Root.
Constituents Pleurisy root contains cardenolides and flavonoids. It is oestrogenic.
History & Folklore In North American herbal medicine, pleurisy root was considered a cure-all. It was used to treat conditions as diverse as pleurisy, typhoid, pneumonia, catarrh, dysentery, colic, eczema and hysteria. The Omaha ate the raw root for bronchitis and other chest conditions. Many tribes thought pleurisy root was a good remedy for hot dry fevers.
Medicinal Actions & Uses Though its most specific usage is relieving the pain and inflammation of pleurisy, pleurisy root has other applications. It is useful for hot, dry and tight conditions in the chest. It promotes the coughing up of phlegm, reduces inflammation and, in addition, helps reduce

***Pleurisy root** was used by Native Americans as a chest remedy.*

fevers by stimulating perspiration. The root is also taken for the treatment of chronic diarrhoea and dysentery.
Related Species *A. incarnata* and *A. syriaca* have both been used in Native American herbal medicine to treat asthma.
Cautions Do not take during pregnancy. Excessive doses may cause vomiting.

Aspalathus linearis (Fabaceae)
Rooibos,
Red Bush

Description Variable shrub growing to 2 m (6½ ft) in height, with green, needle-like leaves, yellow, pea-like flowers and small seed pods.
Habitat & Cultivation Native to southern South Africa, rooibos is now widely cultivated as a commercial crop, particularly in the Cedarberg mountain area. The seed is hard to germinate and must first be scarified. The young leaves are harvested once a year, chopped and left to "sweat" or ferment, before being dried.
Parts Used Young leaves.
Constituents Rooibos contains polyphenols, including flavonoids, with a low tannin content.
History & Folklore Rooibos was first used as an appetising tea by the Khoisan people, indigenous to the Cedarberg region, but also as a sleep aid and for headaches.
Medicinal Actions & Uses Drunk mostly as a pleasant tasting, caffeine-free drink, rooibos, like green tea, has significant antioxidant activity. There is evidence to suggest that the fermented leaves exert a protective effect on the heart and circulation. In view of the herb's traditional use, it might also prove helpful as a night-time drink to promote sound sleep.

Asparagus officinalis (Liliaceae)
Asparagus

Description Slender-stemmed perennial growing to 2 m (6½ ft). Has long fronds of delicate needle-like leaves and bell-shaped yellow-green flowers that produce small bright red berries.
Habitat & Cultivation Native to temperate regions in Europe, North Africa and Asia, asparagus is cultivated worldwide as a vegetable. The shoots grow into tender (and, if sheltered from sunlight, white) stems in spring. The root is gathered after the shoots have been cut.
Parts Used Root, shoots.
Constituents Asparagus contains steroidal glycosides (asparagosides), bitter glycosides, asparagine and flavonoids. Asparagine is a strong diuretic.
History & Folklore To judge from ancient Egyptian tomb drawings, asparagus was cultivated as long ago as 4000 BCE. In the 1st century CE, the Greek physician Dioscorides recommended a decoction of asparagus root to improve urine flow and to treat kidney problems, jaundice and sciatica.

Asparagus *is used to treat a range of urinary problems.*

Medicinal Actions & Uses Asparagus is a strong diuretic that is useful for a variety of urinary problems, including cystitis. It is also useful for rheumatic conditions, helping to "flush" waste products accumulated in the joints out of the body in the urine. Asparagus is also bitter, mildly laxative and sedative.
Caution Do not take if you suffer from kidney disease.

Asparagus racemosus (Liliaceae)
Shatavari,
Indian Asparagus

Description Slender perennial fern growing to 7 m (23 ft) in height. Shatavari has fronds of needle-like leaves, minute, white flowers and purple-black berries.
Habitat & Cultivation Native to the Himalayas and the Indian sub-continent, shatavari grows wild in gravelly soils up to 1,200 m (3,900 ft) above sea level. It is also found in western China.
Part Used Root.
Constituents Shatavari contains steroidal saponins, alkaloids, and mucilage.
History & Folklore Shatavari is known as the "Queen of herbs" in Ayurvedic medicine. Its name literally means "100 spouses", signifying the herb's ability to act as a sexual tonic and promote fertility.
Medicinal Actions & Uses A key Ayurvedic remedy, shatavari is first and foremost a women's herb, aiding fertility and promoting conception, and acting as a general reproductive and sexual tonic. Shatavari can prove particularly helpful in easing menopausal symptoms, such as hot flushes and poor stamina. It appears to improve fertility in both men and women, and may also be taken to treat impotence. A tonic, strengthening herb, shatavari supports immune function and has a place in the treatment of immuno-suppressed conditions.
Related Species Aparagus (*A. officinalis*, *preceding entry*) is a relative.

Asperula odorata syn. *Galium odoratum* (Rubiaceae)
Sweet Woodruff

Description Perennial growing to 45 cm (18 in). Has a square stem, whorls of narrow elliptical leaves, and small white flowers.
Habitat & Cultivation Sweet woodruff is native to Europe, and is also found in Asia and North Africa. It grows in woodlands and shaded places. The herb is gathered when in flower in late spring.
Parts Used Aerial parts.
Constituents Sweet woodruff contains iridoids, coumarins (0.6%), tannins, anthraquinones and flavonoids. The flavonoids act on the circulation and are diuretic.
History & Folklore When it dries, sweet woodruff takes on the scent of newly cut grass, and it has often been placed between clothes to impart its aroma. In his *Irish Herbal* of 1735, K'Eogh records that "It is good in healing wounds if bruised and then applied, and also in curing boils and inflammations." In Germany *Maiwein*, made of sweet woodruff steeped in white wine, is drunk to celebrate May Day.
Medicinal Actions & Uses Sweet woodruff is considered tonic, with significant diuretic and anti-inflammatory effects. Its coumarin and flavonoid constituents make it helpful for varicose veins and phlebitis. It has been used as an antispasmodic, and it is given to children and adults for insomnia.

Sweet woodruff *aerial parts are dried for medicinal use.*

Cautions In excessive doses, sweet woodruff can cause internal bleeding. Do not use if taking conventional medication for circulatory problems, or during pregnancy.

Aspidosperma quebracho-blanco (Apocynaceae)

Quebracho

Description Tree growing to 30 m (100 ft). Has thick corky bark, leathery leaves and tubular white flowers.
Habitat & Cultivation Quebracho is found in the southern half of South America. The bark and timber are used commercially.
Part Used Bark.
Constituents Quebracho contains indole alkaloids (including yohimbine) and tannins.
History & Folklore The name quebracho comes from the Spanish *quebrar* (to break) and *hacha* (axe), an allusion to the hardness of this tree's wood.
Medicinal Actions & Uses With its antispasmodic effect on the bronchial tubes, quebracho is used therapeutically to treat asthma and emphysema. It is also a tonic and reduces fever. This herb is astringent and has been used externally on wounds and burns.
Related Species Many other species of *Aspidosperma* are grown for tanning and timber in South America. Some are also considered fever remedies. One, *A. excelsum*, is used to relieve wind, stomach problems and indigestion.
Cautions Take only under professional supervision. Quebracho is toxic in excessive doses. It is subject to legal restrictions in some countries.

Atractylodes macrocephala (Asteraceae)

Bai Zhu

Description Erect perennial herb growing to 60 cm (2 ft). Has alternate oval- to lance-shaped leaves and purple flowers.
Habitat & Cultivation *Bai zhu* is rare in the wild. It is cultivated in China, Japan and Korea. The rhizome is unearthed in late autumn or winter.
Part Used Rhizome.
Constituents *Bai zhu* contains a volatile oil (0.35–1.35%), which includes atractylol, and the lactones atractylenolide II and III. Atractylol has a liver protective activity.
History & Folklore The first record of the use of *bai zhu* is in the *Tang Materia Medica*, written in China in 659 CE. Later, it was one of the 4 herbs that made up the "decoction of the 4 rulers", a mixture prescribed by Wang Ji (1463–1539) as a treatment for syphilis.
Medicinal Actions & Uses *Bai zhu* has traditionally been used as a tonic, building *qi* (see p. 40) and strengthening the spleen. The rhizome has a sweet, pungent taste, and is used to relieve fluid retention, excessive sweating, and digestive problems such as diarrhoea and vomiting. Combined with Baical skullcap (*Scutellaria baicalensis*, p. 134), it is employed to prevent miscarriage.

Avena sativa (Poaceae)

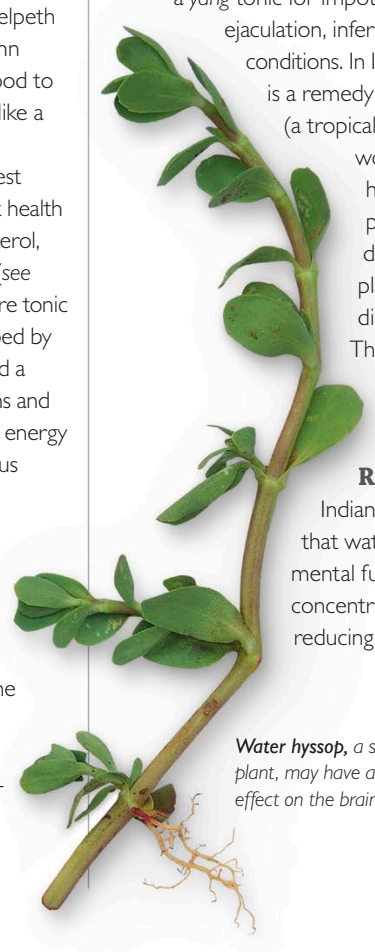
Oats

Description Annual grass growing to 1 m (3 ft). Has straight hollow stems, blade-like leaves and small spikes holding seeds (grain).
Habitat & Cultivation Native to northern Europe, oats are now grown in temperate regions worldwide as a cereal crop. They are harvested in late summer.
Parts Used Seeds, straw (dried stems).
Constituents Oats contain saponins, alkaloids, sterols, flavonoids, silicic acid, starch, proteins (including gluten), vitamins (especially B vitamins) and minerals (especially calcium).
History & Folklore Formerly, oat straw was used to fill mattresses, proving beneficial to those suffering from rheumatism. In *The English Physitian* (1652) Nicholas Culpeper states that "a poultice made of meal of oats and some oil of bay helpeth the itch and the leprosy". Earlier, in 1597, John Gerard was less enthusiastic: "Oatmeal is good to make a fair and well-coloured maid to look like a cake of tallow."
Medicinal Actions & Uses Oats are best known as a nutritious cereal, but they benefit health in many other ways. Oat bran lowers cholesterol, and an oat-based diet may improve stamina (see *Research*). Oats, and oat straw in particular, are tonic when taken medicinally. Oat straw is prescribed by medical herbalists to treat general debility and a wide variety of nervous conditions. The grains and straw are mildly antidepressant, gently raising energy levels and supporting an over-stressed nervous system. Oats are used to treat depression and nervous debility, and insomnia in those suffering from nervous exhaustion. Oats are one of the principal herbal aids to convalescence after a long illness. Externally, the grain is emollient and cleansing, and a decoction strained into a bath can help soothe itchiness and eczema.
Research In research undertaken in Australia, athletes who were placed on an oat-based diet for 3 weeks showed a 4% increase in stamina. Oats are thought to help maintain muscle function during training and exercise.
Self-help Uses **Depression & decreased vitality**, p. 316; **Eczema**, p. 300; **Nervous exhaustion & stress**, p. 319; **Poor sleep & nervous exhaustion**, p. 309.

Bacopa monnieri (Scrophulariaceae)

Water Hyssop,
Brahmi (Hindi)

Description Creeping succulent perennial growing to 50 cm (20 in). Has spatula-shaped fleshy leaves and pale blue or white flowers on long slender stalks.
Habitat & Cultivation Water hyssop grows in warmer temperate and tropical climates, especially in southern Asia. It thrives in marshland, developing into dense mats on mudflats and at the edges of mangrove swamps.
Parts Used Aerial parts.
Constituents Water hyssop contains triterpenoid saponins, including bacosides.
Medicinal Actions & Uses In India, water hyssop is used principally for disorders of the nervous system, such as neuralgia, epilepsy and mental illness, but it is also employed for a wide range of other disorders, including indigestion, ulcers, wind and constipation, asthma and bronchitis, and infertility. In China, it is taken as a *yang* tonic for impotence, premature ejaculation, infertility and rheumatic conditions. In Indonesia, the plant is a remedy for filariasis (a tropical disease caused by worms). In Cuba, water hyssop is used as a purgative, and a decoction of the whole plant is taken as a diuretic and laxative. The expressed juice is mixed with oil and applied as a rub for arthritic pain.
Research Indian research suggests that water hyssop improves mental function, memory and concentration, as well as reducing learning time.



Water hyssop, a swamp plant, may have a tonic effect on the brain.

Ballota nigra (Lamiaceae)

Black Horehound

Description Straggling perennial growing to 1 m (3 ft). Has oval, toothed leaves and pink-purple flowers in whorls at the base of the upper leaves.
Habitat & Cultivation This herb is found throughout much of Europe, in North America and in Asia. It thrives on wasteground, in pavement cracks and by roadsides, mostly near human habitation. It is harvested when in flower in summer.
Parts Used Aerial parts.
Constituents Black horehound contains diterpenoids, including marrubiin, flavonoids, tannins, saponins and a volatile oil.
History & Folklore The Greek physician Dioscorides, writing in the 1st century CE, recommends a plaster of black horehound leaves and salt for dog bites. He also advocates a balm, made from the dried leaves and honey, to purify infected wounds and ulcers.
Medicinal Actions & Uses Though long considered a remedy for convulsions, low spirits and menopausal problems, black horehound is rarely used today. Authorities differ over whether there is any substance to claims for its earlier applications. The herb is currently used by Anglo-American herbalists as an anti-emetic – preventing or reducing nausea or vomiting. It is perhaps most useful when nausea arises from disorders of the inner ear (such as Ménière's disease) as opposed to those of the digestive system. Black horehound is thought to be mildly sedative and antispasmodic, and is occasionally taken for arthritis and gout.

Black horehound *was an ancient Greek remedy for dog bites.*

Bambusa arundiaceae (Poaceae)

Spiny Bamboo

Description Perennial tree, to 30 m (100 ft), with multiple stems from its base. Has narrow pointed leaves and long loose clusters of yellow to yellowish-green flowers.
Habitat & Cultivation Found throughout tropical Asia, especially in India and China, spiny bamboo thrives up to 2,100 m (6,900 ft) above sea level.
Parts Used Root, leaves, sprouts.
Constituents Spiny bamboo juice contains high levels of silica.
History & Folklore Spiny bamboo is arguably the most useful plant on earth, being used to make scaffolding, rafts, furniture, paper and dozens of other items. It also has an important role to play in herbal medicine.
Medicinal Actions & Uses Various parts of spiny bamboo are used in Indian and Ayurvedic medicine. The root is considered astringent and cooling, and is used to treat joint pain and general debility. The leaves are used to stimulate menstruation, and, being antispasmodic, to help relieve period pain. They are also taken to tone and strengthen stomach function and to expel worms. They are reputed to be aphrodisiac. The young sprouts are eaten to relieve nausea, indigestion and wind, and a poultice of the sprouts is applied to help drain wounds that have become infected. The juice is rich in silica, and aids in the strengthening of cartilage in conditions such as osteoarthritis and osteoporosis.
Related Species In Chinese herbal medicine, the juice and shavings of the black bamboo (*B. breviflora*) are prescribed to counter "excess heat", coughs and a congested chest. Its roots are used as a diuretic and to treat fevers.

Banisteriopsis caapi (Malpighiaceae)

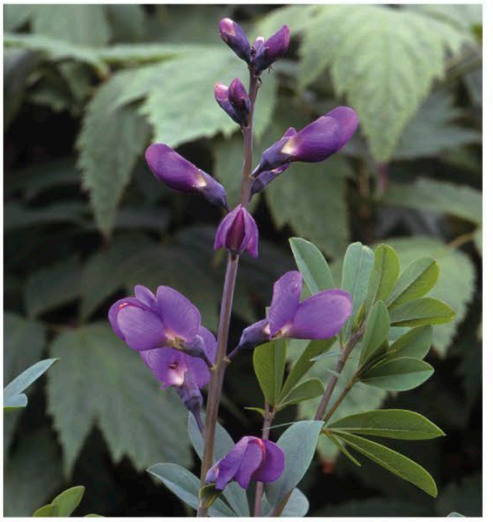
Ayahuasca

Description Woody vine growing to 30 m (100 ft). Has smooth bark, oval leaves and bunches of small red or yellow flowers.
Habitat & Cultivation Ayahuasca is native to jungles of the Amazon basin. It is cultivated by indigenous peoples, but the wild herb is preferred for medicinal use.
Part Used Bark.
Constituents Ayahuasca contains beta-carboline alkaloids (including harmine, harmaline and delta-tetrahycroharmine), which stimulate hallucinations.
History & Folklore In the Quechua language, widely spoken in Peru and neighbouring countries, *ayahuasca* means "spirit of the dead", indicating the awesome powers traditionally attributed to this plant. Another native Indian name is *nixi honi xuma*, meaning "vine from which the vision extract is made". Ayahuasca bark, which is often used in combination with members of the *Datura* genus, is the primary hallucinogen among many Amazonian tribes, being prepared as part of complex ritual ceremonies.
Medicinal Actions & Uses Though known as a powerful hallucinogen, ayahuasca is also a medicine, being used as a remedy to cure a range of diagnosed conditions. However, ayahuasca is usually taken by the healer rather than by the patient. In the shamanistic societies of the Amazon, ayahuasca allows the healer to communicate with the spirit world where illness arises, interceding on behalf of the ill person and the community to restore health and harmony to all – quite unlike the individualized approach of Western medicine. Beyond its ability to affect mood, the bark is emetic and purgative. At low doses it is used as a mild detoxifier.
Caution Ayahuasca is taken traditionally as part of a rich, complex ritual which affects the experience produced. Medicinal use of this plant is not advised.

Baptisia tinctoria (Fabaceae)

Wild Indigo

Description Herbaceous perennial growing to 1 m (3 ft). Has a smooth stem, clover-like leaves and purplish-blue flowers in small terminal clusters.



Wild indigo, *a North American plant, was used by the Penobscot to treat wounds.*

Habitat & Cultivation Native to eastern parts of North America, wild indigo grows from North Carolina to southern Canada in dry, hilly woods.
Parts Used Root, leaves.
Constituents Wild indigo contains isoflavones, flavonoids, alkaloids, coumarins and polysaccharides. The isoflavones are oestrogenic, while the polysaccharides are immune-stimulant.
History & Folklore Wild indigo was commonly used as a poultice by Native Americans and New World settlers to treat snake bite. The Mohicans used a decoction of the root to bathe cuts and wounds.
Medicinal Actions & Uses Wild indigo is a strong antiseptic and immune-stimulant, though at more than moderate doses it can produce nausea and vomiting. It is considered particularly effective for upper respiratory infections such as tonsillitis and pharyngitis, and is also valuable in treating infections of the chest, gastro-intestinal tract and skin. Its antimicrobial and immune-stimulant properties combat lymphatic problems – when used with detoxifying herbs such as burdock (*Arctium lappa*, p. 65), it helps to reduce enlarged lymph nodes. Wild indigo is frequently prescribed along with echinacea (*Echinacea* spp., p. 92) for chronic viral conditions or chronic fatigue syndrome. A decoction of the root soothes sore or infected nipples and infected skin conditions. When used as agargle or mouthwash, the decoction treats mouth ulcers, gum infections and sore throats.
Caution Best taken on professional advice.

Benincasa hispida syn. *B. cerifa* (Cucurbitaceae)

Wax Gourd, Petha

Description Hairy annual climber. Has 3-lobed leaves, tendrils and large yellow flowers. Produces rounded fruit (gourds) about 40 cm (16 in) long.
Habitat & Cultivation Native to tropical Asia and Africa, this herb is cultivated in India and China as a vegetable. The fruit is harvested in late summer.
Parts Used Fruit rind, fruit, seeds.
Constituents Wax gourd contains saponins and guaridine.
History & Folklore Wax gourd has been used as a food and medicine for thousands of years. It was first documented in the *Tang Materia Medica*, written in 659 CE.

Wax gourd

Medicinal Actions & Uses In Chinese herbal medicine, a decoction of wax gourd seeds is used to "drain dampness" and "clear heat". It is given for chest conditions and vaginal discharge. In combination with Chinese rhubarb (*Rheum palmatum*, p. 126), it is prescribed for intestinal abscesses. In Ayurvedic medicine, the seeds are used to treat coughs, fever and excessive thirst, and to expel tapeworms. In an ancient Indian recipe, the fruit juice is mixed with lime juice (*Citrus aurantiifolia*) to prevent or stop bleeding.
Research The fruit appears to have an anti-cancer effect.

Berberis aquifolium syn. *Mahonia aquifolium* (Berberidaceae)

Oregon Grape

Description Evergreen shrub growing to 2 m (6½ ft). Has shiny leaves, clusters of small yellowish-green flowers, and purple berries in autumn.
Habitat & Cultivation Native to western North America, Oregon grape grows in the Rocky Mountains up to 2,000 m (6,600 ft), and in woods from Colorado to the Pacific coast. It is abundant in Oregon and northern California.

***Oregon grape** has evergreen leaves, clusters of small yellow flowers and purple berries.*

Part Used Root.
Constituents Oregon grape contains isoquinoline alkaloids (including berberine, berbamine and hydrastine) and other alkaloids of aporphine-type. These alkaloids are strongly antibacterial and are thought to reduce the severity of psoriasis.
History & Folklore Californian Native peoples took a decoction or tincture of the bitter-tasting root for loss of appetite and debility. In the 19th and early 20th centuries, Oregon grape was an important herb in the Physiomedicalist movement, based on a combination of orthodox and Native American practices. In this context, it was prescribed as a detoxifier and tonic.
Medicinal Actions & Uses Oregon grape is chiefly used for gastritis and general digestive weakness, to stimulate gallbladder function, and to reduce catarrhal problems (mainly of the gut). It also treats eczema, psoriasis, acne, boils and herpes, and skin conditions linked to poor gallbladder function.
Research Clinical use of extracts of Oregon grape has been investigated in Germany and there is now evidence that the root can be effective in relieving psoriasis. Extracts can be taken internally and applied locally on the skin. The alkaloid berberine is thought to prevent cell proliferation.
Related Species Barberry (*B. vulgaris, see following entry*) is similar to Oregon grape in its overall action, but it is generally stronger in the effect it produces.
Caution Do not take during pregnancy.

Berberis vulgaris (Berberidaceae)

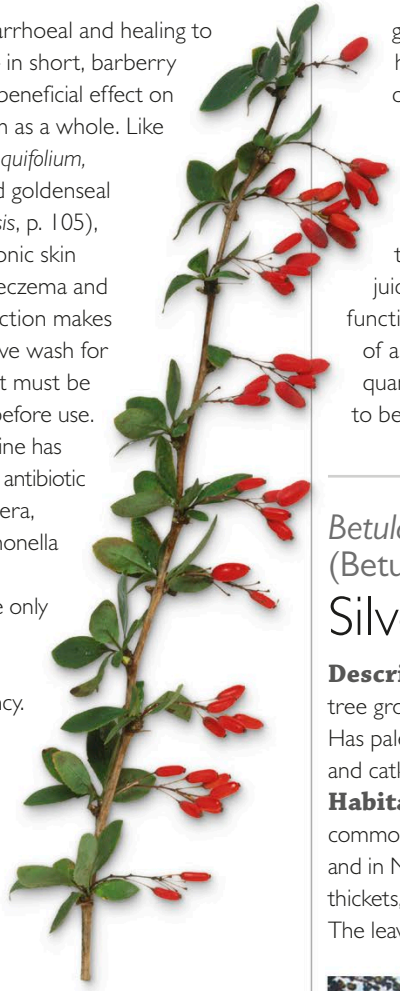
Barberry

Description Thorny deciduous shrub growing to 3 m (10 ft), with leathery leaves, yellow flowers and red berries in autumn.
Habitat & Cultivation Native to Europe, barberry is naturalized in North America. It is cultivated as a garden plant and medicinal herb. The bark is gathered in spring or autumn, and the berries in autumn.
Parts Used Stem bark, root bark, berries.
Constituents Barberry contains isoquinoline alkaloids, including berberine and berbamine. Berberine is strongly antibacterial and amoebicidal, and stimulates bile secretion. Berbamine is strongly antibacterial. Many of the alkaloids are thought to be cancer-inhibiting.
History & Folklore In ancient Egypt, *Berberis* berries were macerated with fennel seed (*Foeniculum vulgare*, p. 212) to make a drink for fevers. The berries are extremely sour but have been used in the past to make preserves – the French *confiture d'épine vinette* is one example.
Medicinal Actions & Uses Barberry acts on the gallbladder to improve bile flow and ameliorate conditions such as gallbladder pain, gallstones and jaundice. Its strongly antiseptic property helps amoebic dysentery, cholera and other similar gastro-intestinal infections. The bark

is astringent, antidiarrhoeal and healing to the intestinal wall – in short, barberry has a strong, highly beneficial effect on the digestive system as a whole. Like Oregon grape (*B. aquifolium, preceding entry*) and goldenseal (*Hydrastis canadensis*, p. 105), barberry helps chronic skin conditions such as eczema and psoriasis. The decoction makes a gentle and effective wash for the eyes, although it must be diluted sufficiently before use.

Research Berberine has been shown to have antibiotic activity against cholera, giardia, shigella, salmonella and *E. coli*.

Cautions Take only under professional supervision. Do not take during pregnancy.



***Barberry** berries were traditionally used in a decoction to treat peptic ulcers.*

Beta vulgaris (Chenopodiaceae)

Red Beet, White Beet

Description Perennial with swollen edible red or white root, upright shoots, large deep green leaves tinged with red and spikes of green-petalled flowers.

Habitat & Cultivation Sea beet (the wild sub-species) is native to coastal regions of Europe, North Africa, and Asia from Turkey to the East Indies. Red beet is widely cultivated as a vegetable, white beet as a source of sugar.

Part Used Root.

Constituents White beet contains betaine, which promotes liver regeneration and fat metabolism. Red beet contains betanin (also found in red wine), which is partly responsible for its immune-enhancing effect, and inorganic nitrate, which increases nitric oxide levels within the body and thus lowers blood pressure.

History & Folklore *The Materia Medica*, written by Dioscorides in the 1st century CE, recommends the following prescription for clearing the head and relieving earache – mix beetroot juice with honey and sniff it up the nose.

Medicinal Actions & Uses White beet acts to support the liver, bile ducts and gallbladder, influencing fat metabolism and helping to lower blood fat levels. Several clinical trials have shown that red beetroot juice (due to its high nitrate content) relaxes the arteries and lowers blood pressure in people with high blood pressure. A glass a day of juice will help to support lower blood pressure. Red beet juice is also thought to support immune function and is prescribed by herbalists as part of a cancer-treatment regime – though large quantities must be taken (up to 1 litre a day) to be effective.

Betula pendula syn. *B. verrucosa* (Betulaceae)

Silver Birch

Description Handsome slender deciduous tree growing to a height of 30 m (100 ft). Has pale grey papery bark, toothed leaves, and catkins in spring.

Habitat & Cultivation Silver birch is common in Europe, in temperate regions of Asia and in North America. It flourishes in woods and thickets, and is also planted as a garden ornamental. The leaves are gathered in late spring.

***Silver birch** is widespread in temperate regions throughout the northern hemisphere. Its leaf oil is used to improve eczema and psoriasis.*

Parts Used Leaves, bark, sap.

Constituents Silver birch contains saponins, flavonoids, tannin, and a volatile oil that includes methyl salicylate.

History & Folklore Silver birch has been used as a medicinal herb in northern Europe and Asia since the earliest times. Its name is thought to derive from the Sanskrit word *bhurga*, meaning "tree whose bark is used for writing on". In the highlands of Scotland, silver birch sap – tapped in the spring – was drunk as a treatment for bladder and kidney complaints.

Medicinal Actions & Uses An infusion made with silver birch leaves hastens the removal of waste products in the urine, and is beneficial for kidney stones and bladder stones (gravel), rheumatic conditions and gout. The leaves are also used, in combination with diuretic herbs, to reduce fluid retention and swelling. Silver birch sap is a mild diuretic. The oil distilled from the leaves is antiseptic and is commonly used in preparations to treat eczema and psoriasis. A decoction of silver birch bark can be used as a lotion for chronic skin problems. The bark can also be macerated in oil and applied to joints for the relief of rheumatism.

Related Species The Himalayan silver birch (*B. utilis*), a close relative, is used to treat convulsions, dysentery, haemorrhages and skin diseases.

Bidens tripartita (Asteraceae)

Bur Marigold

Description Annual growing to a height of 60 cm (2 ft). Has toothed lance-shaped leaves, yellow button-like flowerheads and burr-like fruit.

Habitat & Cultivation Bur marigold grows throughout Europe and in other temperate regions, including Australia and New Zealand. It is found in damp places and near fresh water.

Parts Used Aerial parts.

Constituents Bur marigold contains flavonoids, xanthophylls, volatile oil, acetylenes, sterols and tannins.

History & Folklore The herbalist Nicholas Culpeper, writing in 1652, extolled bur marigold, "It helps the cachexia or evil disposition of the body, the dropsy and yellow jaundice, it opens obstructions of the liver, and mollifies the hardness of the spleen being applied outwardly."

Medicinal Actions & Uses Little used in medicine today, bur marigold is astringent and diuretic, and employed to treat bladder and kidney problems. It has a longstanding reputation for staunching blood flow, and can be used for uterine haemorrhage and conditions causing blood in the urine. Bur marigold's astringency is beneficial in counteracting peptic ulceration, diarrhoea and ulcerative colitis.

Bignonia catalpa syn. *Catalpa bignonioides* (Bignoniaceae)

Indian Bean Tree

Description Deciduous tree growing to 20 m (65 ft). Has large oval leaves in whorls of 3, white flowers in conical clusters, and long thin fruits (bean pods).
Habitat & Cultivation Native to the south-eastern US, this tree is often planted in gardens in southern and western Europe.
Parts Used Bark, fruit.
Constituents The bark contains catalpine, and oxylenzoic and protocatechetic acids.
History & Folklore Indian bean tree bark was formerly used as a substitute for quinine in treating malaria.
Medicinal Actions & Uses The mildly sedative and narcotic bark is used to treat asthma, whooping cough and other spasmodic coughs in children. The distilled water of the fruit, in combination with herbs commonly used to treat eye problems, such as eyebright (*Euphrasia officinalis*, p. 209) and rue (*Ruta graveolens*, p. 265), makes an effective eyewash for conjunctivitis and other eye infections.
Caution Never use the roots, which are highly poisonous.

Bixa orellana (Bixaceae)

Annatto

Description Evergreen tree growing to 8 m (26 ft). Has large leaves, pink or white flowers, and red fruit capsules containing red seeds.
Habitat & Cultivation Native to tropical forests in the Americas and the West Indies, annatto is widely cultivated in similar climatic zones, notably in India. Seeds are collected as the fruit splits open.
Parts Used Seeds, leaves, root.
Constituents The seed pulp contains carotenoid colouring principles.
History & Folklore In tropical South America, the brilliant red pigment in the seed pulp has traditionally been used in body painting. Annatto dye is also used as a colourant for margarine and cheese.
Medicinal Actions & Uses In the Caribbean, annatto leaves and roots are used to make an astringent infusion that is taken to treat fever, epilepsy and dysentery. The infusion is also taken as an aphrodisiac. The leaves alone make an infusion that is used as a gargle. The seed pulp reduces the severity of blistering when applied immediately to burns. Taken internally, the seed pulp acts as a general antidote for poisoning.

Borago officinalis (Boraginaceae)

Borage

Description Hairy annual growing to 60 cm (2 ft). Has a pulpy stem, large basal leaves, and attractive blue flowers in summer.
Habitat & Cultivation Borage is a common Mediterranean weed thought to originate from southern Spain and Morocco. Often grown as a garden herb, it is also extensively cultivated for its seed oil.
Parts Used Aerial parts, flowers, seed oil.
Constituents Borage contains mucilage, tannins and pyrrolizidine alkaloids, which in isolation are toxic to the liver. The seeds contain up to 24% gamma-linolenic acid.

***Borage's** attractive blue flowers are traditionally used to decorate salads.*

History & Folklore The herbalist John Gerard, writing in 1597, extols borage's virtues, "A syrup made of the flowers of borage comforteth the heart, purgeth melancholy, and quieteth the phreneticke or lunaticke person." Gerard also quotes the old saying, "I, Borage, bring always courage".
Medicinal Actions & Uses With its high mucilage content, borage is a demulcent herb and soothes respiratory problems. Its emollient qualities make it helpful for sore and inflamed skin – prepared either as freshly squeezed juice, in a poultice or as an infusion. The flowers encourage sweating and the leaves are diuretic. The seed oil is particularly rich in polyunsaturated fats, and is superior in this respect to evening primrose oil (*Oenothera biennis*, p. 241). Borage seed oil is used to treat premenstrual complaints, rheumatic problems, eczema and other chronic skin conditions.
Cautions Due to the presence of toxic pyrrolizidine alkaloids, there is uncertainty over borage's safety as a medicine. It is subject to legal restrictions in some countries and should not be taken internally. These restrictions and cautions do not apply to borage seed oil.

Boswellia serrata (Burseraceae)

Boswellia,

Indian Olibanum, Sallaki (Sanskrit)

Description Deciduous tree, growing to about 15 m (49 ft), with pale papery bark, compound leaves and clusters of small white flowers. The gum resin exudes from the bark and is transparent gold in colour.
Habitat & Cultivation Boswellia grows in dry, hilly regions of central and northern India.
Parts Used Gum resin, bark.
Constituents Boswellia contains triterpene acids (including beta-boswellic acid), essential oil, terpenols, monosaccharides, uronic acids, sterols and tannins.
History & Folklore Boswellia, a close relative of frankincense (*B. sacra*), has been used for many thousands of years as an astringent and anti-inflammatory.
Medicinal Actions & Uses Boswellia makes an effective mouthwash and gargle, the antiseptic and astringent resin helping to heal and tighten inflamed mucous membranes. Sore throat, laryngitis, mouth ulcers and gum disease will all benefit. Boswellia is also markedly anti-inflammatory and anti-arthritic. This makes it potentially useful in chronic inflammatory diseases such as rheumatoid arthritis, ulcerative colitis and psoriasis. Other conditions that may benefit include gout, asthma, hay fever and nettle rash.
Research Research into Boswellia is ongoing and has expanded in recent years. Clinical trials (mostly in India and Germany) indicate that Boswellia counteracts inflammation in conditions such as arthritis and inflammatory bowel disease. The majority of trials noted that symptoms such as pain, stiffness and poor grip strength all improved. There is increasing evidence that Boswellia has marked pain-relieving activity, and that it promotes stable blood glucose levels in people with type 2 diabetes.

Brassica oleracea (Brassicaceae)

Cabbage

Description Biennial or perennial herb growing to 2.5 m (8 ft). Has a thick stem, grey leaves and 4-petalled yellow flowers. Within the first year, it produces a greatly enlarged terminal bud that develops into the familiar cabbagehead in late summer.

Habitat & Cultivation Wild cabbage is native to coasts of the English Channel and the Mediterranean. Cultivated varieties are produced worldwide as a vegetable.

Parts Used Leaves.

Constituents Cabbage is rich in vitamins A, B_1, B_2 and C.

History & Folklore The wholesome cabbage is one of the oldest vegetables. According to Greek myth, the plant sprang into existence from the perspiration of Zeus. In a Greek ritual, cabbage was given to expectant mothers shortly before birth in order to establish good breast-milk production. The Romans used cabbage as an antidote, especially to alcohol, believing it countered intoxication and prevented or reduced a hangover. They also used cabbage leaves to cleanse infected wounds. It is thought to have been cultivated in Britain from around 500 CE.

Cabbage

One traditional method of making a cabbage poultice, still used today, is to cut out the thick midrib of a leaf and iron it, placing it while still hot on the area to be treated.

Medicinal Actions & Uses Cabbage's best-known medicinal use is as a poultice – the leaves of the wild or cultivated plant are blanched, crushed or chopped, and applied to swellings, tumours and painful joints. Wild cabbage leaves eaten raw or cooked aid digestion and the breakdown of toxins in the liver – so the Romans' eating it to ease a hangover was in fact quite justified. Cabbage is also detoxifying and helpful in the long-term treatment of arthritis. The high vitamin C content of cabbage has made it useful in the prevention of scurvy.

Caution A cabbage poultice may cause blisters if left on for several hours.

Bryonia dioica syn. *B. cretica* subsp. *dioica* (Cucurbitaceae)

White Bryony

Description Perennial climbing vine with fleshy taproot up to 15 cm (6 in) thick. Has straggling stem with tendrils, greenish flowers and red berries.

Habitat & Cultivation White bryony is native to southern England and parts of Europe. The root is dug up in autumn.

Part Used Root.

Constituents White bryony contains cucurbitacins, glycosides, volatile oil and tannins. The cucurbitacins kill cells and so act on tumours.

History & Folklore From prehistory to the Middle Ages, the thick roots of white bryony were cut into a human shape as a substitute (or a counterfeit) for mandrake root (*Mandragora officinarum*, p. 232), which was believed to afford magical protection. The Greek physician Dioscorides (1st century CE) reports that the leaves, fruit and root of white bryony were applied to gangrenous wounds. In medieval England, the plant was used to treat leprosy.

White bryony has anti-tumour and anti-rheumatic properties.

Medicinal Actions & Uses A powerful cathartic and purgative, bryony is used with great caution in herbal medicine today. It is principally prescribed for painful rheumatic conditions. It may be taken internally, or applied as a counter-irritant, causing swelling and increased blood flow to the area. White bryony is also given for other inflammatory conditions such as duodenal ulcers, asthma, bronchitis and pleurisy, and may be used to reduce high blood pressure. The whole herb has antiviral activity and research is now suggesting that it acts as an adaptogen – helping the body to adapt more effectively to stress and strain.

Related Species *B. alba* is used in homeopathic medicine. Black bryony (*Tamus communis*) is an unrelated plant with approximately similar uses.

Cautions Bryony is a toxic plant. Use only under professional supervision. Do not take during pregnancy.

Butea monosperma (Fabaceae)

Palas,

Flame of the Forest, Bengal Kino

Description Deciduous tree growing to 15 m (49 ft). Has 3-lobed leaves and large orange-red flowers in clusters.

Habitat & Cultivation Palas is native to India and South-East Asia. It grows in forests and in open areas to altitudes of 1,200 m (3,900 ft).

Parts Used Bark, flowers, leaves, gum, and seeds.

Constituents All parts of the tree except the seeds contain tannins.

Medicinal Actions & Uses The gum that oozes from incisions made in palas bark is known as Bengal kino. Mildly astringent, it is used as a substitute for the kino derived from bastard teak (*Pterocarpus marsupium*). Bengal kino is taken as a decoction or a tincture for acid indigestion, diarrhoea and dysentery, and used as a gargle for sore throats and as a douche for vaginitis. Early research suggests that the leaves and bark have the potential to treat diabetes, and that the leaves exert a beneficial action on diarrhoea.

Caution Do not take during pregnancy.

Caesalpinia bonduc (Caesalpiniaceae)

Nikkar Nut

Description Thorny bush growing to 9 m (30 ft), with spiny compound leaves, yellow flowers in dense clusters, and prickly pods containing yellow seeds (nuts).

Habitat & Cultivation Nikkar nut is pan-tropical, common in both tropical Asia and Africa. Its seeds are gathered when ripe.

Parts Used Seeds.

Constituents The seeds contain isoflavonoids, diterpenes, a bitter principle and a fixed oil (20%) rich in linoleic acid (68%).

Medicinal Actions & Uses Nikkar seeds are used to treat fevers and are taken as a tonic and aphrodisiac. In India, they are often mixed with black pepper (*Piper nigrum*, p. 250) for medicinal use. The seeds are also taken for inflammatory conditions such as arthritis. Roasted nikkar seeds are used in the treatment of diabetes.

Related Species A decoction of the bark of the Caribbean *C. bahamensis* is used for liver and kidney infections, and a decoction of the wood is used for diabetes. An infusion of the leaves of *C. pulcherrima* (native to Asia and Africa) is taken for liver problems and mouth ulcers.

Calamintha ascendens syn. *C. sylvatica, C. officinalis* (Lamiaceae)

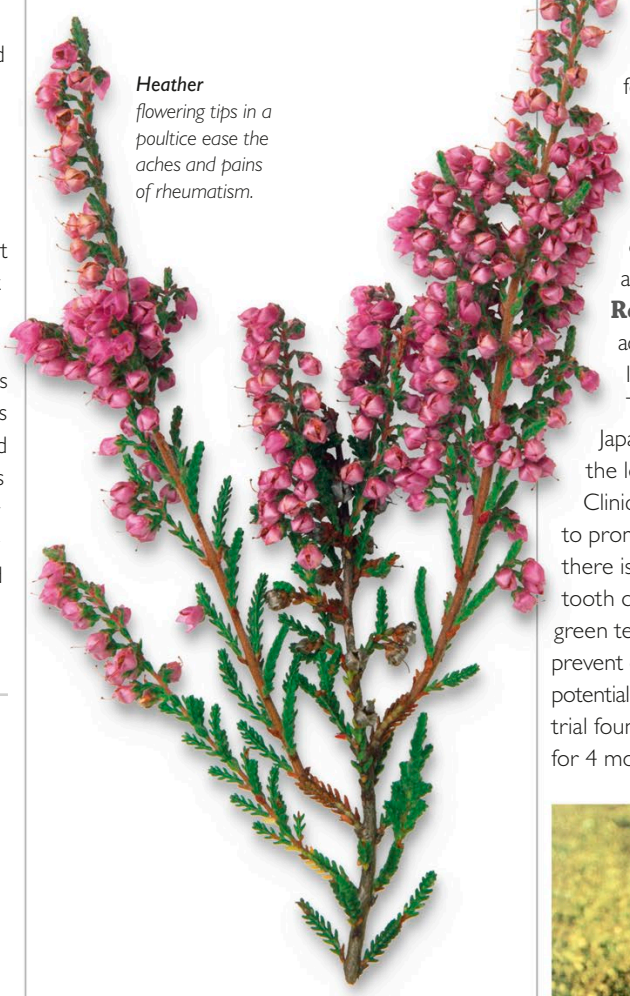
Calamint

Description Mint-scented perennial growing to 60 cm (2 ft). Has hairy oval leaves, and purple flowers in late summer.
Habitat & Cultivation Calamint grows wild in Europe and Asia from the British Isles eastward to Iran, especially in the Mediterranean region. It flourishes along roads and in dry places.
Parts Used Aerial parts.
Constituents Calamint contains a volatile oil (about 0.35%) consisting mainly of pulegone.
History & Folklore In classical legend, calamint had the power to drive away the Basilisk, a serpent credited with the ability to kill with its gaze or breath.
Medicinal Actions & Uses Calamint stimulates sweating, and hence helps lower fevers. It also settles wind and indigestion. It is expectorant, and is a good cough and cold remedy. This range of applications makes it a good medicinal herb for mild respiratory infections. It should preferably be mixed with other herbs such as yarrow (*Achillea millefolium*, p. 56) and thyme (*Thymus vulgaris*, p. 143).
Caution Do not take during pregnancy.

Calluna vulgaris (Ericaceae)

Heather, Ling

Description Small, branched shrub growing to 60 cm (2 ft). Has tiny leaves and white or pink to pale-purple flowers growing on spikes.
Habitat & Cultivation Heather grows in temperate regions of the northern hemisphere. It is found on heaths, moors, bogs and in open woods. The herb is gathered when in flower in late summer.
Parts Used Flowering tips.
Constituents Heather contains flavonoids, arbutin, tannin and an alkaloid, ericodin. This constituent has a strongly disinfectant effect within the bladder and urinary tubules.
History & Folklore If the "*erica*" that Dioscorides discusses in his 1st century CE *Materia Medica* is indeed heather, as has been surmised, then the flowering tips were used in classical times to treat snake bite. Galen (131–200 CE) wrote of the plant's ability to induce sweating. The rootstock of heather is made into musical pipes, the foliage provides mattress stuffing, and the flowers produce a delicate honey. White heather is considered very lucky, especially in Scotland.
Medicinal Actions & Uses Heather is a good urinary antiseptic and diuretic, disinfecting the urinary tract and mildly increasing urine production. Besides its role in treating cystitis and inflammatory bladder conditions, heather has been used to treat kidney and bladder stones. Cleansing and detoxifying, it is helpful for rheumatism, arthritis and gout. A hot poultice of heather tips is a traditional remedy for chilblains and rheumatism.

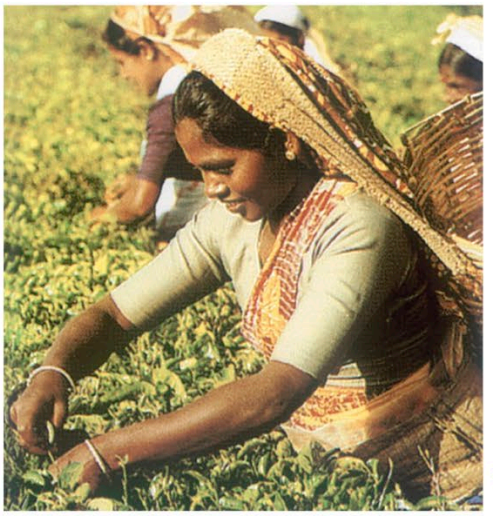


Heather flowering tips in a poultice ease the aches and pains of rheumatism.

Camellia sinensis syn. *Thea sinensis* (Theaceae)

Tea

Description Evergreen shrub clipped to 1.5 m (5 ft) in cultivation, with leathery, dark green leaves and fragrant white flowers.
Habitat & Cultivation Cultivated principally in India, Sri Lanka and China, tea has been grown since the earliest times.
Parts Used Leaves, buds.
Constituents Tea contains xanthines, caffeine (1–5%), theobromine, tannins including polyphenols, flavonoids, fats and vitamin C. Green tea contains significant levels of polyphenols; black tea, which is produced by a process of fermentation, has lower levels.
History & Folklore In China and Japan many rituals have developed around tea drinking. Significantly it is mostly green tea that is drunk in this way.
Medicinal Actions & Uses Due to its astringency tea is useful in digestive infections, helping to tighten up the mucous membranes of the gut and reduce looseness. A strong brew of tea may be used to soothe irritated eyelids, insect stings, swellings and sunburn, and in an emergency, if nothing better is at hand, tea makes a serviceable treatment for minor burns. In Ayurvedic medicine tea is considered astringent and a nerve tonic. The caffeine in tea may help to relieve headaches, though less effectively than coffee (*Coffea arabica*, p. 192). In the light of research, green tea is recognized as being a much healthier drink than black tea.
Research Green tea's strong antioxidant activity is due to polyphenols, which give the leaf potential as a cancer preventative. The high intake of green tea in China and Japan is thought to be partly responsible for the low incidence of cancer in these countries. Clinical trials indicate that green tea may help to promote weight loss and treat hepatitis, and there is the suggestion that it helps to prevent tooth decay. A recent clinical trial indicated that green tea has a genoprotective action, helping to prevent degenerative changes within the body, and potentially slowing the ageing process. A 2013 clinical trial found that green tea extract taken by women for 4 months successfully shrank uterine fibroids.



Tea leaves are picked throughout the year and used both as a beverage and medicinally.

Cananga odorata syn. *Canangium odoratum* (Annonaceae)

Ylang-Ylang

Description Evergreen tree growing to 25 m (80 ft). Has lance-shaped leaves and strongly scented yellow-green flowers.
Habitat & Cultivation Native to Indonesia and the Philippines, ylang-ylang is cultivated in tropical Asia and Africa.
Parts Used Flowers, essential oil.
Constituents The essential oil contains linalool (11–30%), safrole, eugenol, geraniol, and sesquiterpenes (including 15–25% germacrene).
History & Folklore The flowers are a traditional adornment in the Far East. Their scent is thought to have aphrodisiac qualities.
Medicinal Actions & Uses The flowers and essential oil are sedative, antimicrobial and antioxidant. The oil has a soothing effect, and its main therapeutic uses are to slow an excessively fast heart rate and to lower blood pressure. With its reputation as an aphrodisiac, ylang-ylang may be helpful in treating impotence.
Caution Do not take the essential oil internally without professional supervision.

Canella winterana syn. *C. alba* (Canellaceae)

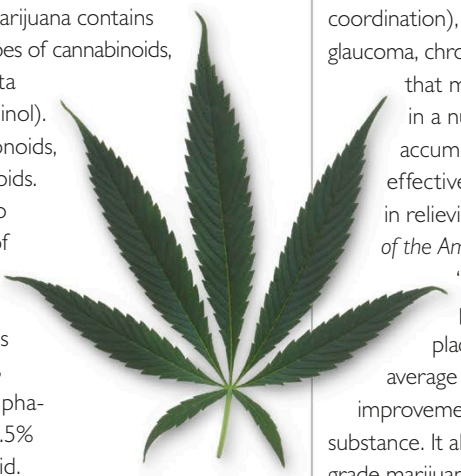
Canella,
Wild Cinnamon

Description White-barked tree growing to 15 m (49 ft). Has elliptical leaves, red flowers and purple-black berries.
Habitat & Cultivation Native to the Caribbean and Florida, canella is found in coastal swamps and scrubland. The bark is collected by gently beating the branches.
Part Used Bark.
Constituents Canella contains about 1% volatile oil (including eugenol, alpha-pinene and caryophyllene), alpha-aldehydes (including canellal), resin and mannitol.
History & Folklore Canella has for a long time been used as a flavouring for tobacco (*Nicotiana tabacum*, p. 240).
Medicinal Actions & Uses Canella is cytotoxic (kills cells), antifungal and repels insects. It is also aromatic, stimulant and antiseptic. Canella is often used in the West Indies and Latin America as a substitute for cinnamon (*Cinnamomum* spp., p. 81). The infusion is drunk for its pleasant flavour and tonic effect (the bark is considered a sexual stimulant). Canella is also used for stomach problems and indigestion.

Cannabis sativa (Cannabinaceae)

Marijuana,
Huo Ma Ren (Chinese)

Description Erect, branching annual growing to 4 m (13 ft). Has fine, serrated, segmented leaves. Both male and female plants flower; the female plant produces seeds.
Habitat & Cultivation Native to the Caucasus, China, Iran and northern India, marijuana is cultivated the world over, both legally (for the fibre and seeds) and illegally (for use as a recreational drug).
Parts Used Flowering tops of female plants, seeds.
Constituents Marijuana contains over 60 different types of cannabinoids, including THC (delta 9-tetrahydrocannabinol). It also contains flavonoids, volatile oil and alkaloids. It is the only plant to contain THC, one of the main psycho-active constituents. The seed oil contains approximately 55% linoleic acid, 20% alpha-linolenic acid and 1.5% gamma-linolenic acid.


Marijuana leaf

History & Folklore In ancient Egypt, marijuana was used to treat inflammations of the eye, and "to cool the uterus". First records of marijuana's use in India date back to about 800 BCE, where it is recommended for catarrh. Famously, Queen Victoria took marijuana as an analgesic – in the 19th century the plant was a standard painkiller for menstrual pain and cramps. From 1840 to 1900, over 100 papers were published recommending marijuana as a medicine.
Medicinal Actions & Uses In view of its long history as a medicinal treatment, it is hardly surprising that marijuana has, at one time or another, been recommended for almost every illness. As an analgesic, it appears to relieve pain with minimal side-effects, being particularly helpful for cancer and aids patients undergoing chemotherapy. For those suffering from multiple sclerosis, cerebral palsy and other muscular illnesses, marijuana can reduce neurological overactivity and muscle spasm. The plant provides effective treatment for glaucoma, in which pressure within the eye is abnormally high, and is hypotensive, lowering blood pressure. Marijuana relieves asthma, menstrual pains, the pain of childbirth, and of arthritis and rheumatism, and may have value as an antidepressant. It encourages and induces sleep. The seeds are used in Chinese medicine as a strong but well-tolerated laxative, especially for constipation in the elderly; and as a dietary supplement provide a balanced and healthy supply of polyunsaturated fatty acids.
Research Modern research shows marijuana to be a sedative, an anti-inflammatory agent, and an analgesic as effective as codeine. Research has focused on the constituent THC, but it is clear that the complex of constituents within marijuana has a significantly wider range of applications. Clinical studies from 1975 onwards have shown that the cannabinoids are powerfully anti-emetic, especially in those having chemotherapy. To varying degrees, clinical trials indicate that marijuana or its cannabinoids relieves symptoms in multiple sclerosis (such as tremor, muscle spasm and poor coordination), in spinal cord injuries, epilepsy, glaucoma, chronic pain and loss of appetite. Now that medical marijuana is legally available in a number of US States, there is accumulating evidence of just how effective the herb, and extracts of it, are in relieving pain. A 2015 article in the *Journal of the American Medical Association* found "30% or greater improvement in pain with cannabinoid compared to placebo", i.e. marijuana extracts on average produced a 30% or more improvement when compared to an inert substance. It also found that availability of medical-grade marijuana was associated "with a 15–35% decrease in substance abuse admissions". Not only is medical marijuana a valuable analgesic, it also helps to prevent addiction to other painkillers, in particular opioids, such as codeine and morphine.
Caution In the UK, it is illegal to grow or possess cannabis in any form.

Capparis spinosa (Capparaceae)

Caper

Description Shrub growing to 1 m (3 ft), with spiny trailing stems, fleshy oval leaves, green buds, large white flowers, and red berries in autumn.
Habitat & Cultivation Native to the Mediterranean region, caper thrives in wasteland, often growing on stony terrain. The buds are harvested before the flowers open and are pickled for culinary use.
Parts Used Root bark, bark, flower buds.
Constituents Caper contains phenolic compounds.
History & Folklore Though much favoured as a piquant food by the ancient Greeks, capers were said to disagree with the stomach. They remain a popular condiment to this day.
Medicinal Actions & Uses The unopened flower buds are laxative and, if prepared correctly with vinegar, are thought to ease stomach pain. The bark is bitter and diuretic and can be taken

Caper's buds pickled with vinegar have been used as a condiment since ancient times.

immediately before meals to increase the appetite. The root bark is purifying and stops internal bleeding. It is used to treat skin conditions, capillary weakness and easy bruising and is also used in cosmetic preparations. A decoction of the plant is used to treat vaginal thrush.

Related Species A decoction of the North American *C. cynophallophora* is taken to encourage the onset of menstruation, and is used as a gargle for throat infections.

Capsella bursa-pastoris syn. *Thlaspi bursa-pastoris* (Brassicaceae)

Shepherd's Purse

Description Annual or biennial with an erect stem, rosette of basal leaves, 4-petalled white flowers and heart-shaped seed pods.

Habitat & Cultivation Thought to be native to Europe and Asia, shepherd's purse is now found throughout most temperate regions, and grows profusely as a weed. It is harvested throughout the year.

Parts Used Aerial parts.

Constituents Contains flavonoids, polypeptides, choline, acetylcholine, histamine and tyramine.

History & Folklore This herb's name derives from the appearance of the seed pods, which resemble heart-shaped purses. During the First World War, when the standard herbal medicines for staunching blood – goldenseal (*Hydrastis canadensis*, p. 105) and ergot (*Claviceps purpurea*) – were unobtainable in Britain, shepherd's purse was used as an alternative.

Medicinal Actions & Uses One of the best remedies for preventing or arresting haemorrhage, shepherd's purse has long been a specific treatment for heavy uterine bleeding. While weaker-acting in this respect than ergot, shepherd's purse has none of ergot's toxicity and is better tolerated by the body. It may be used for bleeding of all kinds – from nosebleeds to blood in the urine. An astringent herb, it disinfects the urinary tract in cases of cystitis, and is taken for diarrhoea. It is used in Chinese medicine to treat dysentery and eye problems.

Research Reports suggest that the plant is anti-inflammatory and reduces fever.

Caution Do not take during pregnancy.

Self-help Use Heavy menstrual bleeding, p. 315.

Cardiospermum spp. (Sapindaceae)

Balloon Vine

Description Deciduous perennial climbers growing to 3 m (10 ft), with compound leaves, small white flowers and black seeds.

Habitat & Cultivation Balloon vine is found growing in tropical regions around the world.

Parts Used Root, leaves, seeds.

Balloon vine leaves are applied to relieve aching joints.

Constituents Most *Cardiospermum* species contain cyanogenic glycosides.

History & Folklore Native Amazonians string balloon vine seeds into armbands that are worn to ward off snakes.

Medicinal Actions & Uses In Indian herbal medicine, balloon vine root is used to bring on delayed menstruation and to relieve backache and arthritis. The leaves stimulate local circulation and are applied to painful joints to help speed the clearing of toxins. The seeds are also thought to help in the treatment of arthritis. The plant as a whole has sedative properties.

Caution Do not take during pregnancy.

Carica papaya (Caricaceae)

Papaya

Description Herbaceous tree growing very rapidly to 8 m (26 ft). Has segmented leaves, yellow flowers, and large, black-seeded yellow to orange fruits weighing up to 5 kg (11 lb).

Habitat & Cultivation Native to tropical America, papaya is now cultivated in tropical regions throughout the world.

Parts Used Fruit, latex, leaves, flowers, seeds.

Constituents The fruit contains proteolytic enzymes (papain and chymopapain), and traces of an alkaloid, carpaine. Papain, which is found in the milky white latex that flows from incisions in the unripe fruit, is a protein-dissolving enzyme that aids digestion.

History & Folklore Papaya juice, shoots and latex were used in Mayan herbal medicine. In tropical Latin America, the leaves are used as a meat tenderizer.

Medicinal Actions & Uses Papaya's main medicinal use is as a digestive agent. The leaves and the fruit can both be used (the unripe fruit is especially effective). The latex from the trunk of the tree is applied externally to speed the healing of wounds, ulcers, boils, warts and cancerous tumours. The seeds are used as a gentle purgative for worms. The latex has a similar but more violent effect. The flowers may be taken in an infusion to induce menstruation, and a decoction of the ripe fruit is helpful for treating persistent diarrhoea and dysentery in children. The ripe fruit is mildly laxative and the leaves are used to dress wounds.

Fruit

Carthamus tinctorius (Asteraceae)

Safflower,
Hong Hua (Chinese)

Description Annual herb growing to 90 cm (3 ft). Has long spiny leaves with 6 oblong-oval leaflets, and groups of yellow flowers arising from the leaf axils.
Habitat & Cultivation Thought to be native to Iran and north-western India, this herb is also found in North America and the Far East. It grows on wasteground and is gathered in summer.
Parts Used Flowers, seeds, seed oil.
Constituents Safflower contains lignans, polysaccharides and a volatile oil. The seeds contain a fixed oil, up to 80% linoleic acid.
History & Folklore In 19th century North American herbal medicine, safflower was used to induce sweating, to promote the onset of a menstrual period and as a treatment for measles. Safflower flowers are falsely sold as saffron (*Crocus sativus*, p. 89).
Medicinal Actions & Uses In Chinese herbal medicine, the flowers are given to stimulate menstruation and to relieve abdominal pain. The flowers are also used to cleanse and heal wounds and sores and to treat measles. In the Anglo-American herbal tradition, the flowers are given as a treatment for fever and skin rashes. The unpurified seed oil is purgative.
Research Chinese research indicates that safflower flowers can reduce coronary artery disease, and lower cholesterol levels. Safflower contains a polysaccharide that has been shown to stimulate immune function in mice. Safflower oil also lowers cholesterol levels.
Caution Do not take the flowers or seeds during pregnancy (seed oil is safe).

Carum carvi (Apiaceae)

Caraway

Description Aromatic annual growing to 60 cm (2 ft). Has ridged stem, feathery leaves and umbels of white flowers in midsummer. Exploding capsules each contain 2 small narrow seeds.
Habitat & Cultivation Caraway grows wild in Europe, North Africa and Asia. It prefers sunny sites up to 2,000 m (6,600 ft) above sea level. It is cultivated in Europe, Russia, North Africa and the US, and the seeds are harvested ripe in late summer.
Parts Used Seeds, essential oil.
Constituents Caraway contains a volatile oil high in carvone (about 50%) and limonene. It also contains a fixed oil, flavonoids, polysaccharides, proteins and furanocoumarins.
History & Folklore Caraway seed is "conducive to all the cold griefs of the head and stomach… and has a moderate quality whereby it breaketh wind, and provoketh urine" (Nicholas Culpeper, *The English Physitian*, 1652). The seeds are commonly used in cooking.
Medicinal Actions & Uses Caraway is similar in action to anise (*Pimpinella anisum*, p. 248) and fennel (*Foeniculum vulgare*, p. 212). Being antispasmodic, the seeds soothe the digestive tract, acting directly on the intestinal muscles to relieve colic and griping as well as bloating and flatulence. They sweeten the breath, improve appetite, counter heart irregularity caused by excess digestive wind, and ease cramping period pain. In addition, the seeds are expectorant and tonic and are frequently used in bronchitis and cough remedies, especially those for children. Caraway has a reputation for increasing breast-milk production. The diluted essential oil is useful for scabies.
Research In a German clinical trial (1999) patients with dyspepsia were given a combination of peppermint and caraway essential oils. Overall, patients experienced a significant reduction in symptoms.
Caution Do not use the essential oil internally except under professional supervision.

***Caraway** is antispasmodic, diuretic and expectorant. It is a mild remedy, suitable for children.*

Castanea sativa (Fagaceae)

Sweet Chestnut

Description Deciduous tree growing to a height of 30 m (100 ft). Has smooth silver-grey bark, lance-shaped dark green leaves, male and female catkins, and spiny yellow-green seed cases containing 2–3 glossy brown nuts.

***Sweet chestnut** nuts are a nutritious food and the leaves are useful for treating coughs.*

Habitat & Cultivation Native to the Mediterranean, Asia Minor and the Caucasus, sweet chestnut grows freely across Europe, including Britain. It is cultivated for its timber and for its nuts, which are collected in the autumn.
Parts Used Leaves, bark.
Constituents Sweet chestnut contains tannins, plastoquinones and mucilage.
History & Folklore Tradition has it that the sweet chestnut tree was carried from Turkey to Sardinia and from there it subsequently spread through Europe, arriving in Britain with the Romans. The nuts are a nutritious foodstuff that can be roasted, candied, or made into a flour. The flowers are sometimes added to blends of aromatic tobaccos.
Medicinal Actions & Uses An infusion of sweet chestnut leaves is taken to treat whooping cough, bronchitis and bronchial catarrh. The preparation tightens the mucous membranes and inhibits racking coughs. A decoction of leaves or bark is also valuable as a gargle for sore throats, and may be taken for diarrhoea. The leaves are used in the treatment of rheumatic conditions, to ease lower back pain and also to relieve stiff joints or muscles.
Related Species The Mohicans in North America used an infusion obtained from American chestnut leaves (*C. dentata*) to treat whooping cough. In his *Natural History of North Carolina* (1737), John Brickell reports that the "leaves or bark of the tree boiled in wine are good against the bloody flux [excessive bleeding]".

Catha edulis (Celastraceae)

Khat,
Catha

Description Tree growing to 15 m (49 ft). Has reddish twigs, oval leathery leaves and small yellow or white flowers.
Habitat & Cultivation Native to the Middle East and the Horn of Africa, khat prefers grassland and arid conditions. It is cultivated in Ethiopia, Somalia, East Africa and the Arabian peninsula.
Parts Used Leaves, twigs.
Constituents Khat contains alkaloids similar to those in *Ephedra* species – norpseudoephedrine (up to 1%) and ephedrine, tannins and a volatile oil. Ephedrine-type alkaloids strongly stimulate the central nervous system, are anti-allergenic and suppress the appetite.
History & Folklore Khat is taken in some African and Middle Eastern countries as a stimulant, tonic and appetite suppressant. Infused, smoked or chewed, khat produces an effect somewhat similar to that of coca leaves (*Erythroxylum coca*, p. 206). Whether khat is addictive is unclear, but withdrawal can produce lethargy.
Medicinal Actions & Uses Mainly used as a social drug, khat is also chewed fresh or taken in an infusion to treat ailments such as malaria. In Africa, it is taken in old age, stimulating and improving mental function. Khat is used in Germany to counter obesity.
Cautions Khat may cause headaches, raised blood pressure and general over-stimulation if used more than a few weeks at a time. Do not take during pregnancy or while breast-feeding.

Caulophyllum thalictroides (Berberidaceae)

Blue Cohosh

Description Upright perennial growing to 1 m (3 ft) with large, 3-lobed leaves, yellow to purple flowers and striking blue berries.
Habitat & Cultivation Blue Cohosh grows wild in much of eastern North America from Manitoba to Alabama, preferring woodland valleys and damp, north-facing slopes. It is mainly wild-harvested but is also cultivated commercially.
Parts Used The root and rhizome are harvested in the autumn.
Constituents Blue cohosh contains alkaloids, steroidal saponins and resin.
History & Folklore "Cohosh" is an Algonquin name and blue cohosh was a popular herb with many Native American tribes. Though it was taken by both sexes to treat genito-urinary problems, it was primarily considered a women's herb.

Blue cohosh is mainly wild-harvested but is also cultivated commercially.

Medicinal Actions & Uses Current medicinal uses of blue cohosh are not that different from the past – the root is still valued as a women's remedy. It is often prescribed as a uterine tonic, bringing relief from uterine and ovarian pain, while regulating to improve menstrual blood flow. The herb also has anti-inflammatory activity and may be used in treatments for arthritic and rheumatic conditions.
Cautions Only take blue cohosh under professional supervision. Do not take during pregnancy or while breast-feeding. The plant can cause contact dermatitis.

Cedrus spp. (Pinaceae)

Cedar

Description Cedar of Lebanon (*C. libani*) is a majestic flat-topped tree growing to 40 m (130 ft). It has dark green needle-like leaves and oval cones. African cedar (*C. atlantica*) grows to 35 m (115 ft).
Habitat & Cultivation Cedar of Lebanon is native to mountain forests of Lebanon, Israel and south-west Turkey. Atlas cedar is native to the Atlas mountains of Morocco, growing from 1,400–2,200 m (4,600–7,200 ft) above sea level.
Parts Used Leaves, wood, essential oil.
Constituents The essential oil of Atlas cedar wood contains mainly alpha-pinene (up to 79%).
History & Folklore Cedar of Lebanon is thought to have been used in building Solomon's Temple and the Hanging Gardens of Babylon. The oil has been used for thousands of years in incense, perfumes and embalming.
Medicinal Actions & Uses Cedar of Lebanon is antiseptic and expectorant, acting to disinfect the respiratory tract. Cedarwood essential oil has been used for thousands of years for perfumes and for embalming. It is most commonly distilled from Atlas cedar and eastern red cedar (*Juniperus virginicus*). The oil is strongly antiseptic, astringent, diuretic, expectorant and sedative. Diluted and massaged into the skin, it treats catarrh, chest infections and cystitis. It is also used to treat skin wounds and ulcers.
Caution Do not take essential oil of cedar internally except under professional supervision.

Celtis australis (Ulmaceae)

Southern Nettle Tree

Description Dome-shaped deciduous tree growing to 25 m (80 ft). Has lance-shaped leaves, green flowers and small round purple-black fruits.
Habitat & Cultivation Native to the Mediterranean region and south-western Asia, southern nettle tree is also planted as a border tree in Italy and France.
Parts Used Leaves, fruit.
Constituents Southern nettle tree contains tannins and mucilage.
Medicinal Actions & Uses Due to their astringent properties, both the leaves and the fruit of southern nettle tree may be taken as a decoction to reduce heavy menstrual and intermenstrual uterine bleeding. The fruit and leaves may be used to astringe the mucous membranes of the gut in peptic ulcers, diarrhoea and dysentery.

Centaurea cyanus (Asteraceae)

Cornflower

Description Annual or biennial plant growing to 90 cm (3 ft). Has a multi-branched stem, a basal rosette of leaves and sky-blue flowers in summer.
Habitat & Cultivation Native to the Near East, cornflower grows wild in all temperate regions, often in cornfields. The flowers are gathered just after they open.
Parts Used Flowers, seeds, leaves.
Constituents Cornflower contains flavonoids, sesquiterpene lactones (including cnicin), acetylenes and coumarins. Cnicin is slightly antibiotic.
History & Folklore Cornflower's medicinal properties were first mentioned in the 12th-century writings of Hildegard of Bingen. Later, the herbalist Pierandrea Mattioli (1501–1577) recommended it on the basis of the Doctrine of Signatures, which held that a plant's appearance indicated the ailments it would cure. Cornflower's deep blue colour symbolized healthy eyes, and for this reason it became a treatment for eye ailments. (In France, the plant is called *casse-lunette*, or "break glasses".)
Medicinal Actions & Uses Cornflower is still used in French herbal medicine as a remedy for the eyes (the strained infusion is used as an eyewash, and the petals applied as a poultice), but opinion differs as to its efficacy. The petals are also taken as a bitter tonic and stimulant, improving digestion

and possibly supporting the liver as well as improving resistance to infection. The seeds have been used as a mild laxative for children. A decoction of the leaves is used to treat rheumatic complaints.
Related Species Greater knapweed *(C. scabiosa)* formed part of the medieval *salve*, an ointment applied to heal wounds and to treat skin infections.
Self-help Use Conjunctivitis, p. 310.

Cephaelis ipecacuanha (Rubiaceae)
Ipecacuanha

Description Small shrub with a slender stem growing to 30 cm (1 ft). Has a few oblong leaves, small white flowers and purple-black berries.
Habitat & Cultivation This herb grows mainly in Brazil. Cultivation has been attempted in South-East Asia with limited success. The root of 3-year-old plants is unearthed when the plant is in flower.
Parts Used Root, rhizome.
Constituents Ipecacuanha contains isoquinoline alkaloids, tannins and glycosides. The alkaloids are expectorant and, at a larger dose, cause vomiting and diarrhoea. They are also strongly amoebicidal.
History & Folklore Ipecacuanha came to Europe in 1672, and achieved fame as a cure for dysentery. But the cure was not without controversy. It appeared to work well in some cases but to have no effect in others. Now it is possible to see why. There are two types of dysentery – amoebic and bacillary. While the herb is strongly amoebicidal, it has little effect against bacilli.
Medicinal Actions & Uses Though a highly effective emetic (even moderate doses of ipecacuanha will stimulate vomiting until the contents of the stomach are cleared) it is now rarely used in conventional medicine as safer substitutes have been developed. Ipecacuanha continues to be a common ingredient in patent over-the-counter cough medicines, as its strong expectorant action helps to clear phlegm and ease irritable coughs. It is used in the treatment of bronchitis and whooping cough. Ipecacuanha is also still used for amoebic dysentery.
Cautions Do not use the root or rhizome. Take formulations containing ipecacuanha carefully and only as instructed on the label. Several deaths have resulted from overdose.

Ceratonia siliqua (Fabaceae)
Carob

Description Evergreen tree growing to a height of 10 m (30 ft). Has compound leaves, green flowers and large violet-brown fruit (bean pods).
Habitat & Cultivation Native to south-eastern Europe, western Asia and North Africa, carob flourishes in poor soil in warm temperate climates; it is said to "want sight of the sea". It is cultivated for its fruit, and harvested in late summer or autumn.
Parts Used Fruit, bark.
Constituents The fruit contains up to 70% sugars, fats, starch, proteins, vitamins and tannins.
History & Folklore In ancient Egypt, carob pods were combined with porridge, honey and wax as a remedy for diarrhoea. They also featured in recipes for expelling worms, and treating poor eyesight and eye infections.
Medicinal Actions & Uses Carob pods are nutritious and, due to their high sugar content, sweet-tasting and mildly laxative. A decoction of the pulp can be used as an antidiarrhoeal, gently helping to cleanse and relieve irritation within the gut.

Carob seeds were used to weigh gold and gave rise to the word "carat".

Cetraria islandica (Parmeliaceae)
Iceland Moss

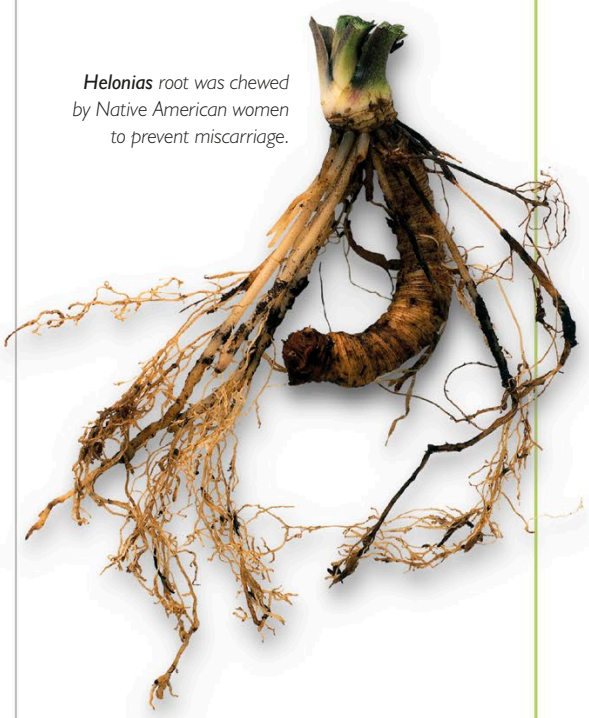
Description Yellow-green lichen growing in undulating, leathery tufts up to 8 cm (3 in) across.
Habitat & Cultivation Iceland moss is native to northern and alpine areas of Europe. It flourishes in sub-Arctic and mountainous regions on rocks and on the bark of trees, especially conifers. It is harvested throughout the year.
Part Used Whole plant.
Constituents Iceland moss contains lichen acids (including usnic acid) and about 50% polysaccharides. Usnic acid and the other lichen acids are powerfully antibiotic. The polysaccharides are antiviral.
History & Folklore Iceland moss has been used since ancient times as a cough remedy, and has also been used in European folk medicine as a cancer treatment.

Iceland moss is used to ease coughs and treat catarrh. It also has a soothing and bitter tonic effect on the digestive tract.

Medicinal Actions & Uses Strongly demulcent, Iceland moss soothes the mucous membranes of the chest, counters catarrh and calms dry and paroxysmal coughs, being particularly helpful as a treatment for elderly people. Iceland moss is also very bitter and, within the gut, has both a demulcent and bitter tonic effect – a combination almost unique in medicinal herbs. It is thus of value in all kinds of chronic digestive problems, for instance irritable bowel syndrome.

Chamaelirium lutea (Liliaceae)
Helonias,
False Unicorn Root

Description Herbaceous perennial growing to 1 m (3 ft) with large, green leaves forming a basal rosette from which emerges a tall spike of green-white flowers.
Habitat & Cultivation Native to North America, helonias grows in low, moist, well-drained ground east of the Mississippi river. In view of its rarity in the wild, it is best to use alternative herbs such as black cohosh (*Cimicifuga racemosa*, p. 79) and wild yam (*Disocorea villosa*, p. 91).
Parts Used Rhizome (lifted in autumn).



Helonias root was chewed by Native American women to prevent miscarriage.

Constituents The root contains steroidal saponins (to 9%), including chamaelirin and diogenin.
History & Folklore A traditional Native American medicine, Helonias was prized as a woman's herb and used to treat a range of gynaecological problems. There is some confusion about its precise use since several herbs share the same (or similar) name.

Medicinal Actions & Uses In Western herbal medicine helonias has been valued as a key remedy for conditions affecting the uterus and ovaries. It is thought to have a "normalizing" effect on the female reproductive system. It is thought to regulate the release of hormones by the ovaries and encourage a regular menstrual cycle. It has also been used to treat conditions such as endometriosis, ovarian cysts and menopausal problems. As it is now an endangered species, other herbs (notably black cohosh) are routinely used in its place.
Caution Do not take during pregnancy.

Chamaemelum nobile syn. *Anthemis nobilis* (Asteraceae)
Roman Chamomile

Description Aromatic perennial growing to 50 cm (20 in). Has feathery leaves and daisy-like flowerheads.
Habitat & Cultivation Native to western Europe, Roman chamomile is now cultivated across Europe, and also in other temperate regions. The flowers are harvested as they open in summer.
Parts Used Flowers, essential oil.
Constituents Roman chamomile contains up to 1.75% essential oil (including tiglic and angelic acid esters, chamazulene and other sesquiterpene lactones), flavonoids, coumarins and phenolic acids.
History & Folklore Though called Roman chamomile, this herb was not cultivated in Rome until the 16th century, probably arriving there from Britain.

Dried flowerheads

Medicinal Actions & Uses A remedy for the digestive system, Roman chamomile is often used interchangeably with German chamomile (*Chamomilla recutita*, p. 77). However, an infusion of Roman chamomile has a more pronounced bitter action than its German namesake. It is an excellent treatment for nausea, vomiting, indigestion and loss of appetite. It is also sedative, antispasmodic and mildly analgesic, and will relieve colic, griping and other cramping pains. By stimulating digestive secretions and relaxing the muscles of the gut, it helps normalize digestive function. Roman chamomile may also be taken for headaches and migraine, even by children. Its marked anti-inflammatory and anti-allergenic properties make it helpful when applied to irritated skin.
Cautions Do not use the essential oil internally except under professional supervision. The essential oil is subject to legal restrictions in some countries.

Chamaenerion angustifolia syn. *Epilobium angustifolium* (Onagraceae)
Rose Bay Willow Herb

Description Perennial growing to 2 m (6½ ft). Has an erect stem, narrow leaves and long spikes of pink-purple flowers.
Habitat & Cultivation This herb is found in Europe and western Asia, and grows in clearings, in hedgerows and on wasteground. It is picked when in flower in late summer.
Parts Used Aerial parts.
Constituents Rose bay willow herb contains flavones and tannins.
History & Folklore In Siberia, an alcoholic drink has been made from this herb and the fly agaric mushroom (*Amanita muscaria*).
Medicinal Actions & Uses Demulcent and astringent, rose bay willow herb treats diarrhoea, mucous colitis and irritable bowel syndrome. It has also been made into an ointment to soothe skin problems in children. Rose bay willow herb is used to treat prostate problems.

Cheiranthus cheiri (Brassicaceae)
Wallflower

Description Evergreen perennial growing to 45 cm (18 in). Has lance-shaped leaves and yellow-orange flowers appearing in spring.

The Greek physician Dioscorides (1st century CE) used ***wallflower*** *roots to treat gout.*

Habitat & Cultivation Native to southern Europe, wallflower is now found throughout the continent. It grows on cliffs and old walls, and is a common garden plant.
Parts Used Leaves, flowers.
Constituents The herb contains cheiranthin and other cardioactive glycosides.
History & Folklore In 1735, the Irish herbalist K'Eogh described wallflower thus: "It provokes urination and menstruation and expels a stillborn child, and the afterbirth if a decoction of the dried flowers or a little seed is drunk in wine."
Medicinal Actions & Uses Although wallflower was formerly used as a diuretic, there was no understanding of its powerful effect on the heart. In small doses it is cardiotonic, supporting a failing heart in a manner similar to foxglove (*Digitalis purpurea*, p. 202). In more than small doses it is toxic, and is therefore rarely used in herbal medicine.
Cautions Use only under professional supervision. Do not take during pregnancy.

Chelidonium majus (Papaveraceae)
Greater Celandine

Description Thin-stemmed perennial herb growing to a height of 90 cm (3 ft). Has indented yellow-green leaflets and 4-petalled flowers, which appear in clusters in late spring.
Habitat & Cultivation Native to Europe, western Asia and North Africa, greater celandine flourishes close to human habitation, preferring wasteground, the banks of hedgerows and damp places. The aerial parts of the herb are collected in late spring or early summer.
Parts Used Aerial parts, latex.
Constituents Greater celandine contains isoquinoline alkaloids, including allocryptopine, berberine, chelidonine and sparteine. Several of these alkaloids are analgesic. Chelidonine is antispasmodic and also lowers blood pressure. Sparteine, by contrast, raises it.
History & Folklore In folk medicine, greater celandine has often been viewed as a cure-all. It has also been used for thousands of years to treat and clear the eyesight, especially cataracts. According to Pliny and Dioscorides (both writing in the 1st century CE), swallows used the latex that flows from cuts in the stems or leaves as a means to sharpen their eyesight. In 1598, Gerard recommended the herb for eye disorders "for it clenseth and consumeth awaie slimie things that cleave about the ball of the eie".
Medicinal Actions & Uses Greater celandine acts as a mild sedative, relaxing the muscles of the bronchial tubes, intestines and other organs.

In both Western and Chinese herbal traditions, it has been used to treat bronchitis, whooping cough and asthma. The herb's antispasmodic effect extends to the gallbladder, where it helps to improve bile flow. This would partly account for its use in treating jaundice, gallstones and gallbladder pain, as well as its long-standing reputation as a detoxifying herb. Greater celandine's sedative action does not, however, extend to the uterus – it causes the muscles of this organ to contract. The herb is applied externally to soothe and encourage the healing of skin conditions such as eczema. The yellow latex of greater celandine is applied to warts, ringworm and malignant skin tumours, which are slowly broken down by the effect of its protein-dissolving enzymes.
Cautions Use only under professional supervision. Can cause liver damage in rare cases. It is subject to legal restrictions in some countries.

Chelone glabra (Scrophulariaceae)
Balmony

Description Perennial herb growing to 60 cm (2 ft). Has narrow leaves and short spikes of creamy-white to purple double-lipped flowers.

***Balmony's** bile-inducing property makes it useful for gallbladder problems.*

Habitat & Cultivation Native to eastern North America, balmony thrives in habitats such as marshland, wet woodland and riverbanks. It is harvested when in flower in summer or autumn.
Parts Used Aerial parts.
Constituents Balmony contains resins and bitters.
History & Folklore Balmony's genus name, *Chelone*, means "tortoise" in Greek, referring to the flowerhead's supposed resemblance to the head of the tortoise.
Medicinal Actions & Uses A strongly bitter remedy, balmony is principally used to treat gallstones and other gallbladder problems. It stimulates bile flow and has a mildly laxative action. It can be taken to relieve nausea and vomiting, intestinal colic, and to expel worms. It may also be antidepressant. Balmony is a suitable remedy for children.

Chenopodium ambrosioides (Chenopodiaceae)
Wormseed

Description Annual herb growing to 1 m (3 ft) with toothed lance-shaped leaves. Yellow-green flowers in round clusters bloom in summer, producing small black seeds in autumn.
Habitat & Cultivation Wormseed is native to Central and South America and the Caribbean. It has been extensively cultivated in Maryland, US, and in China.
Parts Used Aerial parts, flowering tops.
Constituents Wormseed contains a volatile oil (up to 90% ascaridol, plus geraniol and methyl salicylate), and triterpenoid saponins. Ascaridol is a powerful worm-expellent.
History & Folklore A herbal remedy that has been used for centuries, wormseed was used by the Maya in Central America to expel worms. In the eastern US, European settlers employed it for the treatment of worms, especially in children. The Catawba made a poultice from the plant, which they used to detoxify snake bite and other poisonings.
Medicinal Actions & Uses Wormseed is principally known for its ability to expel worms, especially roundworm and hookworm. It is also used in the Americas as a digestive remedy, the leaves being taken to settle colic and stomach pains. Wormseed's muscle-relaxing action has led to its use in the treatment of spasmodic coughs and asthma. Externally, juice expressed from the whole herb is applied as a wash for haemorrhoids.
Related Species Many species of *Chenopodium* are used as foods, and some medicinally. The seeds of *C. rhadinostachyum* are used as food by Aborigines in central Australia. Good King Henry (*C. bonus-henricus*), a species that is native to Europe, is both eaten as a vegetable and used medicinally to treat anaemia.
Cautions Use only under professional supervision. Wormseed is toxic when taken in overdose. Do not take during pregnancy. The herb is subject to legal restrictions in some countries.

Chimaphila umbellata (Pyrolaceae)
Pipsissewa

Description Evergreen plant with several stems, growing to 20 cm (8 in). Has shiny wedge-shaped leaves and small flat-topped clusters of white flowers tinged with red.
Habitat & Cultivation Native to North America, Europe and Asia, pipsissewa grows in woods and shady places, in sandy soils. The leaves are gathered in summer.
Parts Used Leaves.
Constituents Pipsissewa contains hydroquinones (including arbutin), flavonoids, triterpenes, methyl salicylate and tannins. The hydroquinones have a pronounced disinfectant effect within the urinary tract.
History & Folklore Pipsissewa was much used by Native North Americans to induce sweating and treat fevers, including typhus. European settlers used the herb for rheumatism and for urinary and kidney problems. It was listed in the *Pharmacopoeia of the United States* from 1820 to 1916.
Medicinal Actions & Uses Astringent, tonic and diuretic, pipsissewa is mainly used in an infusion for urinary tract problems such as cystitis and urethritis. It has also been prescribed for more serious conditions such as gonorrhoea and kidney stones. By increasing urine flow, it stimulates the removal of waste products from the body, and is therefore of benefit in the treatment of rheumatism and gout. The fresh leaves of pipsissewa may be applied externally to rheumatic joints or muscles, as well as to blisters, sores and swellings.
Research In tests on animals, pipsissewa leaves appear to lower blood sugar levels.

Chionanthus virginicus (Oleaceae)
Fringe Tree

Description Deciduous shrub or tree growing to a height of 10 m (33 ft). Has elliptical dark green leaves and long flowering stems with spikes of white flowers. Produces dark blue oval fruits.
Habitat & Cultivation Native to the US, fringe tree grows from Pennsylvania south to Florida and Texas. It is also now found in eastern Asia, and thrives on riverbanks and in damp

Fringe tree is a valuable tonic for the liver, gallbladder and pancreas.

shrubby areas. The root is unearthed in spring or autumn, mostly in Virginia and North Carolina.
Parts Used Root bark, bark.
Constituents Fringe tree contains saponins (including chionanthin) and glycosides (including phyllirine).
History & Folklore Fringe tree was commonly used by Native Americans and European settlers alike to treat inflammations of the eye, mouth ulcers and spongy gums. The Choctaw of Louisiana applied the mashed bark to cuts and bruises. Native Americans in Alabama used the bark as a treatment for toothache. In the 19th century Anglo-American Physiomedicalist tradition, fringe tree was valued as a bitter tonic, and the bark was often used to aid recovery from long-term illness.
Medicinal Actions & Uses The root bark is a liver tonic, stimulates bile flow and acts as a mild laxative. It is prescribed mainly for gallbladder pain, gallstones, jaundice and chronic weakness. While it appears to be of benefit to liver and gallbladder function, there is as yet no research to substantiate its effects. The root bark also appears to strengthen function in the pancreas and spleen. Anecdotal evidence indicates that it may substantially reduce sugar levels in the urine. Fringe tree also stimulates the appetite and digestion and is an excellent remedy for chronic illness, especially where the liver has been affected. For external use, the crushed bark may be made into a poultice for treating sores and wounds.

Chondrodendron tomentosum (Menispermaceae)
Pareira

Description Vine climbing to a great height in tropical rainforests. Reaches 30 m (100 ft). Has large leaves up to 30 cm (1 ft) long, and trailing clusters of flowers.
Habitat & Cultivation Pareira grows wild in rainforests in the upper Amazon region and in Panama. It is collected from the wild as available.
Parts Used Root, stem.
Constituents Pareira contains alkaloids, including delta-tubocurarine and L-curarine. Tubocurarine is a potent muscle relaxant.
History & Folklore Pareira and similar species are famous for being the source of curare, the paralysing arrow poison used by Amazonian and other South American Indians to catch their prey. A dart or spear tipped with curare causes instantaneous paralysis on entering the bloodstream of the animal. Traditional recipes for toxins usually involve blending 10 or more different plants, but pareira or a plant with similar action is always present in the mix.
Medicinal Actions & Uses Pareira's notoriety as a poison hinges on the effect of its toxic derivative entering directly into the bloodstream. Provided there are no cuts or sores in the mouth, the plant is reasonably safe taken orally as a medicinal remedy. The bitter and slightly sweet-tasting roots and stems are mildly laxative, tonic and diuretic, and also act to induce menstruation. The plant is chiefly used to relieve chronic inflammation of the urinary tubules. In Brazil, it is also used for snake bite.
Research Pareira's powerful ability to paralyse has led to its being extensively researched. Tubocurarine – one of the many alkaloids within the plant – is now used (as tubocurarine chloride) as an anaesthetic to paralyse the muscles during operations.
Related Species At least four other closely related species of *Chondrodendron* are used to produce the traditional poison known as curare.
Cautions Use only under professional supervision. Pareira and/or curare are subject to legal restrictions in some countries.

Chondrus crispus (Gigartinaceae)
Carragheen,
Irish Moss

Description Reddish-brown seaweed growing to 25 cm (10 in). Plant body is flat and forked, with a fan-shaped outline.
Habitat & Cultivation Carragheen is found on the Atlantic coasts of Europe and North America. It grows just below the waterline, attached to rocks and stones. In summer in North America, and in autumn in Ireland, it is pulled up by hand or with a rake at low tide and dried in the sun.
Part Used Whole herb.
Constituents Carragheen contains large amounts of polysaccharides, proteins (up to 10%), amino acids, iodine and bromine, plus many other minerals. The polysaccharides become jelly-like and demulcent when the plant is immersed in water.
History & Folklore Carragheen is used extensively in the food and pharmaceutical industries as an emulsifying and binding agent, for example in toothpastes.
Medicinal Actions & Uses A useful demulcent and emollient, carragheen is mainly taken for coughs and bronchitis. Its expectorant effect encourages the coughing up of phlegm and it soothes dry and irritated mucous membranes. It is of value for acid indigestion, gastritis and urinary infections such as cystitis. For these conditions it is normally combined with other appropriate herbs. Mucilaginous in texture and slightly salty in taste, carragheen makes a valuable nutrient in convalescence. Applied externally, this emollient herb soothes inflamed skin. Carragheen also acts to thin the blood.
Caution Due to its blood-thinning property, carragheen should not be used by people taking anticoagulant medicines.

Cichorium intybus (Asteraceae)
Chicory

Description Deep-rooted perennial growing to 1.5 m (5 ft). Has a hairy stem, oblong leaves and blue flowers.

Chicory leaves make a settling digestive tea.

Habitat & Cultivation Native to Europe, chicory also grows in North Africa and western Asia. It flourishes along paths and roadsides, and in banks and dry fields. The root is unearthed in spring or autumn.
Parts Used Root, leaves, flowers.
Constituents The root contains up to 58% inulin, caffeic acids, coumarins, flavonoids, polyynes, an essential oil including sesquiterpene lactones,

and vitamins and minerals. There is now significant evidence to show that chicory root protects the liver from damage.

History & Folklore According to Pliny (23–79 CE), chicory juice was mixed with rose oil and vinegar as a remedy for headaches. The roasted root is commonly used as a coffee substitute. The young root can be boiled and eaten like parsnips.

Medicinal Actions & Uses Chicory is an excellent mild bitter tonic for the liver and digestive tract. The root is therapeutically similar to dandelion root (*Taraxacum officinale,* p. 141), supporting the action of the stomach and liver and cleansing the urinary tract. Chicory is also taken for rheumatic conditions and gout, and as a mild laxative, one particularly appropriate for children. An infusion of the leaves and flowers also aids the digestion.

Related Species The endive (*C. endiva*) has similar though milder effects.

Cinnamomum camphora
syn. *Laurus camphora* (Lauraceae)

Camphor

Description Evergreen tree growing to 30 m (100 ft). Produces red leaves that turn dark green as they mature, small fragrant yellowish flowers and oval red berries.

Habitat & Cultivation Native to China and Japan, this tree is cultivated in tropical and sub-tropical regions for its wood, from which camphor oil is derived.

Parts Used Stems, root, wood, leaves, twigs, volatile oil.

Constituents The plant contains a volatile oil comprising camphor, safrole, eugenol and terpineol. It also contains lignans. Camphor is irritant and antiseptic; safrole is thought to be carcinogenic. A white crystalline substance derived from the stems, root and other parts of the tree, also called camphor, has powerful antiseptic, stimulant and antispasmodic properties.

History & Folklore In the 13th century, Marco Polo noted that camphor oil was highly valued by the Chinese as a medicine, scent and embalming fluid.

Medicinal Actions & Uses Camphor is most commonly applied externally as a counter-irritant and analgesic liniment to relieve arthritic and rheumatic pains, neuralgia and back pain. It may also be applied to skin problems, such as cold sores and chilblains, and used as a chest rub for bronchitis and other chest infections. Though the oil has been taken for various complaints, internal use is not advised.

Related Species See also cinnamon (*Cinnamomum* spp., p. 81).

Cautions Do not take internally. Camphor oil is subject to legal restrictions in some countries.

Citrullus vulgaris (Cucurbitaceae)

Watermelon

Description Annual vine with hairy, 3–5 lobed leaves, yellow flowers, and green fruit typically growing to 25 cm (10 in) across.

Habitat & Cultivation Native to tropical Africa, watermelon is grown throughout warm temperate to tropical regions. The fruit is gathered when ripe.

Parts Used Fruit, seeds.

Constituents Watermelon contains citrullin and arginine, both of which are thought to increase urea production in the liver, so increasing the flow of urine.

History & Folklore Watermelon species have been used in Egypt for more than 4,000 years, figuring in wall paintings dating to the Old Kingdom (2686–2181 BCE). They appear to have been a component in remedies for trembling fingers, constipation and expelling disease brought on by demons. Egyptian myth recounts that the watermelon originated from the semen of the god Seth.

Medicinal Actions & Uses Watermelon is best known as a thirst-quenching fruit that comes into season when temperatures are at their hottest. In traditional Chinese medicine it is used precisely to counter "summer heat" patterns – characterized by excessive sweating, thirst, raised temperature, scanty urine, diarrhoea and irritability or anger. Watermelon fruit and juice soothe these symptoms, increasing urine flow and cleansing the kidneys. The fruit's refreshing properties extend to the digestive system, where it clears wind. Watermelon may also be used in the treatment of hepatitis. In hot, stifling weather it is helpful for those suffering from bronchitis or asthma. The cooling fruit pulp may be applied to hot and inflamed skin and to soothe sunburn. The seeds can be mashed and used to expel worms.

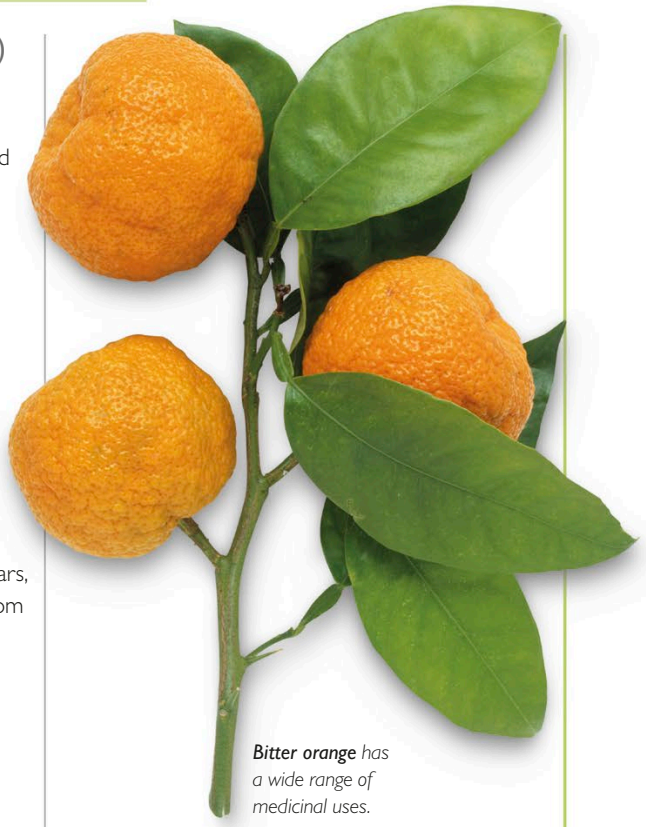
Related Species The watermelons of Egypt (*C. lanata* and *C. colocynthoides*) are very similar species. The colocynth (*C. colocynthus*), native to dry areas of Africa and Asia, is extremely bitter and contains a cucurbitacin glycoside with anti-tumour properties.

Citrus aurantium (Rutaceae)

Bitter Orange

Description Evergreen tree growing to 10 m (30 ft). Has leathery, dark green leaves, delicately perfumed white flowers and orange fruit.

Habitat & Cultivation Native to tropical Asia, this tree is now grown throughout the tropics and sub-tropics. Orchards of bitter orange are found along the Mediterranean coast, especially in Spain.



***Bitter orange** has a wide range of medicinal uses.*

Parts Used Fruit, peel, leaves, flowers, seeds, essential oil.

Constituents Bitter orange peel contains a volatile oil with limonene (around 90%), flavonoids, coumarins, triterpenes, vitamin C, carotene and pectin. The flavonoids are anti-inflammatory, antibacterial and antifungal. The composition of the volatile oils in the leaves, flowers and peel varies significantly. Linalyl acetate (50%) is the main constituent in oil from the leaves (petitgrain) and linalool (35%) in oil from the flowers (neroli). The unripe fruit of the bitter orange contains cirantin, which reportedly is contraceptive.

History & Folklore The bitter orange has provided food and medicine for thousands of years. It yields neroli oil from its flowers, and the oil known as petitgrain from its leaves and young shoots. Both distillates are used extensively in perfumery. Orange flower water is a by-product of distillation and is used in perfumery and to flavour sweets and biscuits, as well as being used medicinally.

Medicinal Actions & Uses The strongly acidic fruit of the bitter orange stimulates the digestion and relieves flatulence. An infusion of the fruit is thought to soothe headaches, calm palpitations and lower fevers. The juice helps the body eliminate waste products, and, being rich in vitamin C, helps the immune system ward off infection. If taken to excess, however, its acid content can exacerbate arthritis. In Chinese herbal medicine, the unripe fruit, known as *zhi shi,* is thought to "regulate the *qi*", helping to relieve flatulence and abdominal bloating, and to open the bowels. The essential oils of bitter

orange, especially neroli, are sedative. In Western medicine, these oils are used to reduce heart rate and palpitations, to encourage sleep and to soothe the digestive tract. Diluted neroli is applied as a relaxing massage oil. The distilled flower water is antispasmodic and sedative.

Related Species The lime (*C. aurantiifolia*) and lemon (*C. limon,* p. 82) have nutritional properties that are similar to those of bitter orange. See also bergamot (*C. bergamia, following entry*).

Caution Do not take the essential oils internally except under professional supervision.

Citrus bergamia syn. *C. aurantium var. bergamia* (Rutaceae)

Bergamot

Description Evergreen tree growing to 10 m (30 ft). Has pointed oval leaves, scented white flowers and fruit with aromatic peel.

Habitat & Cultivation Native to tropical Asia, bergamot is cultivated in sub-tropical regions, especially in southern Italy.

Part Used Essential oil.

Constituents Bergamot contains a volatile oil including linalyl acetate (30–60%), limonene (26–42%) and linalool (11–22%), bergapten and a diterpene.

History & Folklore Bergamot oil, expressed from the peel, provides the distinctive flavour of Earl Grey tea. The oil (or constituents of it) is sometimes added to sun-tanning oils.

Medicinal Actions & Uses Bergamot is little used in herbal medicine, but it can be used to relieve tension, relax muscle spasms and improve digestion.

Caution Do not take bergamot essential oil internally.

Clerodendrum trichotomum (Verbenaceae)

Chou Wu Tong

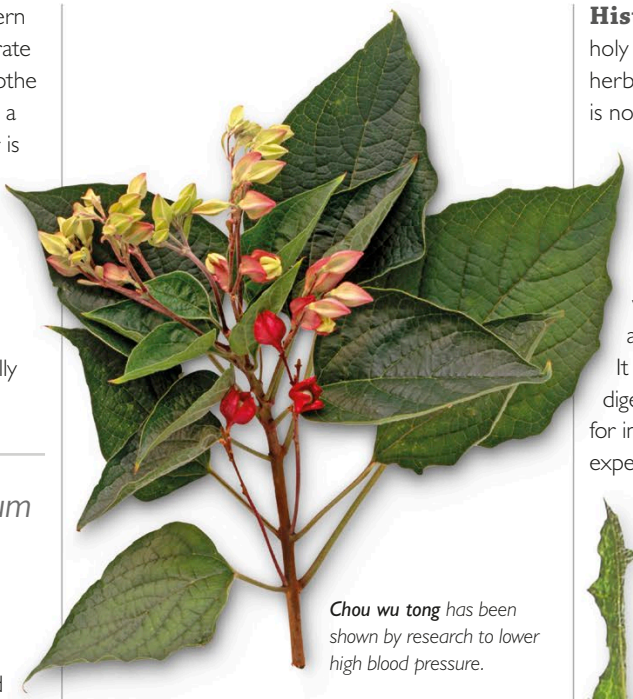
Description Upright, deciduous shrub growing to 3 m (10 ft). Has large leaves, clusters of white flowers and blue berries.

Habitat & Cultivation This herb grows in central and southern China. The leaves are harvested just before it flowers.

Parts Used Leaves.

Constituents *Chou wu tong* contains clerodendrin, acacetin and mesoinositol.

History & Folklore *Chou wu tong* was first documented in the *Illustrated Classic of the Materia Medica* (1061 CE).



***Chou wu tong** has been shown by research to lower high blood pressure.*

Medicinal Actions & Uses In Chinese herbal medicine, *chou wu tong* is prescribed for joint pain, numbness and paralysis, and occasionally for eczema. Traditionally regarded as a plant that "dispels wind-dampness", it is now also being used to help lower blood pressure. The plant is mildly analgesic and, when used with the herb *Siegesbeckia pubescens*, is anti-inflammatory.

Research In a Chinese trial, 171 people with high blood pressure were given *chou wu tong*. In 81% of those tested, blood pressure levels dropped significantly. This effect was reversed when the treatment was stopped.

Related Species *C. serratum* is commonly used in Ayurvedic medicine for various respiratory conditions.

Cnicus benedictus syn. *Carbenia benedicta, Carduus benedictus* (Asteraceae)

Holy Thistle

Description Erect, red-stemmed annual growing to 65 cm (26 in). Has spiny leathery leaves, a spiny stem, and yellow flowers in summer and autumn.

Habitat & Cultivation This Mediterranean plant flourishes on dry stony ground and wasteland. The leaves and flowering tops are collected in summer.

Parts Used Leaves, flowering tops.

Constituents Holy thistle contains lignans, sesquiterpene lactones (including cnicin), volatile oil, polyacetylenes, flavonoids, triterpenes, phytosterols and tannins. Cnicin is bitter and anti-inflammatory; the volatile oil is thought to have antibiotic properties.

History & Folklore In the Middle Ages, holy thistle was thought to cure the plague. In his herbal of 1568, Nicholas Turner wrote: "There is nothing better for the canker [ulcerous sore] and old rotten and festering sores than the leaves, juice, broth, powder and water of holy thistle."

Medicinal Actions & Uses Holy thistle is a good bitter tonic, stimulating secretions within the salivary glands, stomach, gallbladder and intestines, and thereby improving digestion. It is taken, generally as a tincture, for minor digestive complaints. It has also been a treatment for intermittent fevers. Holy thistle is mildly expectorant and antibiotic. It makes a healing balm for wounds and sores.

Cautions In excessive doses, holy thistle may cause vomiting. It is subject to legal restrictions in some countries.

***Holy thistle** was a 16th-century remedy for migraine headaches.*

Cochlearia officinalis (Cruciferae)

Scurvy Grass

Description Low-growing perennial with fleshy heart-shaped leaves, dense clusters of white 4-petalled flowers and rounded swollen seed pods.

Habitat & Cultivation Native to Europe and temperate regions of Asia and North America, but now rare, scurvy grass thrives in the salty soil of coastal areas and salt marshes. It is occasionally cultivated.

Parts Used Leaves, aerial parts.

Constituents Scurvy grass contains glucosilinates, a volatile oil, a bitter principle, tannin, vitamin C and minerals.

History & Folklore As the common name suggests, this plant has long been used for its high vitamin C content. It was used by sailors and others

to prevent the onset of scurvy, a potentially fatal vitamin C deficiency marked by bleeding of the gums.

Medicinal Actions & Uses Besides having a high vitamin C content, scurvy grass has antiseptic and mild laxative actions. The young plant, which has a general detoxicant effect and contains a wide range of minerals, is taken as a spring tonic. Like watercress (*Nasturtium officinale*, p. 239), it has diuretic properties and is useful for any condition in which poor nutrition is a factor. It can be used in the form of a juice as an antiseptic mouthwash for mouth ulcers and can also be applied externally to spots and pimples.

Cocos nucifera (Arecaceae)

Coconut,

Coconut Palm

Description Too familiar to need description, the coconut is a large palm reaching up to 30 m (100 ft) in height with a single, smooth trunk and long-ribbed leaves up to 6 m (20 ft) in length.

Habitat & Cultivation Thought to have originated in South-East Asia, coconut is now found throughout the tropics. It thrives in sandy, salty soils (typically coastal) and requires abundant sun and rain. Propagated by seed, the one-seeded nut grows out through one of the three germinating pores at its base. In 2009, coconut was grown commercially in 80 countries, with a total production of 61.7 million tons. A coconut palm can produce up to 10,000 nuts during its lifetime.

Parts Used Kernel (fresh or dried), water. Every part of coconut is useful.

***Coconut** palms have spread across the tropical regions of the globe. The oil has antimicrobial properties.*

Constituents Coconut oil is about 90% saturated fat, mostly medium chain fatty acids (lauric, myristic, caprylic and capric acids). Coconut water contains significant levels of minerals, notably potassium. Virgin coconut oil is entirely non-toxic.

History & Folklore The coconut palm is described as "Kalpavriksha" (meaning "the all giving tree") in ancient Indian texts.

Medicinal Actions & Uses Coconut oil and cream have established antimicrobial and immunostimulant activity. With antibacterial, antifungal and antiviral properties, the oil and cream can be used to counter many commonly occurring infections, such as influenza, cold sores, shingles, and fungal problems. Coconut has a beneficial action on the gut flora and can prove useful (alongside other treatment) in clearing instertinal worms and parasites. Coconut oil and cream aid digestion and the absorption of nutrients (notably calcium and magnesium), and may be taken as part of a regime to prevent or treat osteoporosis. Coconut water is reported to lower blood pressure, in part due to its high potassium content, while the oil helps prevent arteriosclerosis. It is also thought to lower cholesterol levels, aid weight loss and lower blood glucose levels. Coconut oil helps keep skin and hair healthy and is a common ingredient in skin creams and shampoos. Coconut merits its name of "all giving tree".

Coffea arabica (Rubiaceae)

Coffee

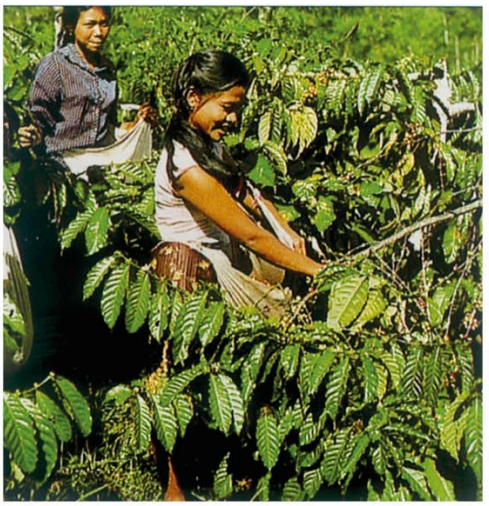
Description Evergreen shrub or small tree growing to 9 m (30 ft). Has dark green, shiny oval leaves and white star-shaped flowers. Produces small red fruit, each containing 2 seeds (beans).

Habitat & Cultivation Coffee is native to tropical East Africa, and is now cultivated in tropical areas worldwide. The best-quality beans are produced by fermenting, sun-drying and roasting the seeds.

Parts Used Seeds.

Constituents Coffee contains chlorogenic acids, tannins, and xanthines – caffeine (0.6–0.32%), theobromine, and theophylline. Caffeine is a strong stimulant. Theophylline is a stimulant and smooth muscle relaxant. Chlorogenic acids are anti-inflammatory.

History & Folklore Native to the plateaus of central Ethiopia, where it is thought to have originated, coffee spread to Yemen in the 6th century CE and then on into the Arabian peninsular. The Arabian physician Rhazes first recorded coffee's use in the 10th century CE. While coffee drinking formed part of Sufi prayer rituals, being taken to enable longer, more ecstatic prayer through the night, coffee gradually became



***Coffee**, native to East Africa, can be used to relieve headaches.*

the popular stimulant drink that we know today, spreading to Europe in the 17th century. By 2015, the annual trade in coffee exceeded $10 billion (£7 billion).

Medicinal Actions & Uses Coffee is an effective and much-loved stimulant of central nervous function, aiding mental alertness and perception. Coffee (and extracts) increase physical performance and heart output, stimulate digestive juices, and act as a powerful diuretic. It can be taken to counter drowsiness and to relieve headaches and migraines. It is non-addictive, although excess intake or sudden withdrawal from coffee may cause headaches. Many natural medicine practitioners consider overuse of coffee to be unhealthy as it is associated with nervous and endocrine exhaustion. Decaffeinated green coffee bean extract is taken to promote weight loss.

Research Regular coffee drinking is associated with a significantly decreased risk of colon cancer. Coffee may have a protective effect against Alzheimer's and Parkinson's diseases.

Cautions Percolated or boiled coffee is thought to have potentially harmful effects on the heart and circulation and to raise cholesterol levels. Caffeine can increase pre-menstrual symptoms and period pains.

Cola acuminata (Sterculiaceae)

Kola Nut,

Cola Nut

Description Evergreen tree growing to 20 m (65 ft) with dark green leaves and yellowish-white flowers. Large woody seed pods contain 5–10 white or red seeds (nuts).

Habitat & Cultivation Native to West Africa, kola nut is cultivated widely in the tropics, especially in Nigeria, Brazil and the West Indies.

The seeds are harvested when ripe and dried in the sun.
Parts Used Seeds.
Constituents Kola nut contains up to 2.5% caffeine (generally higher than coffee), theobromine, tannins, phlobaphene and an anthocyanin.
History & Folklore Chewed for their digestive, tonic and aphrodisiac properties, kola nuts have been an integral part of western and central African life for thousands of years. Kola nuts are used in huge quantities today to flavour soft drinks.
Medicinal Actions & Uses Kola nut stimulates the central nervous system and the body as a whole. It increases alertness and muscular strength, counters lethargy, and has been used extensively both in western African and Anglo-American herbal medicine as an antidepressant, particularly during recovery from chronic illness. Like coffee (*Coffea arabica, preceding entry*), kola is used to treat headaches and migraine. It is diuretic and astringent, and may be taken for diarrhoea and dysentery.
Related Species *C. nitida*, growing in Africa, Brazil and the West Indies, is used in a similar fashion to *C. arabica*.
Cautions Do not take if suffering from high blood pressure, peptic ulcers or palpitations.

Colchicum autumnale (Liliaceae)
Meadow Saffron

Description Attractive perennial growing from a bulb-like corm to 10 cm (4 in). Has pointed lance-shaped leaves and tubular 6-petalled pink flowers in autumn.
Habitat & Cultivation Common in Europe and North Africa, meadow saffron grows wild in woods and damp meadows. It is also cultivated. The corm is gathered in early summer, the seeds in late summer.
Parts Used Corm, seeds.
Constituents Meadow saffron contains alkaloids (including colchicine) and flavonoids. Colchicine is anti-inflammatory and is used in conventional medicine for acute attacks of gout. As it affects cell division it can cause foetal abnormality. It has been used in the laboratory to create new genetic strains.
History & Folklore Meadow saffron was not used in classical times due to its poisonous nature. Arabian physicians used it in the Middle Ages to treat joint pain and gout, but otherwise herbalists disregarded the plant until the 19th century.
Medicinal Actions & Uses Despite its toxicity, meadow saffron is considered one of the best remedies for acute gout pain. Leukaemia has been successfully treated with meadow saffron, and the plant has also been used with some success to treat Behcet's syndrome, a chronic disease marked by recurring ulcers and leukaemia. Taken internally, the herb has significant side-effects even at low dosage. Externally, it is applied to relieve neuralgia and itchiness.
Cautions This herb is highly toxic. Use only under professional supervision. Do not use during pregnancy. Meadow saffron is subject to legal restrictions in some countries.

Meadow saffron *is an attractive yet highly toxic herb, requiring great caution in usage. It is a well-established remedy for treating gout.*

Collinsonia canadensis (Lamiaceae)
Stone Root

Description Perennial herb growing to 1 m (3 ft). Has a square stem, oval leaves, and clusters of greenish-yellow flowers.
Habitat & Cultivation This herb is native to moist woodlands of eastern North America. The root is dug up in autumn.
Parts Used Root, leaves.
Constituents Stone root contains a volatile oil, tannins and saponins.
Medicinal Actions & Uses Stone root has diuretic and tonic properties, and is chiefly employed in the treatment of kidney stones. It is also prescribed to counteract fluid retention. It has been used to reduce back pressure in the veins, which in turn helps prevent the formation or worsening of haemorrhoids and varicose veins. As an astringent, stone root contracts the inner lining of the intestines, and can be helpful in treating disorders of the digestive system such as irritable bowel syndrome and mucous colitis. The fresh leaves or roots of stone root are applied as a poultice to bruises and sores.

Commiphora mukul (Burseraceae)
Guggul

Description Spiny shrub or tree, growing to 2 m (6½ ft), with oval, serrated leaves, brownish-red flowers and red fruits. Guggul, the gum resin obtained from the bark, forms pale yellow to brown "tears" on the stems.
Habitat & Cultivation Guggul thrives in dry, semi-arid and desert environments across much of the Indian sub-continent and the Middle East.
Parts Used Gum resin.
Constituents Guggul is an oleo-gum resin, its main active constituents being fat-soluble steroids (guggulipids), in particular guggulsterones E and Z.
History & Folklore Early Ayurvedic texts describe guggul as being effective in treating obesity. This has led to research into whether the gum resin might be useful for problems associated with fat metabolism, such as raised blood cholesterol levels.
Medicinal Actions & Uses Guggul has anti-inflammatory, blood-thinning and cholesterol-lowering activity, and – true to ancient understanding of the herb – can be helpful in treating obesity. In Ayurveda, guggul is principally used to treat arthritic problems, such as osteoarthritis, though it is also considered to have tonic and rejuvenating properties. As a result of research in the 1980s and 1990s, guggul is now most commonly used to lower raised blood cholesterol levels and to improve blood fat profiles in general. It reduces the stickiness of platelets and thins the blood, and may have a protective activity on the heart. Guggul is also useful in the treatment of acne. The normal dose of guggulipid extract is 1–1.5 g a day (equivalent to 50–75 mg of guggulsterones).
Research Extensive research has shown that the guggulipids have anti-inflammatory and anti-arthritic activity and prevent or reverse raised blood cholesterol levels. In several clinical trials, patients showed an average fall in cholesterol levels of about 12%, and in triglycerides of about 14%. The overall blood-fat profile was also shown to improve. Some clinical trials recorded weight loss for patients taking guggulipids.
Caution Avoid if breast-feeding.

Conium maculatum (Apiaceae)

Hemlock

Description Graceful biennial growing to a height of 2.5 m (8 ft). Has slender, red-speckled stems, finely divided leaves, small clusters of white flowers and small seeds that have beaded ridges.

***Hemlock** is highly poisonous and was used for capital punishment.*

Habitat & Cultivation Commonly found in Europe, hemlock also grows in temperate regions of Asia and North America. It flourishes in damp meadows, on riverbanks and on wasteground. The seeds are gathered when almost ripe in summer.
Parts Used Leaves, seeds.
Constituents Hemlock contains alkaloids, mainly coniine, and a volatile oil. Coniine is extremely toxic and causes congenital deformities.
History & Folklore Hemlock is notorious as the poison administered as a capital punishment in ancient Greece. The Greek philosopher Socrates died in 399 BCE after drinking hemlock juice. According to an old English tradition, the stems took their colour in sympathy with the mark placed on Cain's forehead after he murdered Abel. In the 19th century, hemlock was used in conventional medicine as a painkiller.
Medicinal Actions & Uses In extremely small quantities, hemlock is sedative and analgesic; in larger doses it causes paralysis and death. Rarely used today, it has been prescribed in the past as a treatment for epilepsy, Parkinson's disease and Sydenham's chorea. Hemlock has also been used to treat acute cystitis.
Cautions Do not take internally. Use externally only under professional supervision. Hemlock is subject to legal restrictions in many countries.

Convallaria majalis (Liliaceae)

Lily of the Valley

Description Attractive perennial growing to 23 cm (9 in). Has a pair of elliptical leaves, clusters of bell-shaped white flowers on one side of the stem and red berries.
Habitat & Cultivation Native to Europe, this herb is also distributed over North America and northern Asia. It is widely cultivated as a garden plant. The leaves and flowers are gathered in late spring as the plant comes into flower.
Parts Used Leaves, flowers.
Constituents Lily of the valley contains cardiac glycosides, including the cardenolides convallotoxin, convalloside, convallatoxol and others, and flavonoid glycosides. The cardiac glycosides act to strengthen a weakened heart.
History & Folklore The herbalist Apuleius, writing in the 2nd century CE, records that Apollo gave lily of the valley as a gift to Aesculapius, the god of healing. In the 16th century, the herbalist John Gerard had the following to say about its therapeutic value: "The flowers of the valley lillie distilled with wine, and drunke to the quantitie of a spoonful, restore speech unto those that have the dumb palsie and that are fallen into apoplexy, and are good against the gout, and comfort the heart."
Medicinal Actions & Uses Lily of the valley is used by British herbalists in place of common foxglove (*Digitalis purpurea*, p. 202). Both herbs have a profound effect in cases of heart failure, whether due in the long term to a cardiovascular problem, or to a chronic lung problem such as emphysema. Lily of the valley encourages a failing heart to beat more slowly and regularly, and to pump more efficiently, thereby improving blood flow to the heart itself via the coronary arteries. It is also diuretic and lowers blood volume. The herb is better tolerated than foxglove, as it does not accumulate within the body to the same degree. Relatively low doses are required to support heart rate and rhythm, and to increase urine production.
Cautions Use only under professional supervision. Lily of the valley is subject to legal restrictions in some countries.

***Lily of the valley** encourages a regular heart beat, and acts as a strong diuretic.*

Conyza canadensis syn. *Erigeron canadensis* (Asteraceae)

Canadian Fleabane

Description Erect annual herb growing to 1 m (3 ft). Has narrow, dark green, lance-shaped leaves and clusters of small white flowerheads that quickly fade into silky white tufts.
Habitat & Cultivation Native to North America, Canadian fleabane is now common in South America and Europe. It thrives on uncultivated and recently cleared land, often invading in large swathes. It is gathered from the wild when in flower.
Parts Used Aerial parts.
Constituents Canadian fleabane contains a volatile oil (including limonene, terpineol and linalool), flavonoids, terpenes, plant acids and tannins.

***Canadian fleabane** was used both ritually and medicinally by Native North Americans.*

History & Folklore In traditional North American herbal medicine, Canadian fleabane was boiled to make steam for sweat lodges, taken as a snuff to stimulate sneezing during the course of a cold, and burned to create a smoke that warded off insects – hence its common name.
Medicinal Actions & Uses An astringent herb, Canadian fleabane is taken for gastro-intestinal problems such as diarrhoea and dysentery. A decoction of Canadian fleabane is reportedly a very effective treatment for bleeding haemorrhoids. The herb is occasionally used as a diuretic for bladder problems, to clear toxins in rheumatic conditions and to treat gonorrhoea and other genito-urinary diseases.
Related Species The Philadelphia fleabane (*E. philadelphicus*) was used by the Houma as a treatment for menstrual problems. *E. affinis*, a Mexican relative, is used to make a tooth powder and to treat toothache.

Copaifera spp. (Fabaceae)
Copaiba

Description Evergreen trees growing to 18 m (59 ft). Have compound leaves and small yellow flowers.
Habitat & Cultivation Copaiba is native to tropical South America, and also found in southern Africa. Oleo-resin, a blend of volatile oil and resin often also referred to as copaiba, is obtained by drilling holes in the trunk.
Part Used Oleo-resin.
Constituents The oleo-resin contains a volatile oil (30–90%), which in turn contains alpha- and beta-caryophyllene, sesquiterpenes, resins and terpenic acids.
History & Folklore Copaiba was used by native Brazilians long before the arrival of Europeans. In 1625, the Portuguese monk Manoel Tristaon observed that it was employed to heal wounds and remove scars.
Medicinal Actions & Uses Antiseptic, diuretic and stimulant, copaiba is still used extensively in Brazil. Chiefly employed to counter mucus in the chest and genito-urinary system, it irritates the mucous membranes and promotes the coughing up of mucus. A solution or tincture of copaiba may be taken for bronchitis, chronic cystitis, diarrhoea and haemorrhoids. Eczema and other skin diseases reportedly benefit from its application.
Related Species Several of the 40 *Copaifera* species yield a medicinal oleo-resin.
Caution Copaiba is toxic in overdose. Use only under professional supervision.

Coptis chinensis (Ranunculaceae)
Huang Lian (Chinese), Chinese Goldthread

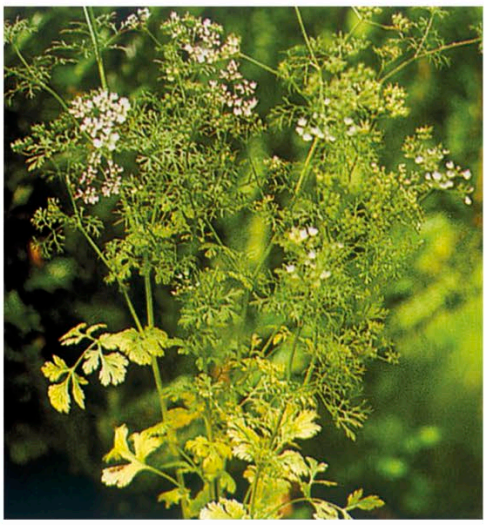
Description Perennial herb growing to 50 cm (20 in). Has basal leaves and small whitish-green flowers.
Habitat & Cultivation This herb is native to the mountains of China, and is most commonly cultivated in Szechwan province. The root is dug up in autumn.
Part Used Root.
Constituents Contains isoquiniline alkaloids, including berberine, coptisine and worenine. Berberine is antibacterial, amoebicidal and antidiarrhoeal.
Medicinal Actions & Uses A bitter-tasting herb, *huang lian* is given in the Chinese herbal tradition as a decoction to "clear heat" and "dry dampness", relieving fever, red and sore eyes, and sore throats. The herb is particularly helpful for diarrhoea and dysentery, and has been used to quell vomiting. Skin problems such as acne, boils, abscesses and burns are also treated with huang lian. Like the root of goldthread (*C. trifolia, see following entry*), *huang lian* is taken as a gargle for mouth and tongue ulcers, and for swollen gums and toothache.
Research In a Chinese trial, 30 patients with tuberculosis were given *huang lian*, and all of them showed marked improvement in their symptoms.
Cautions Use only under professional supervision. Do not take during pregnancy.

Coptis trifolia (Ranunculaceae)
Goldthread

Description Perennial growing to 15 cm (6 in). Has a slender golden root, 3-lobed leaves and single small white flowers.
Habitat & Cultivation Native to eastern North America from Labrador to Tennessee, this herb prefers damp sites. The rhizome is dug up in autumn.
Part Used Rhizome.
Constituents Goldthread contains isoquiniline alkaloids (including berberine and coptisine).
History & Folklore Though little used in herbal medicine today, goldthread was once highly valued. In a book recounting his travels in North America, published in 1779, Jonathan Carver states that the plant "was greatly esteemed both by the Indians and the colonists as a remedy for any soreness in the mouth". The Montagnais used a decoction of the root for problems associated with the mouth, lips and eyes. The Menominee used the plant as a gargle for children's throat problems and also to treat ulcers and tumours in the mouth.
Medicinal Actions & Uses A strongly bitter tonic, goldthread has been prescribed in the North American tradition principally for indigestion and stomach weakness, though it has also come under consideration as a treatment for peptic ulcers, and has been applied as a wash for thrush. Goldthread has been used as a mouthwash, gargle or lotion for mouth ulcers, sore lips and throats. The herb's constituents (and to some degree its actions) are similar to those of goldenseal (*Hydrastis canadensis*, p. 105) and it has been used as a substitute for this herb.
Related Species *Huang lian (C. chinensis, preceding entry)* is a close relative that has similar actions.
Cautions Use only under professional supervision. Do not take during pregnancy.

Coriandrum sativum (Apiaceae)
Coriander, Cilantro

Description Strongly aromatic annual growing to 50 cm (20 in). Has finely cut upper leaves, small white or pink flowers, and rounded seeds in beige seed coats.



***Coriander** was used as a digestive aid and a treatment for measles in 6th-century China.*

Habitat & Cultivation Native to southern Europe and western Asia, the herb is cultivated throughout the world. The seeds are gathered ripe in late summer.
Parts Used Seeds, essential oil, leaves.
Constituents Coriander contains up to 1.5% volatile oil, consisting mainly of delta-linalool (at around 70%), alpha-pinene and terpinine. It also contains flavonoids, coumarins, phthalides and phenolic acids.

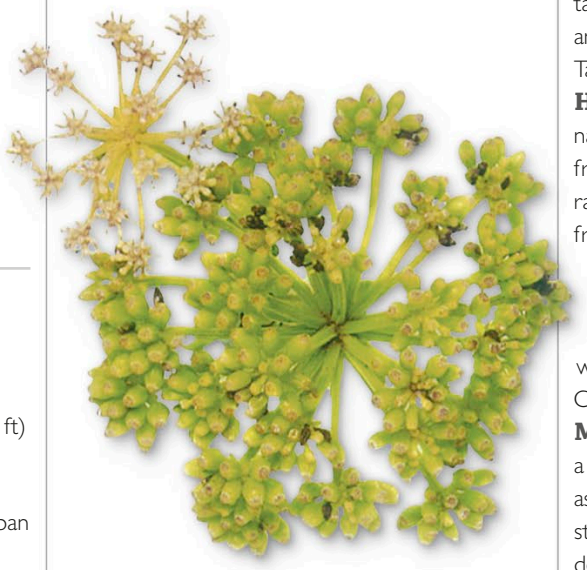
History & Folklore Coriander has been used throughout Asia, northern Africa and Europe for well over 2,000 years. It is listed in the Ebers papyrus (dating to about 1500 BCE), and apparently was much employed in ancient Egypt. The herb reached China during the Han Dynasty (202 BCE–220 CE). Pliny (23–79 CE) describes its use "for spreading sores … diseased testes, burns, carbuncles, and sore ears, fluxes of the eyes, too, if woman's milk be added".
Medicinal Actions & Uses Coriander is more often used as a spice than as a medicine. Nevertheless, an infusion of the herb is a gentle remedy for flatulence, bloating and griping. It settles spasms within the gut and counters the effects of nervous tension. Coriander is also chewed to sweeten the breath, especially after consumption of garlic (*Allium sativum*, p. 59). Coriander seed has been used as an expectorant to treat coughs and bronchitis, and in traditional Middle Eastern medicine it is taken to calm anxiety and aid sleep. The ground seed is applied externally as a rub for rheumatic pain. In Europe, it has traditionally been thought to possess aphrodisiac properties.
Caution Do not take coriander essential oil internally.

Cornus officinalis (Cornaceae)
Shan Zhu Yu

Description Deciduous tree reaching 4 m (13 ft) with glossy elliptical leaves and bright red oval berries.
Habitat & Cultivation Native to China, Japan and Korea, this tree is cultivated in central and eastern China. The fruit is harvested when ripe in autumn.
Part Used Fruit.
Constituents *Shan zhu yu* contains an iridoid glycoside (verbenalin), saponins and tannins. Verbenalin produces a mild tonic effect on the involuntary nervous system, especially that governing the digestive system.
History & Folklore Listed in the 1st-century CE *Divine Husbandman's Classic (Shen'nong Bencaojing), shan zhu yu* is one of the constituents of the "Pill of Eight Ingredients", used to "warm up and invigorate the *yang* of the loins".
Medicinal Actions & Uses As a herb that "stabilizes and binds", *shan zhu yu* is used principally to reduce heavy menstrual bleeding and unusually active secretions, including copious sweating, excessive urine, spermatorrhoea (involuntary discharge of semen) and premature ejaculation.
Related Species Several *Cornus* species are used medicinally around the world. In Europe, the fruit and bark of the cornelian cherry (*C. mas*) and the bark of common dogwood (*C. sanguinea*) are used as astringents and to relieve fever. The American boxwood (*C. florida*) was used by Native Americans as a fever remedy.

Crithmum maritimum (Apiaceae)
Samphire,
Sea Fennel

Description Maritime herb growing to a height of 60 cm (2 ft). Has long, succulent, bright green leaves and clusters of small yellowish-green flowers.
Habitat & Cultivation Samphire grows on the Atlantic, Mediterranean and Black Sea coasts of Europe and Asia Minor. It is found on rocks and cliffs close to the sea, and gathered in early summer.
Parts Used Aerial parts.



***Samphire** is rich in vitamin C and minerals.*

Constituents Samphire contains a volatile oil, pectin, vitamins (especially vitamin C) and minerals.
History & Folklore A much-valued herb in the past, samphire fell into disfavour but is slowly becoming popular again as a vegetable, either pickled or eaten fresh. The English herbalist John Gerard described it in 1597 as "the pleasantest sauce, most familiar, and best agreeing with man's body, both for the digestion of meates, breaking of stone, and voiding of gravel".
Medicinal Actions & Uses Though it is currently little used in herbal medicine, samphire is a good diuretic, and it has potential as a treatment for obesity. Samphire has a high vitamin C and mineral content, and is thought to relieve flatulence and soothe the digestion. In this, the plant resembles its inland namesake, fennel (*Foeniculum vulgare*, p. 212). Glasswort (*Salicornia europeae*), also known as samphire, is an unrelated coastal plant with a high mineral content and is commonly eaten as a vegetable.

Croton spp. (Euphorbiacea)
Dragon's Blood,
Sangre de Drago

Description Fast-growing tree reaching 15 m (49 ft) in height. It has large, heart-shaped leaves and greenish-white flowers.
Habitat & Cultivation Dragon's blood is a rainforest tree native to north-western Amazonia (from Bolivia to Colombia), preferring riverbanks and sites with disturbed soil. It is cultivated by the indigenous peoples there as an environmentally sustainable crop.
Parts Used Latex, sap, resin (fresh or dried); bark.
Constituents Key constituents within dragon's blood, include proanthocyanidins, mono- and di-terpenes, an alkaloid (taspine), and a lignan (dimethylcedrusine). Many constituents, notably taspine and dimethyldedrusine, have potent anti-inflammatory and wound healing properties. Taspine also has anti-cancer and antiviral activity.
History & Folklore Dragon's blood derives its name from the deep red sap or latex that oozes from the tree when the bark is cut. A prized rainforest medicine, the latex is applied to wounds, fractures, skin infections and insect bites. Internally, it is taken to treat diarrhoea and dysentery, stomach ulcers, viral infections, and as a vaginal bath before and following childbirth. The first written record of its use was in 1653 (Bernabe Cobo, *Historia del Nuevo Mundo*).
Medicinal Actions & Uses Dragon's blood is a first-rate wound healer and has been described as a "liquid bandage". Tissue healing and repair is strongly stimulated, while the chances of infection developing in open wounds and sores is minimized due to the marked antiseptic action of the latex and its ability to seal off the wound from the open air. The latex (fresh or dried) is a key remedy for herpes, including shingles and genital herpes, and fungal skin infections. Taken internally, it helps to treat and prevent gastro-intestinal infection, peptic ulcers, and to control diarrhoea in conditions such as ulcerative colitis. A patent US medicine (Crofelemer) derived from dragon's blood is licensed for the treatment of chronic diarrhoea, typically in patients with HIV.
Related Species *C. lecheri* is most commonly used to make dragon's blood, although similar *Croton* species grow in Central America. *C. flavens* (Yellow balsam), a traditional Mayan and Aztec remedy, is used for fever, infections and as a wound salve. Dragon trees, such as the Socotra dragon tree (*Dracaena cinnabari*), are desert trees and unrelated to dragon's blood, though some also produce a red latex.
Caution Can permanently stain clothing.

Cucurbita pepo (Cucurbitaceae)

Pumpkin

Description Annual plant with twining stems, lobed leaves, yellow flowers and large orange fruit.
Habitat & Cultivation Probably native to North America, pumpkin is now found worldwide. It is harvested in autumn.
Parts Used Seeds, pulp.
Constituents Pumpkin seeds contain a fixed oil (30–50%), which is mostly linoleic acid (43–56%) and oleic acid (24–38%). The oil also contains protein (31–51%), sterols, cucurbitin, vitamin E, beta-carotene, and minerals (4–5%), including significant levels of iron, zinc and selenium.
History & Folklore The pumpkin has been much used as a medicine in Central and North America. The Maya applied the sap of the plant to burns, the Menominee used the seeds as a diuretic, and European settlers ground and mixed the seeds with water, milk or honey to make a remedy for worms. This practice became so widespread in homes across North America that the medical profession eventually adopted it as a standard treatment.
Medicinal Actions & Uses Pumpkin has been used mostly as a safe and effective deworming agent, particularly in children and pregnant women for whom strong-acting and toxic preparations are inappropriate. It is thought most effective in removing tapeworms. The seeds are diuretic and tonic to the bladder, and they have distinct value in treating the early stages of prostate enlargement. The fruit pulp is used as a decoction to relieve intestinal inflammation and is applied as a poultice or plaster for burns.
Research Pumpkin seeds' range of medicinal and nutritional compounds ensures that they have great value as a "natural" food supplement. A good dietary source of zinc, the seeds also contain relatively high levels of selenium, a mineral with important antioxidant and anticancer activity in the body. Cucurbitin repels intestinal worms, and the sterols are anti-inflammatory. Research suggests that pumpkin seed is effective in helping reduce benign enlargement of the prostate gland (BPH), due to both the hormonal influence of the sterols and this anti-inflammatory activity. In one clinical trial pumpkin seeds were combined with saw palmetto (*Serenoa repens*, p. 136) to treat BPH: those taking the herbal extract showed improved urine flow and reduced frequency of urination.

***Pumpkin** was a popular medicinal plant in the Americas; its seeds are still used to treat worms.*

Cuminum cyminum (Apiaceae)

Cumin

Description Small annual growing to 30 cm (1 ft). Has long, narrow segmented leaves, clusters of pink or white flowers and small oblong ridged fruits.
Habitat & Cultivation Cumin is native to Egypt and widely cultivated in southern Europe and Asia. The seeds are gathered when ripe in late summer.
Parts Used Seeds.
Constituents Cumin seeds contain 2–5% volatile oil, which consists of 25–35% aldehydes, pinene and alpha-terpineol. The seeds also contain flavonoids.

Seeds

History & Folklore A popular spice and medicinal herb in ancient Egypt, cumin was used for illnesses of the digestive system, for chest conditions and coughs, as a painkiller, and to treat rotten teeth. The herb is mentioned in the Old Testament and was widely used in the Middle Ages. It has declined in popularity since that time, although it is still frequently used in contemporary Egyptian herbal medicine. In cookery, cumin is an ingredient that is found in many Chinese, Indian and Middle Eastern recipes, especially curries and pickles.
Medicinal Actions & Uses Cumin, like its close relatives caraway (*Carum carvi*, p. 184) and anise (*Pimpinella anisum,* p. 248), relieves flatulence and bloating, and stimulates the entire digestive process. It reduces abdominal gases and distension and relaxes the gut. In Indian herbal medicine, cumin is used for insomnia, colds and fevers, and, mixed into a paste with onion juice, has been applied to scorpion stings. The seeds can be taken to improve breast-milk production – a role it shares with fennel seeds (*Foeniculum vulgare*, p. 212).

Cupressus sempervirens (Cupressaceae)

Cypress

Description Evergreen tree growing to 30 m (100 ft). Has tiny dark green leaves, and male and female cones.
Habitat & Cultivation Native to Turkey and cultivated in the Mediterranean, this herb is gathered in spring.
Parts Used Cones, branches, essential oil.
Constituents Cypress contains a volatile oil (with pinene, camphene and cedrol) and tannins.
History & Folklore Ancient Greeks took the cones, mashed and steeped in wine, to treat dysentery, the coughing up of blood, asthma and coughs.
Medicinal Actions & Uses Applied externally as a lotion or as a diluted essential oil, cypress astringes varicose veins and haemorrhoids, tightening up the blood vessels. A footbath of the cones is used to cleanse the feet and counter excessive sweating. Taken internally, cypress acts as an antispasmodic and general tonic, and is prescribed for whooping cough, the spitting up of blood, and spasmodic coughs. Colds, flu and sore throats, and rheumatic aches and pains, also benefit from this remedy.
Caution Do not take the essential oil internally without professional supervision.

***Cypress** has properties similar to those of witch hazel.*

Curcuma zedoaria (Zingiberaceae)

Zedoary

Description Perennial herb with large, tapering, elliptical leaves, pink or yellow flowers, and an aromatic, pale yellow root.
Habitat & Cultivation Zedoary is a common Indian and East Asian plant. It is cultivated in India, Bangladesh, Indonesia, China and Madagascar.
Part Used Rhizome.
Constituents Zedoary contains a volatile oil, sesquiterpenes, curcumemone, curcumol and curdione. Curcumol and curdione have anti-cancer properties.
Medicinal Actions & Uses An aromatic, bitter digestive stimulant, zedoary is used in much the same way as ginger (*Zingiber officinale*, p. 155) – to relieve indigestion, nausea, flatulence and bloating, and generally to improve the digestion. The rhizome is used in China to treat certain types of tumours.
Research In trials carried out in China, zedoary has reduced cervical cancer, and increased the cancer-killing effects of radiotherapy and chemotherapy.
Related Species In Chinese herbal medicine zedoary is often substituted for turmeric (*C. longa*, p. 90).

Cuscuta epithymum (Convolvulaceae)

Dodder,
Hellweed, Devil's Guts

Description Leafless parasitic plant. Has thread-like stems, which are usually yellow-red in colour, and small, scented, pale pink flowers.
Habitat & Cultivation Dodder grows throughout Europe, Asia and southern Africa. It prefers coastal and mountainous regions, and is gathered in summer.
Parts Used Aerial parts.
Constituents Dodder contains flavonoids (including kaempferol and quercitin), and hydroxycinnamic acid.
History & Folklore Dodder has always been an unpopular country plant. It is also known as hellweed and devil's guts, due to its tendency to overrun and strangle the plant on which it feeds. This host can be thyme (*Thymus vulgaris*, p. 143), gorse (*Ulex europeaus*), or a crop such as beans. Dodder does, however, have medicinal benefits. In his *Materia Medica*, Dioscorides (1st century CE) notes its use in classical times in combination with honey to purge "black bile" and to lift a melancholy humour. In 1652, the herbalist Nicholas Culpeper similarly recommended it "to purge black or burnt choler". Culpeper further states that dodder plucked off thyme is the most efficacious, making the interesting point that the parasite's medicinal benefits are determined in part by its host.
Medicinal Actions & Uses In line with its traditional use to purge black bile, dodder is still considered a valuable, though little-used, herb for problems affecting the liver and gallbladder. It is thought to support liver function and is taken for jaundice. Dodder has a mildly laxative effect, and is also taken for urinary problems.
Related Species Greater dodder (*C. europaea*) and flax dodder (*C. epilinum*) may be used in the same way as *C. epithymum*. *C. reflexa* is employed in Ayurvedic medicine to treat difficulty in urinating, jaundice, muscle pain and coughs.

Cyanopsis tetragonoloba (Fabaceae)

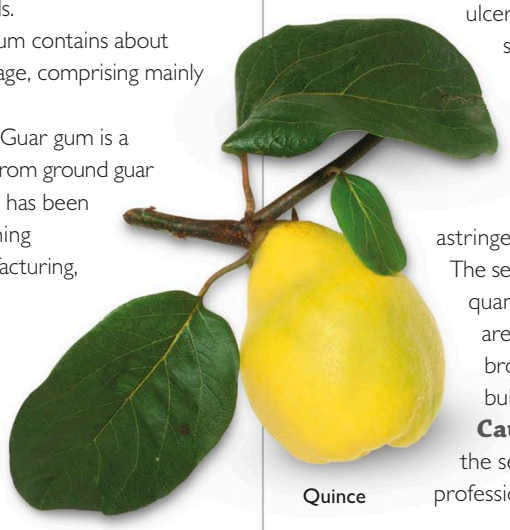
Guar Gum

Description Erect annual growing to 60 cm (2 ft), with hairy 3-lobed leaves, small purple flowers and fleshy seed pods.
Habitat & Cultivation Native to the Indian sub-continent, guar gum is cultivated extensively in India and Pakistan. The seed pods are harvested when ripe in summer.
Parts Used Pods, seeds.
Constituents Guar gum contains about 86% water-soluble mucilage, comprising mainly galactomannan.
History & Folklore Guar gum is a viscous substance made from ground guar seed mixed with water. It has been used as a filter in the mining industry, in paper manufacturing, and in cosmetics.
Medicinal Actions & Uses Guar gum is an effective bulk laxative, similar in action to psyllium (*Plantago ovata*, p. 123). It delays the emptying of the stomach and thus slows down absorption of carbohydrates. As this appears to help stabilize blood sugar levels, guar gum may prove useful in pre-diabetic conditions and in the early stages of late-onset diabetes. Research also indicates that guar gum lowers cholesterol levels. In Indian medicine, guar seed is a laxative and a digestive tonic.
Caution Do not exceed the dose. Guar gum can cause flatulence, abdominal distension and intestinal obstruction.

Cydonia oblonga (Rosaceae)

Quince

Description Deciduous tree growing to 8 m (26 ft). Has green-grey oval leaves, pink or white flowers and yellow, pear-shaped sweet-smelling fruit.
Habitat & Cultivation Native to south-west and central Asia, quince has become naturalized in Europe, especially in the Mediterranean region. It grows in damp, rich soils in hedges and copses. The fruit is harvested when ripe in autumn.
Parts Used Fruit, seeds.
Constituents The fruit contains tannin, pectin and fruit acids; the seeds contain about 20% mucilage, cyanogenic glycosides (including amygdalin), fixed oil and tannins.
History & Folklore The quince has long been prized as a fruit and medicine in Greece and the eastern Mediterranean. It was used as an astringent in the time of Hippocrates (460–377 BCE). Dioscorides (40–90 CE) records a recipe for quince oil, which was applied to itchy and infected wounds and spreading sores. In northerly climates, quince is often cooked to make a preserve. The English word "marmalade", meaning citrus fruit jam, comes from the Portuguese word for quince, *marmelo*.
Medicinal Actions & Uses The great astringency of the unripe fruit makes it useful as a remedy for diarrhoea, one that is particularly safe for children. The fruit and its juice can also be taken as a mouthwash or gargle to treat mouth ulcers, gum problems and sore throats. When cooked, much of the fruit's astringency is lost; quince syrup is recommended as a pleasant, mildly astringent, digestive drink. The seeds contain significant quantities of mucilage and are helpful both in treating bronchitis and as a bulk laxative.
Caution Do not use the seeds except under professional supervision.


Quince

Cymbopogon citratus (Graminaceae)

Lemon Grass

Description Sweetly scented grass growing in large clumps up to 1.5 m (5 ft). Has narrow leaf blades and branched stalks of flowers.
Habitat & Cultivation Native to southern India and Sri Lanka, lemon grass is now cultivated in tropical regions around the world.

Lemon grass makes a soothing tea.

Parts Used Leaves, essential oil.
Constituents Lemon grass contains a volatile oil with citral (about 70%) and citronellal as its main constituents. Both are markedly sedative.
History & Folklore Lemon grass is cultivated for its oil, which is used as a culinary flavouring, a scent and medicinally.
Medicinal Actions & Uses Lemon grass is principally taken as a tea to remedy digestive problems. It relaxes the muscles of the stomach and gut, relieves cramping pains and flatulence and is particularly suitable for children. In the Caribbean, lemon grass is primarily regarded as a fever-reducing herb (especially where there is significant catarrh). It is applied externally as a poultice or as diluted essential oil to ease pain and arthritis. In India, a paste of the leaves is smeared on patches of ringworm.
Related Species *C. martinii* and *C. nardus* yield essential oils that are widely used in soaps and detergents. In Tanzania medicine men smoke the flowers of *C. densiflorus* to produce dreams foretelling the future.
Caution Do not take the essential oil internally without professional supervision.

Cynara scolymus syn. *C. cardunculus* (Asteraceae)

Artichoke

Description Perennial herb growing to 1.5 m (5 ft). Has large, thistle-like leaves, grey-green above and woolly white beneath, and very large purple-green flowerheads.
Habitat & Cultivation Native to the Mediterranean region, artichoke thrives in rich loam in warm temperate climates. Commercially grown plants are renewed after 4 years. The unopened flowerheads and leaves are picked in early summer.
Parts Used Flowerheads, leaves, root.
Constituents All parts of the plant contain the sesquiterpene lactone cynaropicrin (which is strongly bitter) and much inulin. The leaves also contain cynarin, which has liver-protective properties.
History & Folklore Artichokes were greatly valued by the ancient Greeks and Romans. Dioscorides (1st century CE) recommended applying the mashed roots to the armpit or elsewhere on the body to sweeten offensive odours.
Medicinal Actions & Uses Artichoke is a valuable medicinal plant. Like milk thistle (*Silybum marianus*, p. 137) it benefits the liver, protecting against toxins and infection. Though the leaves are particularly effective, all parts of the plant are bitter and stimulate digestive secretions, especially bile. This makes artichoke useful for the treatment of gallbladder problems, nausea, indigestion and abdominal distension, with the added benefit that it lowers blood cholesterol levels. A home recipe from the Mediterranean region uses fresh artichoke leaf juice mixed with wine or water as a liver tonic. Artichoke is also taken during the early stages of late-onset diabetes. It is a good food for diabetics, as it significantly lowers blood sugar. It is also a useful diuretic, and in France it has been used to treat rheumatic conditions.
Research Research with laboratory animals in the late 1990s has shown that artichoke has a powerful positive effect on the liver. Artichoke extracts, and cynaroside in particular, appear to reduce cholesterol synthesis in the liver, while leaf extracts are strongly antioxidant and liver protective.

Artichoke flowerheads are nourishing and benficial for the liver and digestion.

Cyperus esculentus (Cyperaceae)

Chufa,
Tiger Nut

Description Erect, grass-like plant growing to 50 cm (20 in). Has cylindrical brown tubers, lance-shaped leaves, and rays of small spikes of green-brown flowers.
Habitat & Cultivation Native to the Mediterranean region, chufa was first introduced to Spain and North Africa by the Arabs. It now grows worldwide, including in India. The tubers (called "nuts") are unearthed in winter and summer.
Parts Used Tubers.
Constituents Chufa contains 20–36% fixed oil, known as chufa or tiger nut oil.
History & Folklore Chufa nuts have been found in the excavations of the earliest settlements in the Nile Valley, and since ancient times they have remained a popular food in the region. The Greek physician Dioscorides, writing in the 1st century CE, mentions their ability to comfort the stomach.
Medicinal Actions & Uses Chufa is regarded as a digestive tonic, having a heating and drying effect on the digestive system and alleviating flatulence. It also promotes urine production and menstruation. The juice is taken to heal ulcers of the mouth and gums. Ayurvedic medicine classifies the nuts as digestive, tonic and aphrodisiac.
Related Species Many other species of *Cyperus* are used as foods or medicines. For example, in Chinese herbal medicine *C. rotundus* is used as a liver tonic, to counter indigestion and to promote menstruation. *C. stolonifera*, native to tropical regions of Asia and Australia, is thought to ease stomach pain and act as a heart stimulant. Perhaps the most famous Cyperus species of all is papyrus (*C. papyrus*). This plant provided fibre for the first writing paper, invented by the ancient Egyptians. Papyrus was also chewed like sugar cane, and used medicinally in eye compresses and to bandage wounds.

Cypripedium pubescens (Orchidaceae)

Lady's Slipper,
American Valerian

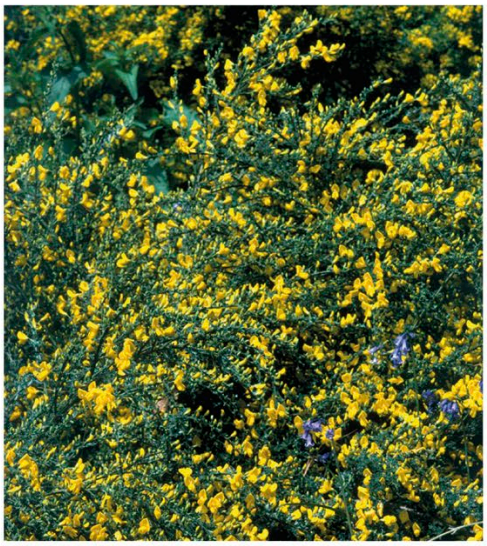
Description Perennial orchid with several stems sheathed by broad lance-shaped leaves. Has beautiful, complex golden-yellow and purple flowers in late summer.
Habitat & Cultivation This herb is native to eastern North America. Its natural habitat is woods and pastures, but due to overharvesting, it is rarely found in the wild. It is cultivated to a limited degree.

Part Used Rootstock.
Constituents Lady's slipper is poorly researched, but it is known to contain a volatile oil, resins, glucosides and tannins.
History & Folklore Lady's slipper was held in high regard by Native Americans, who used it as a sedative and antispasmodic. It was commonly taken to ease menstrual and labour pains, and to counter insomnia and nervous conditions. The Cherokee used one variety to treat worms in children. In the Anglo-American Physiomedicalist tradition, lady's slipper had many uses. Swinburne Clymer (in *Nature's Healing Agents,* 1905) considered the plant "of special value in reflex functional disorders, or chorea, hysteria, nervous headache, insomnia, low fevers, nervous unrest, hypochondria and nervous depression accompanying stomach disorders".
Medicinal Actions & Uses Due to its scarcity and cost, lady's slipper is now rarely used. A sedative and relaxing herb, it treats anxiety, stress-related disorders such as palpitations, headaches, muscular tension, panic attacks, and neurotic conditions generally. Like valerian (*Valeriana officinalis*, p. 148), lady's slipper is an effective tranquillizer. It reduces emotional tension and often calms the mind sufficiently to allow sleep. Indeed, its restorative effect appears to be more positive than that of valerian.
Caution In view of its rarity, lady's slipper should no longer be used medicinally.

Cytisus scoparius syn. *Sarothamnus scoparius* (Fabaceae)

Broom

Description Tall deciduous shrub growing to 2 m (6½ ft). Has narrow ridged stems, small trefoil leaves and bright yellow flowers in leafy terminal spikes.
Habitat & Cultivation Native to Europe, broom is commonly found on heaths, verges and in open woodland. It is naturalized in many temperate regions, including in the US. The flowering tops are picked from spring to autumn.
Parts Used Flowering tops.
Constituents Broom contains quinolizidine alkaloids (particularly sparteine and lupanine), phenethylamines (including tyramine), isoflavones (such as genistein), flavonoids, a volatile oil, caffeic and p-coumaric acids, tannins and pigments. Sparteine reduces the heart rate and the isoflavones are oestrogenic.
History & Folklore Both the common and species names of this plant indicate its usefulness as a sweeper ("scopa" means "broom" in Latin). Broom's medicinal value is not mentioned in classical writings, but it does appear in medieval herbals. The 12th-century Welsh Physicians of



Broom, *taken under professional guidance, helps to regulate an overly rapid heart beat.*

Myddfai recommend broom as a means to treat suppressed urine: "seek broom seed, and grind into fine powder, mix with drink and let it be drank. Do this till you are quite well." Broom tops have been pickled and used as a condiment similar to capers (*Capparis spinosa*, p. 182).
Medicinal Actions & Uses Broom is used mainly as a remedy for an irregular, fast heart beat. The plant acts on the electrical conductivity of the heart, slowing and regulating the transmission of the impulses. Broom is also strongly diuretic, stimulating urine production and thus countering fluid retention. Since broom causes the muscles of the uterus to contract, it has been used to prevent blood loss after childbirth.
Cautions Take broom internally only under professional supervision. Do not take during pregnancy, or if suffering from high blood pressure. The plant is subject to legal restrictions in some countries.

Daphne mezereum (Thymelaeaceae)

Mezereon

Description Hardy deciduous shrub growing to 1.2 m (4 ft). Has oval to lance-shaped leaves, clusters of red or pink flowers and small red berries.
Habitat & Cultivation Mezereon is found in Europe, North Africa and western Asia, in damp mountain woodlands. It is cultivated as a garden plant. The root and bark are gathered in autumn.
Parts Used Root, root bark, bark.
Constituents Mezereon contains diterpenes (including daphnetoxin and mezerein), mucilage and tannins. Though highly toxic, daphnetoxin and mezerein have anti-leukaemic properties and have been used to treat cancer.
History & Folklore Mezereon was formerly well used in northern Europe, both internally as a purgative and externally as an ointment for cancerous sores and skin ulcers. The Swedish naturalist Carolus Linnaeus (1707–1778) recorded that the bark was applied to the bites of poisonous reptiles and rabid dogs. People have reportedly died simply from eating birds that have eaten the highly poisonous berries.
Medicinal Actions & Uses Today, mezereon is considered too poisonous to be ingested. Mezereon is used occasionally as an external counter-irritant and is effective on rheumatic joints, increasing blood flow to the affected area.
Cautions Under no circumstances should mezereon be taken internally. It should only be used externally under professional supervision, and never on open wounds.

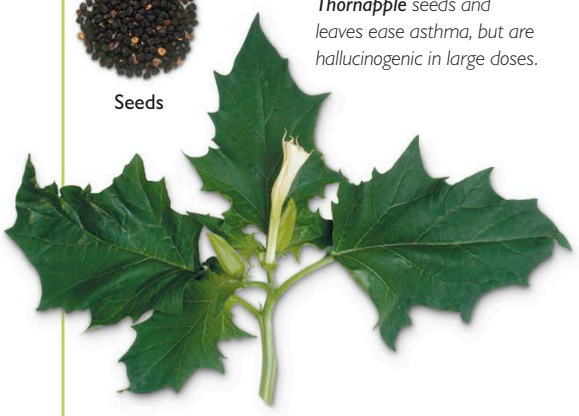
Mezereon *was once used as a remedy for rheumatic joints.*

Datura stramonium (Solanaceae)

Thornapple

Description Robust annual growing to 1 m (3 ft). Has lobed oval leaves, long white or violet trumpet-shaped flowers, and spiny fruit capsules.
Habitat & Cultivation Thornapple grows in the Americas, Europe, Asia and North Africa. It is cultivated for medicinal use in Hungary, France and Germany. The leaves and flowering tops are harvested in summer, and the seeds in early autumn when the capsules burst.
Parts Used Leaves, flowering tops, seeds.

Seeds



Thornapple seeds and leaves ease asthma, but are hallucinogenic in large doses.

Constituents Thornapple contains 0.2–0.45% tropane alkaloids (especially hyoscyamine and hyoscine), flavonoids, steroidal lactones, withanolides, coumarins and tannins. The tropane alkaloids are similar to those found in deadly nightshade (*Atropa belladonna*, p. 69), acting to reduce secretions and relax smooth muscle.
History & Folklore Thornapple has a long history of medicinal use. If taken in sufficient doses, it causes hallucinations; the Delphic oracle in ancient Greece and the Inca in South America may have used it as an aid to making prophecies. Though it is hallucinogenic, thornapple has traditionally been used to treat insanity.
Medicinal Actions & Uses At low doses, thornapple is a common remedy for asthma, whooping cough, muscle spasm and the symptoms of Parkinsonism. It relaxes the muscles of the gastro-intestinal, bronchial and urinary tracts, and reduces digestive and mucous secretions. Like deadly nightshade, thornapple may be applied externally to relieve rheumatic pains and neuralgia.
Related Species *D. metel* and *D. innoxia* are both native to India. These plants are employed in the treatment of asthma, coughs, fevers and skin conditions.
Cautions Take only under professional supervision. Since it is toxic at more than small doses, thornapple is subject to legal restrictions in most countries.

Daucus carota (Apiaceae)
Carrot

Description Annual (cultivated varieties) or biennial (wild). Has erect stem, which grows to a height of 1 m (3 ft), with feathery leaves, small white flowers and flat green seeds. Cultivated subspecies have fleshy orange taproots.
Habitat & Cultivation Wild carrot is native to Europe, although cultivated sub-species are now grown around the world. The root is harvested in late summer, and the seeds are gathered in late summer or early autumn.
Parts Used Seeds, root, leaves.
Constituents Wild carrot seeds contain flavonoids, and a volatile oil including asarone, carotol, pinene and limonene. Cultivated carrot root contains sugars, pectin, carotene, vitamins, minerals and asparagine. Carrot leaves contain significant amounts of porphyrins, which stimulate the pituitary gland and lead to the release of increased levels of sex hormones.
History & Folklore The origins of the familiar garden carrot are a mystery – it has been cultivated as a nutritious and cleansing food at least as long ago as ancient Greece and Rome. In the 1st century CE, the physician Dioscorides recommended the seeds to stimulate menstruation, to relieve urinary retention, and to "wake up the genital virtue". The cultivated variety did not reach Britain until the 16th century, when women used its beautiful, finely divided leaves to adorn their hair.
Medicinal Actions & Uses This common vegetable is also a wonderfully cleansing medicine. It supports the liver, and stimulates urine flow and the removal of waste by the kidneys. The juice of organically grown carrots is a delicious drink and a valuable detoxifier. Carrots are rich in carotene, which is converted to vitamin A by the liver. The raw root, grated or mashed, is a safe treatment for threadworms, especially in children. Wild carrot leaves are a good diuretic. They have been used to counter cystitis and kidney stone formation, and to diminish stones that have already formed. The seeds are also diuretic. They stimulate menstruation and have been used in folk medicine as a treatment for hangovers. Both leaves and seeds relieve flatulence and settle the digestion.
Research In a study published in 1995 a carrot extract was shown to protect the liver from toxicity.
Cautions Do not take carrot seeds during pregancy. Use only organic carrot juice since the root concentrates artificial fertilizers and insecticides.

Desmodium adscendens (Fabaceae)
Desmodium

Description Perennial, much-branched herb, growing to 50 cm (20 in). Has light purple flowers, and the leaves each have three small oval leaflets.
Habitat & Cultivation A native of West Africa, including Sierra Leone, northern Liberia and Ghana. The aerial parts are harvested as required or after flowering.
Parts Used Leaves and stems.
Constituents Desmodium contains indole alkaloids.
History & Folklore Desmodium has long been used in West African herbal medicine as a treatment for asthma, and also for jaundice.
Medicinal Actions & Uses Desmodium is chiefly a remedy for asthma and has been used as an anti-asthmatic in Ghanaian hospitals. In France, the herb is taken for liver disorders including viral hepatitis – both A and B – apparently having most effect during the early stages. Desmodium may also be used to relieve headache, backache, and muscle and joint pain – a decoction being taken internally or applied as a lotion.
Research Ghanaian research has shown the herb to have antispasmodic and anti-asthmatic activity. It also appears to increase the resistance of liver cells to inflammation, whether resulting from infection or toxicity. When taken in the early stages of illness, it normalizes liver function.
Caution In rare cases desmodium can cause nausea or diarrhoea.

Dianthus superbus (Caryophyllacaea)
Fringed Pink, Qu Mai (Chinese)

Description Upright perennial herb growing to 80 cm (32 in) or more. Has narrow, lance-shaped leaves and large, delicate, fragrant pink or lilac flowers.
Habitat & Cultivation Fringed pink is native to Europe and northern Asia (including China and Japan) growing at altitudes of up to 2,400 m (7,900 ft). It grows in clumps on hillsides and crevices, and is cultivated from seed in eastern China. It is only harvested when in flower.
Parts Used Aerial parts.
Constituents Fringed pink contains saponins, dianthins, tannins and flavonoids.
History & Folklore Fringed pink is first mentioned in the Chinese herbal known as the *Divine Husbandman's Classic (Shen'nong Bencaojing)*, which was written in the 1st century CE.
Medicinal Actions & Uses Although fringed pink is common in Europe, there is little indication that people there have used it as anything other than a vegetable (the young leaves are best boiled or steamed). In Mongolia, it is used to promote contractions and childbirth, and is considered a diuretic, haemostatic, and anti-inflammatory. In Chinese medicine it is widely used for "damp-heat" conditions, and prescribed for kidney stones and urinary tract infections.
Research Research, mostly conducted in Korea and China, indicates that fringed pink has marked anti-inflammatory activity and possible anti-cancer properties.
Related Species The gillyflower (*D. caryophyllus*), of Mediterranean origin, has similar constituents and is traditionally prescribed in European herbal medicine for coronary and nervous disorders.

Dictamnus albus (Rutaceae)

Dittany,

Burning Bush

Description Strongly aromatic, bushy and hairy perennial growing to 80 cm (32 in). Has compound leaves and spikes of 5-petalled white or pink flowers streaked with purple.
Habitat & Cultivation This herb grows in southern and central Europe and northern Asia, preferring warm, wooded areas. The flowering tops are gathered in late summer, the root generally in autumn.
Parts Used Root, flowering tops.

Dittany flowers were formerly used to make a preparation that was sniffed up the nose as a treatment for head colds.

Constituents Dittany's potent volatile oil contains estragol and anethole, and a toxic alkaloid, dictamnin.
History & Folklore Dittany exudes such large amounts of volatile oil that in hot, dry conditions, a match held close will cause the whole plant to burst into flames. The plant has been used to flavour liqueurs and has been brewed as a tea in parts of Siberia. In European folk medicine, dittany was considered an antidote to poison, pestilence, and the bites of all types of venomous animals.
Medicinal Actions & Uses Very rarely used by herbalists today, dittany has an action similar to that of rue (*Ruta graveolens*, p. 265), in that it strongly stimulates the muscles of the uterus, inducing menstruation and sometimes causing abortion. By contrast, its effect on the gastro-intestinal tract is antispasmodic. Dittany relaxes the gut and acts as a mild tonic for the stomach. The plant has also been used as a treatment for nervous conditions.
Cautions This herb is toxic. Take only under professional supervision. Do not take during pregnancy.

Digitalis lutea (Scrophulariaceae)

Yellow Foxglove

Description Erect perennial growing to 1 m (3 ft). Has narrow, lance-shaped leaves, and long spikes of yellow, bell-shaped flowers.
Habitat & Cultivation Native to western and central Europe, this herb grows in woodland areas, hedgerows and mountainous regions. It is cultivated for medicinal use in Russia. The leaves are harvested in the second summer of growth.
Parts Used Leaves.
Constituents Yellow foxglove contains cardiac glycosides (including the cardenolides alpha-acetyldigitoxin, acetyldigitoxin and lanatoside). All act to strengthen the beating of a weakened heart.
History & Folklore Unlike the closely related common foxglove (*D. purpurea, following entry*), yellow foxglove does not appear to have played a significant role in European herbal medicine.
Medicinal Actions & Uses Yellow foxglove is little employed in herbal medicine, but in fact it is a less toxic alternative to purple foxglove and woolly foxglove (*D. lanata*). It has similar medicinal actions but its alkaloids are more readily metabolized and flushed out by the body. Like other foxgloves, this plant supports a weakened or failing heart, increasing the strength of contraction, slowing and steadying the heart rate, and lowering blood pressure by strongly stimulating the production of urine, which reduces overall blood volume.
Related Species Common foxglove (*following entry*).
Cautions Excessive doses of yellow foxglove can prove fatal. Use only under professional supervision. This plant is subject to legal restrictions in some countries.

Digitalis purpurea (Scrophulariaceae)

Common Foxglove,

Purple Foxglove

Description Perennial growing to 1.5 m (5 ft). Has a single erect stem, broad lance-shaped leaves and bell-shaped, purple-pink or white flowers in long spikes.
Habitat & Cultivation This herb is native to western Europe. Though it is also cultivated, the wild plant is considered superior. The leaves are picked in summer.
Parts Used Leaves.
Constituents Foxglove contains cardiac glycosides (including digoxin, digitoxin and lanatosides), anthraquinones, flavonoids and saponins. Digitoxin rapidly strengthens the heartbeat, but is excreted very slowly. Digoxin is therefore preferred as a long-term medication.
History & Folklore In medical history, foxglove is best known as the discovery of William Withering, an 18th-century English country doctor. Curious about the formula of a local herbalist, he explored the plant's potential medical uses. His work led to the production of a life-saving medicine.
Medicinal Actions & Uses Foxglove has a profound tonic effect on a diseased heart. Heart disease worsens when the heart's ability to maintain normal circulation decreases. Foxglove's cardiac glycosides enable the heart to beat more strongly, slowly and regularly, without requiring more oxygen. At the same time, it stimulates urine production, which lowers the volume of blood, and thus lessens the load on the heart.
Related Species Woolly foxglove (*D. lanata*) is today the main source of cardiac glycosides.
Cautions Potentially fatal in overdose. Use only under professional supervision. This plant is subject to legal restrictions.

Common foxglove enables the heart to beat more evenly and is an invaluable remedy for heart disease.

Dipsacus fullonum (Dipsacaceae)

Teasel

Description Perennial with a spiny ridged stem growing to 2 m (6½ ft), lance-shaped leaves and lilac-coloured flowers blooming from hooked heads.
Habitat & Cultivation Common throughout Europe and western Asia, teasel thrives on wasteground, roadsides and banks. It is cultivated only on a small scale. The root is unearthed in late summer.
Part Used Root.
Constituents Teasel contains inulin, bitter substances and a scabioside.
History & Folklore Traditionally, the root was used to treat conditions such as warts, fistulae (abnormal passages opening through the skin) and cancerous sores. The water that collects in the leaf was called "Venus's bath" by early herbalists, and was thought to be very beneficial for the eyes.
Medicinal Actions & Uses Teasel root is little used medicinally today, and its therapeutic applications are disputed. It is thought to have diuretic, sweat-inducing and stomach-soothing properties, cleansing the system and improving digestion. Due to its apparent astringency, teasel is considered helpful in diarrhoea. It is also thought to increase appetite, to tone the stomach, and to act on the liver, helping with jaundice and gallbladder problems. A new application of teasel, so far unsubstantiated, is in the treatment of Lyme's disease.

***Teasel** was traditionally used to treat warts and fistulae.*

Dorema ammoniacum (Apiaceae)

Ammoniacum

Description Very large perennial herb growing to a height of 3 m (10 ft), with a stout stem, compound leaves and umbels of white flowers.
Habitat & Cultivation Ammoniacum is native to central Asia, Iran and northern Russia. When pierced, the stem exudes a milky gum, which is pressed into blocks and then ground into a powder.
Part Used Oleo-gum-resin.
Constituents Ammoniacum contains a resin (60–70%), gum, volatile oil (including ferulene and linalyl acetate), free salicylic acid and coumarins.
History & Folklore Ammoniacum's medicinal value has been appreciated since ancient times, and is mentioned by Hippocrates (460–377 BCE). The herb's common name reputedly derives from the Temple of Jupiter Ammon in Libya, in an area where it was commonly collected.
Medicinal Actions & Uses Used in both Western and Indian medicine, ammoniacum is still listed in the *British Pharmacopoeia* as an antispasmodic and as an expectorant that stimulates the coughing up of thick mucus. It is a specific treatment for chronic bronchitis, asthma and persistent coughs. Ammoniacum is also occasionally used to induce sweating or menstruation.
Other Species Ammoniacum is medicinally similar to asafoetida (*Ferula assa-foetida*, p. 210) and galbanum (*Ferula gummosa*, p. 211).

Dorstenia contrajerva (Urticaceae)

Contrayerva

Description Stemless perennial herb growing to 30 cm (1 ft). Has palm-shaped leaves and long-stalked greenish flowers.
Habitat & Cultivation Native to Central and South America and the Caribbean islands, contrayerva is generally gathered from the wild.
Part Used Rhizome.
History & Folklore Contrayerva means "antidote" in Spanish, indicating its traditional use in the treatment of poisoning and venomous bites. The herb was employed in Mayan and Aztec medicine for a variety of purposes, including as a poultice to draw pus.
Medicinal Actions & Uses Contrayerva rhizome is considered aromatic, stimulant and sweat-inducing. Occasionally used in the early stages of serious fevers such as typhoid, it is also given for gastro-intestinal problems such as diarrhoea and dysentery. There is no scientific substantiation of its reputation as an antidote.
Related Species *D. convexa*, native to Zaire, is used as a wound healer; *D. klainei* is used in tropical Africa as a gargle.

Drosera rotundifolia (Droseraceae)

Sundew

Description Evergreen, insectivorous perennial growing to 15 cm (6 in). Has small white flowers. The hinged, spoon-shaped leaves edged with spines secrete a sticky fluid ("sundew"), which traps insects. They are digested when the leaf closes.

***Sundew** was once considered a refreshing herb because it maintained its "dew" even in full sun.*

Habitat & Cultivation Sundew grows in Europe, Asia and North America, and is found in marshy ground at altitudes up to 1,800 m (5,900 ft). Formerly it was picked while in flower in summer. As it is now rare, it should not be gathered from the wild.
Parts Used Aerial parts.
Constituents Sundew contains naphthaquinones, enzymes, flavonoids and volatile oil. The naphthaquinones are antimicrobial, antispasmodic and also cough-suppressing.
History & Folklore In the 16th and 17th centuries, sundew was thought to be a remedy for melancholy. In his *Irish Herbal* (1735), K'Eogh advised using sundew to "eat away rotten sores".
Medicinal Actions & Uses Sundew is of greatest value in the treatment of spasmodic chest conditions such as whooping cough, bronchial asthma and asthma. In relaxing the muscles of the respiratory tract, the plant eases breathing, relieves wheezing and lessens the spasms of whooping cough. Commonly mixed with thyme in a syrup, sundew is a helpful remedy for coughs in children. The herb is also prescribed for gastric problems.

Echium vulgare (Boraginaceae)

Viper's Bugloss

Description Abundantly hairy perennial growing up to 1 m (3 ft). Has narrow prickly leaves and pink to violet clusters of flowers in dense spikes.
Habitat & Cultivation Native to Europe, viper's bugloss is commonly found on uncultivated land, by roadsides, and in low-lying and coastal regions. The flowering tops are gathered in late summer.
Parts Used Flowering tops.
Constituents Viper's bugloss contains pyrrolizidine alkaloids, allantoin, alkannins and mucilage. In isolation, pyrrolizidine alkaloids are toxic to the liver. The alkannins are antimicrobial and allantoin helps wounds to heal.

History & Folklore As its name suggests, viper's bugloss was once considered a preventative and remedy for viper bite. In his 1656 *The Art of Simpling*, herbalist William Coles described the plant: "its stalks all to be speckled like a snake or viper, and is a most singular remedy against poison and the sting of scorpions." Four years earlier, the English herbalist Nicholas Culpeper had praised its action against "the biting of vipers".

Medicinal Actions & Uses In many respects, viper's bugloss is similar to borage (*Borago officinalis*, p. 179) in that both herbs have a sweat-inducing and diuretic effect if taken internally. Viper's bugloss has also been taken to treat chest conditions, as its mucilage soothes dry coughs and encourages expectoration. The significant mucilage content in viper's bugloss has also proved helpful in treating skin conditions. Prepared in a poultice or plaster, it is an effective balm for boils and carbuncles. In recent times, this herb has fallen out of use, due partly to lack of interest in its medicinal potential, and partly to its pyrrolizidine alkaloids, which in isolation are toxic. Viper's bugloss may be safely used externally on unbroken skin.

Caution Do not take internally.

Viper's bugloss *makes a soothing poultice for treating boils and carbuncles.*

Eclipta prostrata syn. *E. alba* (Asteraceae)

Trailing Eclipta

Description Multi-branched annual growing to 60 cm (2 ft). Has lance-shaped leaves and white flowers.

Habitat & Cultivation Trailing eclipta is native to Africa, Asia and Australia. It is now found throughout the tropics, being particularly common in India, China, and Queensland and New South Wales in Australia. It is harvested in early autumn.

Parts Used Aerial parts.

Constituents Trailing eclipta contains triterpenoid saponins, including ecliptine and alpha-terthienylmethanol, isoflavonoids and phytosterols.

Trailing eclipta *is taken in India and China to stop premature greying of the hair.*

History & Folklore Trailing eclipta is first mentioned in herbal literature in the Chinese *Tang Materia Medica* of 659 CE. The herb contains a black pigment that has been used to colour the hair in India, and mothers wash babies' heads in a decoction of the leaves to encourage hair growth. It is also used as an ink for tattooing. The leaves are also eaten as a vegetable.

Medicinal Actions & Uses Trailing eclipta has remarkably similar uses in Ayurvedic and Chinese herbal medicine. In both of these traditions, a decoction is used to invigorate the liver, to prevent premature greying of the hair, and to staunch bleeding, especially from the uterus. In the Chinese tradition, the herb is considered a *yin* tonic; in Ayurvedic medicine it is thought to prevent ageing. In the Caribbean, the juice is sometimes taken for asthma and bronchitis. Trailing eclipta is also used there as a treatment for enlarged glands, as well as for dizziness, vertigo and blurred vision.

Research Several laboratory experiments have shown that eclipta regulates enzyme levels within the liver and exerts a protective activity on it.

Embelia ribes (Myrsinaceae)

Embelia

Description Climber with short, elliptical leaves, white or white-green flowers and round, red or black fruits.

Habitat & Cultivation Native to India and South-East Asia, embelia grows in hilly regions. The fruit is harvested when ripe.

Part Used Fruit.

Constituents Embelia contains naphthaquinones, including embelin. Embelin stimulates the production of oestrogen and progesterone, and it may have a contraceptive effect.

Medicinal Actions & Uses Embelia has been used in Asia as a home remedy for expelling worms. The herb is also diuretic and relieves flatulence, and is used for indigestion, colic, constipation and debility.

Cautions Use only under professional supervision. Do not take during pregnancy.

Emblica officinalis (Euphorbiaceae)

Indian Gooseberry

Description Deciduous tree with feathery leaves, pale green flowers and round pale green or yellow fruit.

Habitat & Cultivation Indian gooseberry grows in China, India and South-East Asia and is widely cultivated for its fruit.

Part Used Fruit.

Constituents Indian gooseberry contains tannins, polyphenols, flavonoids, a fixed oil and a volatile oil.

History & Folklore The Indian gooseberry features in a 7th-century Ayurvedic medical text. The sage Muni Chyawan reputedly restored his vitality with this fruit.

Medicinal Actions & Uses The astringent Indian gooseberry is given to allay the effects of ageing and to restore the organs. In Ayurvedic medicine, the fruit juice is given to strengthen the pancreas of diabetics. It is one of the three herbs in the classic Ayurvedic herbal formula known as "Triphala".

Research Recent research suggests that Indian gooseberry might have a remarkably wide range of potential medicinal benefits. A study in Kerala, India, showed that it may have protective activity against liver cancer. Other studies indicate potential anti-inflammatory and fever-inhibiting effects, and a cholesterol-lowering action. A study undertaken in Bombay concluded that the fruit might prove useful in the treatment of acute pancreatitis.

Entada phaseoloides (Fabaceae)

Matchbox Bean

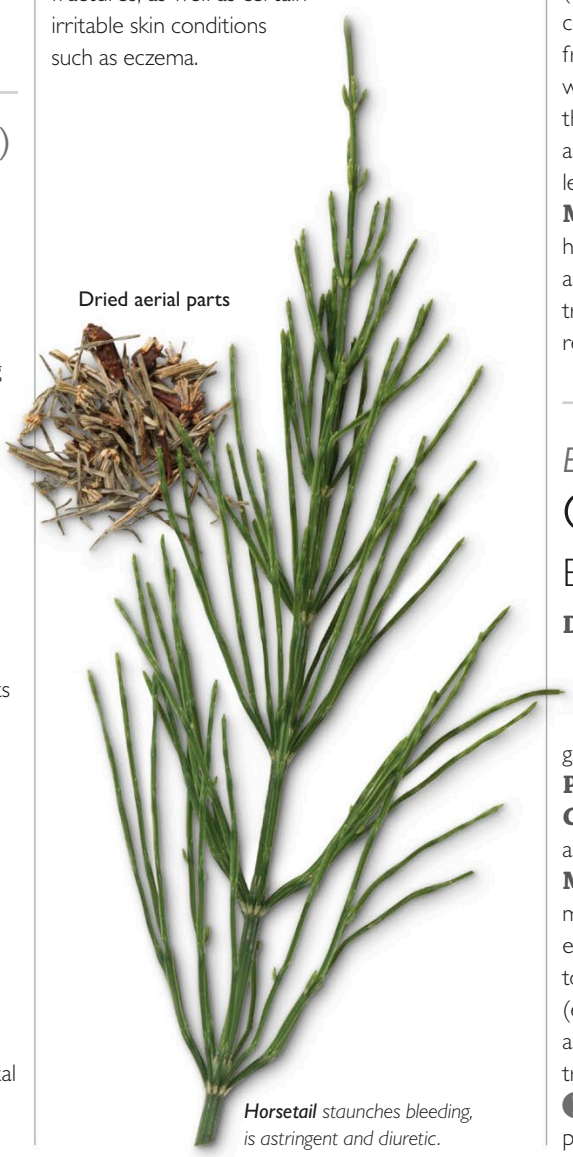
Description Woody vine with compound leaves and clusters of pea-type flowers. Huge, flat brown seed pods, containing black glossy seeds, grow to 1.5 m (5 ft) in length, making them the largest-growing legumes in the world.
Habitat & Cultivation Matchbox bean is native to Australia and tropical regions of Asia and Africa. The seeds are collected when the pods are ripe.
Parts Used Seeds.
Constituents Matchbox bean contains significant amounts of saponins.
History & Folklore The young leaves and roasted bean are eaten as vegetables, whilst fibre from the stems is made into nets, ropes and sails. Due to the plant's high saponin content, it is used as a shampoo.
Medicinal Actions & Uses Australian Aborigines use the seeds to treat female sterility and indigestion, and as a painkiller. In the Philippines, juice made from the bark is used to treat conjunctivitis.

Equisetum arvense (Equisetaceae)

Horsetail,

Bottlebrush

Description Perennial plant with a yellowish fruiting stem growing to 35 cm (14 in), followed by a sterile segmented and toothed stem growing to 60 cm (2 ft). The latter has whorls of needle-shaped leaves.
Habitat & Cultivation Native to Europe, North Africa, northern Asia and the Americas, horsetail is a common plant, preferring damp soil. The sterile stems are harvested in summer and carefully dried, all discoloured parts being discarded.
Parts Used Aerial parts.
Constituents Horsetail contains large amounts of silicic acid and silicates (about 15%), flavonoids, phenolic acids, alkaloids (including nicotine), and sterols. Much of the therapeutic effectiveness of this herb is due to its high silica content, a large proportion of which is soluble and can be absorbed. Silica supports the regeneration of connective tissue.
History & Folklore Horsetail is a primitive plant that is descended from huge trees that lived during the Palaeozoic era (600–375 million years ago). The herb's high silica content makes it abrasive, and in the past it was used to polish metal and wood. Its common name, bottlebrush, indicates another of its uses. Horsetail was also tied to the tails of livestock to help them ward off flies. It was long considered a wound-healing herb. The English herbalist John Gerard, writing in 1597, recounted: "Dioscorides saith, that the horse-taile being stamped and laid to, doth perfectly cure wounds, yea although the sinues be cut in sunder, as Galen addeth."
Medicinal Actions & Uses As its traditional usage indicates, horsetail is an excellent clotting agent. It staunches wounds, stops nosebleeds and reduces the coughing up of blood. In addition, horsetail has an astringent effect on the genito-urinary system, proving especially valuable where there is bleeding within the urinary tract, and in cases of cystitis, urethritis and prostate disease. Horsetail helps to speed the repair of damaged connective tissue, improving its strength and elasticity. The herb is also prescribed to treat problems related to rheumatism and arthritis, for chest ailments (such as emphysema), for chronic swelling of the legs and for various other conditions. A decoction of the herb's aerial parts added to a bath benefits slow-healing sprains and fractures, as well as certain irritable skin conditions such as eczema.



***Horsetail** staunches bleeding, is astringent and diuretic.*

Cautions Horsetail breaks down vitamin B_1 (thiamine) and should generally be taken long term only in tandem with a B vitamin supplement.

Eriodictyon californicum (Hydrophyllaceae)

Yerba Santa

Description Sticky evergreen shrub growing to 2.5 m (8 ft). Its narrow lance-shaped leaves are shiny green on the upper side and hairy white underneath. Trumpet-shaped white or blue flowers grow in clusters.
Habitat & Cultivation Native to California and Oregon in the US, and northern Mexico, yerba santa flourishes on dry mountain slopes. It grows at altitudes of up to 1,200 m (3,900 ft).
Parts Used Leaves.
Constituents Yerba santa contains a volatile oil, flavonoids (including eriodictyol) and resin.
History & Folklore The name *yerba santa* (holy weed) was given to this plant by Spanish colonists who learned of its medicinal virtues from Native Americans. Traditionally, the leaves were infused and taken for coughs, colds, sore throats, catarrh and asthma. The infusion was also used as a wash to ease fever, and the mashed leaves were applied as a poultice to treat sores.
Medicinal Actions & Uses An aromatic herb with a pleasant sweet taste, yerba santa is a valuable expectorant that can be used to treat tracheitis, bronchitis and asthma and similar respiratory tract ailments.

Ervatamia coronaria (Apocynaceae)

Grape Jasmine,

East Indian Rosebay

Description Perennial shrub growing to 2 m (6½ ft). Has dark green, elliptical leaves and strongly perfumed white flowers.
Habitat & Cultivation Grape jasmine is grown in India, Malaysia and Indonesia.
Parts Used Root, leaves, latex.
Constituents Grape jasmine contains alkaloids and resins.
Medicinal Actions & Uses In Ayurvedic medicine, the root and the latex are used to expel worms. The root is also chewed to relieve toothache. The latex is used to treat cataracts (especially in the early stages), eye inflammations and poor eyesight. The leaf juice makes a soothing treatment for skin irritations and wounds.
Caution Use grape jasmine only under professional supervision.

Eryngium maritimum (Apiaceae)

Sea Holly,

Eryngo

Description Evergreen perennial growing to 60 cm (2 ft). Has spiny silver leaves, and tiny flowers in summer.
Habitat Sea holly is found in coastal areas of Europe, preferring sandy soils. The root is unearthed in autumn.
Part Used Root.
Constituents Sea holly contains saponins, coumarins, flavonoids and plant acids.

Sea holly has distinctive silver leaves and is often seen in coastal areas of Europe.

History & Folklore In 17th-century England, sea holly root was candied and eaten as a sweetmeat. It was also consumed as a means of preventing scurvy. In his *Irish Herbal* (1735), K'Eogh states that the herb "provokes urination and menstruation, encourages flatulence, and removes obstructions of the liver, kidneys and bladder." In K'Eogh's time, sea holly was a popular medicinal herb, and was considered helpful in the treatment of a wide array of neurological conditions, including paralysis and convulsions.
Medicinal Actions & Uses In contemporary European herbal medicine, sea holly is used as a diuretic. It is prescribed as a treatment for cystitis and urethritis, and taken as a means to alleviate kidney stones. It is unlikely that the herb actually dissolves established stones, but it probably helps retard their formation. Sea holly is also used to treat enlargement or inflammation of the prostate gland, and may be of benefit in treating chest problems.

Erythraea centaurium (Gentianaceae)

Centaury

Description Biennial herb growing to 24 cm (9½ in) with a basal rosette of leaves and 5-petalled pink flowers in clusters.
Habitat & Cultivation Native to Europe and south-western Asia, centaury is now found in temperate regions throughout the world. The plant is harvested in summer when just about to flower.
Parts used Aerial parts.
Constituents Centaury contains many bitter constituents, including secoiridoids, also found in gentian (*Gentiana lutea*, p. 99).
History & Folklore In classical myth, the centaur Chiron used this herb to treat a poisoned arrow wound.
Medicinal Actions & Uses One of the most useful bitter herbs, centaury has a relatively mild bitter action, stimulating appetite as well as digestive secretions from the salivary glands, stomach, intestines and gallbladder. With increased digestive juices, food is processed and broken down more effectively, leading to better absorption of nutrients. For best results, centaury should be taken over several weeks. The preparation should be slowly sipped so that the components (detectable at a dilution of up to 1:3,500) can stimulate reflex activity throughout the upper digestive tract.
Self-help Uses Weak digestion, p. 306; Wind & bloating, p. 306.

Erythrina variegata (Fabaceae)

Indian Coral Tree,

Dadap (Hindi)

Description Deciduous tree growing to 18 m (59 ft). Has prickly stems, leaves with triangular leaflets and pea-like red flowers.
Habitat & Cultivation Indian coral tree grows in deciduous forests throughout much of the Indian sub-continent.
Parts Used Bark, leaves.
Constituents Indian coral tree contains alkaloids, isoflavonoids, triterpenoids and lectins. The alkaloids are anti-inflammatory and analgesic, and the isoflavonoids display antibacterial activity.
Medicinal Actions & Uses In Ayurvedic medicine, Indian coral tree is used to treat inflammatory conditions, period pain and problems related to eating and digestion, including anorexia, flatulence, colic and worms. The bark is used to treat skin problems and fever. A paste made from the leaves is traditionally applied to heal wounds.

Erythronium americanum (Liliaceae)

Trout Lily

Description Perennial growing to 25 cm (10 in) from a small, bulb-like corm. Has two oblong leaves mottled with purple and a large, bright yellow lily flower.
Habitat & Cultivation Native to North America, trout lily is found mainly in the east, from New Brunswick to Florida. It prefers damp woodland and open ground. The leaves are gathered in summer.
Parts Used Leaves.
Constituents Very little is known about the constituents of this plant. It contains alpha-methylenebutyrolactone.
History & Folklore Trout lily was little used by Native Americans. European settlers considered its medicinal properties to be similar to those of meadow saffron (*Colchicum autumnale*, p. 193). Trout lily was listed in the *Pharmacopoeia of the United States* from 1820 to 1863 as a treatment for gout.
Medicinal Actions & Uses An infusion of the leaves is taken for skin problems such as ulcers and tumours, and for enlarged glands. The leaves (or the whole plant) may also be applied as a poultice for skin conditions. The fresh leaves are strongly emetic.
Caution Take trout lily only under professional supervision.

Erythroxylum coca (Erythroxylaceae)

Coca

Description Evergreen shrub growing to 3 m (10 ft). Has alternate oval leaves, small white flowers and small red berries that each contain a single seed.
Habitat & Cultivation Native to Peru and Bolivia, coca grows in high-rainfall areas of the eastern Andes to altitudes of 1,500 m (4,900 ft). It is mostly cultivated for the illegal market. The leaves are picked when they begin to curl.
Parts Used Leaves.
Constituents Coca contains cocaine and various other alkaloids, a volatile oil, flavonoids, vitamins A and B_2, and minerals. The plant's stimulant and anaesthetic action is due largely to cocaine.
History & Folklore The indigenous peoples of the Andes carry pouches containing coca leaves and lime, which they chew throughout the day. Early European travellers noted that individuals chewing coca never had tooth or gum problems,

and local folk medicine traditionally considered the plant a treatment for toothache. Coca leaf extract is still used as a flavouring for cola drinks – but cocaine has long been banned from the formulas.

Medicinal Actions & Uses In Bolivia and Peru, coca leaves play an important part in the culture and herbal medicine of the indigenous Aymara and Quechua peoples. High altitudes, cold and an impoverished diet place great physical demands on the population. Coca leaves, chewed with lime or ashes, release small amounts of the active constituents, which act as a tonic and help block the effects of cold, exhaustion and poor nutrition. Coca leaves are also used in South American herbal medicine to treat nausea, vomiting and asthma, and have been used to speed convalescence. Cocaine extracted from coca leaves is used legally in conventional medicine as a local anaesthetic. It is also taken illegally as a narcotic, stimulant drug. As an isolated chemical, cocaine is extremely addictive.

Cautions Take only under professional supervision. Coca is subject to legal restrictions in most countries.

Coca *is cultivated in the Andes and chewed as a tonic to help counter the effects of cold.*

Eschscholzia californica (Papaveraceae)

Californian Poppy

Description Annual or perennial growing to 60 cm (2 ft). Californian poppy has finely cut leaves and bright orange, yellow, pink or red flowers.

Habitat & Cultivation Californian poppy is native to western North America. Widely cultivated as a garden plant, it prefers sandy soils.

Parts Used Aerial parts.

Constituents Californian poppy contains isoquinoline alkaloids (including protopine, cryptopine and chelidonine) and flavone glycosides.

Californian poppy *contains a latex that has sedative, pain-killing and antispasmodic properties. It is a gentle remedy, suitable for children.*

History & Folklore Native American peoples were known to use the sap of Californian poppy for its pain-killing properties, particularly for toothache. The leaves were also eaten as a vegetable. Early settlers used Californian poppy for sleep problems, especially in children, and for whooping cough.

Medicinal Actions & Uses Though the Californian poppy is a close relation of the opium poppy (*Papaver somniferum*, p. 244), it has a significantly different effect on the central nervous system. Californian poppy is not a narcotic. In fact, rather than disorientating the user, it actually tends to normalize psychological function. Californian poppy's gently antispasmodic, sedative and analgesic effects make it a valuable herbal medicine for treating physical and psychological problems in children. The herb may prove beneficial in attempts to overcome nervous tension and anxiety, bedwetting, and difficulty in sleeping.

Research A French study confirmed the traditional usage of Californian poppy by showing that extracts were sedative, reduced anxiety levels and were non-toxic.

Eucalyptus smithii (Myrtaceae)

Gully Gum

Description Aromatic evergreen tree growing to 50 m (165 ft).

Habitat & Cultivation Native to Australia, eucalyptus now grows in temperate and sub-tropical zones across the globe. It prefers moist soil, and so is found in swamps, gullies, and at the foot of slopes.

Part Used Essential oil.

Constituents The volatile oil contains about 70% eucalyptol (1, 8-cineole), as well as pinene, limonene, alpha-terpineol and linalool. While it is similar to the oils of related species, this oil appears to be better tolerated by the skin.

Medicinal Actions & Uses *Eucalpytus smithii* oil is an antiseptic and decongestant, and is used for inhalations as well as aromatherapy massages. See eucalyptus (*Eucalyptus globulus*, p. 96) for further details.

Cautions Though less toxic than the oils of other eucalyptus species, *E. smithii* essential oil should be used with care. Follow the label instructions, or take professional advice.

Eucommia ulmoides (Eucommiaceae)

Eucommia Bark,

Du Zhong (Chinese)

Description Deciduous tree growing to 20 m (65 ft). Has elliptical leaves, with male flowers in loose clusters and solitary female flowers in the leaf axils.

Habitat & Cultivation Eucommia bark grows in temperate zones in China. It is cultivated, but only in small amounts.

Part Used Bark.

Constituents Eucommia bark contains gutta-percha, alkaloids, flavonoids, iridoids and other glycosides, and phenolic compounds.

History & Folklore The herb is mentioned in the Chinese herbal, the *Divine Husbandman's Classic* (*Shen'nong Bencaojing*), which was written in the 1st century CE.

Medicinal Actions & Uses Eucommia bark is considered an excellent tonic for the liver and kidneys. Eucommia bark is said to "tonify the *yang*", to improve the circulation, and also to prevent miscarriage in women who are weak or suffering from back pain.

Research Much interest has been aroused by eucommia bark's ability to reduce high blood pressure, which it is thought to do by increasing nitrous oxide levels within the arteries. In a clinical trial in China involving 119 people, 46% of those treated with the herb showed a significant blood pressure reduction. However, eucommia bark appears to have little effect in cases of severe hypertension. Recent studies indicate that eucommia bark is an antioxidant and may help to prevent the onset of type 2 diabetes. A small clinical trial in Japan published in 1996 concluded that an infusion of eucommia bark reduced the body's exposure to mutagen-forming compounds naturally present within the diet.

Euonymus atropurpureus
(Celastraceae)

Wahoo Bark

Description Deciduous tree growing to 8 m (26 ft). Has smooth branches, serrated elliptical leaves, clusters of purple flowers and 4-lobed scarlet fruit.
Habitat & Cultivation Native to eastern North America, wahoo bark thrives in damp woods and close to water. The bark is gathered in autumn.
Parts Used Stem bark, root bark.
Constituents Wahoo bark contains cardenolides (cardiac glycosides) similar to digitoxin, asparagine, sterols and tannins.
History & Folklore The Sioux, Cree and other Native American peoples used wahoo bark in various ways, for example as an eye lotion, as a poultice for facial sores, and for gynaecological conditions. Native Americans introduced the plant to early European settlers, and it became very popular in Britain as well as in North America in the 19th century.
Medicinal Actions & Uses Wahoo bark is considered a gallbladder remedy with laxative and diuretic properties. It is prescribed for biliousness and liver problems, as well as for skin conditions such as eczema (which may result from poor liver and gallbladder function) and for constipation. In the past, it was often used in combination with other herbs such as gentian (*Gentiana lutea*, p. 99), which is used as a fever remedy, especially if the liver was under stress. Following the discovery that it contains cardiac glycosides, wahoo bark has been given for heart conditions.
Cautions Wahoo bark is toxic. Use only under professional supervision. Do not take during pregnancy or while breast-feeding.

Eupatorium cannabinum
(Asteraceae)

Hemp Agrimony

Description Perennial growing to a height of 1.5 m (5 ft). Has a red stem, downy leaves and dense bunches of pink to mauve florets.
Habitat & Cultivation Native to Europe, hemp agrimony is now also found in western Asia and North Africa. It grows in damp woods, ditches, marshes and on wasteground, and is gathered when in flower in summer.
Parts Used Aerial parts, root.
Constituents Hemp agrimony contains a volatile oil (with alpha-terpinene, p-cymene, thymol and an azulene), sesquiterpene lactones (especially eupatoriopicrin), flavonoids, pyrrolizidine alkaloids, and polysaccharides. P-cymene is antiviral, while eupatoriopicrin has anti-cancer properties and inhibits cellular growth. The polysaccharides stimulate the immune system. In isolation, the pyrrolizidine alkaloids are toxic to the liver.
History & Folklore Hemp agrimony was known to Avicenna (980–1037 CE) and other practitioners of Arabian medicine in the early Middle Ages.

Hemp agrimony was formerly taken as a spring tonic in Holland.

Medicinal Actions & Uses Hemp agrimony has been employed chiefly as a detoxifying herb for fever, colds, flu and other acute viral conditions. The root is laxative and diuretic, and the whole herb is considered to be tonic. Recently, hemp agrimony has found use as an immune-stimulant, helping to maintain resistance to acute viral and other infections.
Related Species See also boneset (*E. perfoliatum, following entry*) and gravel root (*E. purpureum, subsequent entry*).
Caution In view of hemp agrimony's pyrrolizidine alkaloid content, take only under professional supervision.

Eupatorium perfoliatum
(Asteraceae)

Boneset

Description Erect perennial growing to 1.5 m (5 ft). Has tapering lance-shaped leaves and many white or purple florets.
Habitat & Cultivation Native to eastern North America, boneset is found in meadows and marshland. It is gathered when in flower in summer.
Parts Used Aerial parts.
Constituents Boneset contains sesquiterpene lactones (including eupafolin), polysaccharides, flavonoids, diterpenes, sterols and volatile oil. The sesquiterpene lactones and polysaccharides are significant immune-stimulants.
History & Folklore Native American people used boneset to make an infusion for treating colds, fever, and arthritic and rheumatic pain. European settlers learned of the plant's benefits, and by the 18th and 19th centuries it was regarded as a virtual cure-all. Boneset's common name derives from its ability to treat "break-bone fever". Commonly used to treat malaria, constituents within boneset are now known to have antiprotozoal activity.
Medicinal Actions & Uses A hot infusion of boneset will bring relief to symptoms of the common cold. The plant stimulates resistance to viral and bacterial infections, and reduces fever by encouraging sweating. Boneset also loosens phlegm and promotes its removal through coughing, and it has a tonic and laxative effect. It has been taken for rheumatic illness, skin conditions and worms.
Related Species Wild horehound (*E. teucrifolium*) was used as a substitute for boneset. *E. occidentale* was used by the Zuni of the south-western US to treat rheumatism. See also hemp agrimony (*E. cannabinum, preceding entry*) and gravel root (*E. purpureum, following entry*).
Self-help Uses **Allergic rhinitis with catarrh**, p. 300; **Colds, flu & fevers**, p. 311; **High fever**, p. 311.

Eupatorium purpureum (Asteraceae)

Gravel Root,

Joe Pye Weed

Description Erect perennial growing to 1.5 m (5 ft). Has whorls of pointed oblong leaves and clusters of purple-pink florets.
Habitat & Cultivation Gravel root is native to eastern North America. The root is unearthed in autumn.
Part Used Root.
Constituents Gravel root contains a volatile oil, flavonoids and resin.
History & Folklore The plant's alternative name, Joe Pye weed, is in honour of the Native American said to have used it to cure New Englanders of typhus. Native Americans used the herb as a diuretic and as a remedy for genito-urinary conditions. The root was listed in the *Pharmacopoeia of the United States* from 1820 to 1842.

***Gravel root** is especially helpful for urinary tract problems.*

Medicinal Actions & Uses As its common name indicates, gravel root is a valuable herb for urinary tract problems. It helps to prevent the formation of kidney and bladder stones and may diminish existing stones. Gravel root is also useful for cystitis, urethritis, prostate enlargement (and other forms of obstruction), and for rheumatism and gout. The root is thought to help the latter two conditions by increasing the removal of waste by the kidneys.
Related Species *E. maculatum*, native to eastern North America, is used to treat kidney and urinary problems. See also *E. cannabinum*, p. 208 and *E. perfoliatum, preceding entry*.

Euphorbia hirta syn. *E. pilulifera* (Euphorbiaceae)

Pill-bearing Spurge,

Asthma Plant

Description Erect annual or perennial plant growing to 50 cm (20 in), with pointed oval leaves and clusters of small flowers.
Habitat & Cultivation Native to India and Australia, pill-bearing spurge is now widespread throughout the tropics. The aerial parts of the plant are gathered when it is in flower.
Parts Used Aerial parts.

***Pill-bearing spurge** is recommended as a treatment for asthma.*

Constituents Pill-bearing spurge contains flavonoids, terpenoids, alkanes, phenolic acids, shikimic acid and choline. The latter two constituents may be partly responsible for the antispasmodic action of this plant.
History & Folklore As its name suggests, this plant was traditionally used in Asia to treat asthma.
Medicinal Actions & Uses A specific treatment for bronchial asthma, pill-bearing spurge relaxes the bronchial tubes and eases breathing. Mildly sedative and expectorant, it is also taken for bronchitis and other respiratory tract conditions. It is most often used along with other anti-asthmatic herbs, notably gumplant (*Grindelia camporum*, p. 218) and lobelia (*Lobelia inflata*, p. 110). In the Anglo-American tradition, pill-bearing spurge is taken to treat intestinal amoebiasis.
Related Species The Cherokee used *E. maculata* to treat sore nipples and skin disorders. Many other North American *Euphorbia* species were used for constipation. A decoction of *E. lancifolia*, native to the West Indies, is used to stimulate breast-milk production. *E. atoto* is used in Malaysia and Indochina to induce a delayed period and as an abortifacient. Many species of *Euphorbia* are used as arrow poisons.
Caution Take pill-bearing spurge only under professional supervision.

Euphorbia pekinensis (Euphorbiaceae)

Da Ji

Description Erect annual or perennial plant with oblong leaves and dense clusters of small flowers.
Habitat & Cultivation Native to China, *da ji* is cultivated mainly in the eastern and central provinces. The root is unearthed in early spring.
Part Used Root.
Constituents *Da ji* contains euphorbon.
Medicinal Actions & Uses *Da ji* is classified as a toxic herb in Chinese herbal medicine, and therefore it is prescribed only for relatively serious illnesses. It is taken as a cathartic to purge excess fluid in conditions such as pleurisy and ascites (excess fluid in the abdomen), and for the treatment of kidney problems, especially nephritis. *Da ji* is applied externally to inflamed sores to reduce swelling.
Research Research in China indicates that *da ji* is therapeutically useful in the treatment of ascites and nephritis; however, it produces significant side-effects.
Related Species *E. kansui* is similar to *da ji* but has a stronger cathartic action. In Chinese herbal medicine it is only given to people with strong constitutions.
Caution *Da ji* is a toxic plant. Take only under professional supervision.

Euphrasia spp. (Scrophulariaceae)

Eyebright

Description Creeping semi-parasitic annual growing to 50 cm (20 in). Has tiny oval leaves and small scallop-edged white flowers with yellow spots and a black centre, somewhat resembling an eye.
Habitat & Cultivation Common in Europe, eyebright thrives in meadows and open grassland. It is gathered in summer when in flower.
Parts Used Aerial parts.
Constituents Eyebright contains iridoid glycosides (including aucubin), flavonoids, tannins, lignans and phenolic acids. Aucubin has antibacterial, anti-inflammatory and antispasmodic activity.
History & Folklore Eyebright's use for eye problems was due in part to the Doctrine of Signatures, an ancient belief that the way that a plant looks – its "sign" – indicates the ailments for which it should be used as a medicine.
Medicinal Actions & Uses Eyebright relieves inflammation and tightens mucous membranes and finds specific use in the treatment of conjunctivitis and blepharitis. Its ability to counter catarrh means that it is often used for infectious

and allergic conditions affecting the eyes, middle ear, sinuses and nasal passages. Eyebright counters liquid mucus, but it should be used guardedly for dry and stuffy congestion, which tends to be made worse by the plant's astringency.

Self-help Uses Allergic rhinitis with catarrh, p. 300; Conjunctivitis, p. 310; Prevention of nosebleeds, p. 310.

Eyebright, as its name suggests, helps eye problems.

Euterpe oleracea (Arecaceae)

Acai

Description A rainforest palm reaching 25 m (80 ft), with 4–8 slender trunks and pinnate leaves up to 3 m (10 ft) long. The berries (about the size of a grape) hang down in large bunches.

Habitat & Cultivation Found throughout much of Central America and northern South America, the acai palm is widely grown for its berries and palm hearts.

Parts Used Drupe (the "berries"), seed, root, palm heart.

Constituents The berries contain high levels of polyphenols, especially anthocyanins and proanthocyanidins (as found in other dark purple berries, such as blueberry). They are strong antioxidants and anti-inflammatories.

History & Folklore Acai berries and their juice are a nutritious part of many Brazilians' diet. In Brazil and Peru, the crushed seeds (which make up 80% of the berry) are used to treat fever. Traditionally, the essence of the root is extracted to treat conditions such as hepatitis and enlarged prostate.

Medicinal Actions & Uses Less a medicine than a nourishing addition to the diet, acai supports vitality and a healthy heart and circulation. Acai juice has much in common with blueberry and pomegranate (*Punica granatum*, p. 259) juices – all helping to sustain good health. The Acai palm is the main source of palm hearts, which are eaten worldwide as a vegetable.

Evodia rutaecarpa (Rutaceae)

Evodia,

Wu Zhu Yu (Chinese)

Description Deciduous tree growing to 10 m (33 ft). Has compound leaves, clusters of white flowers and greenish-red fruit.

Habitat & Cultivation Native to China, Tibet and the eastern Himalayas, evodia is cultivated in China. The partially ripe fruit is gathered in late summer.

Part Used Fruit.

Constituents Evodia contains the alkaloids evodine, evodiamine and rutaecarpine.

History & Folklore Evodia is listed in the *Divine Husbandman's Classic (Shen'nong Bencaojing)* of the 1st century CE.

Medicinal Actions & Uses Evodia has a marked warming effect on the body, helping to relieve headaches and a wide range of digestive problems. In Chinese herbal medicine, evodia is used mainly for abdominal pains, vomiting, diarrhoea, headaches and a weak pulse.

Research Chinese studies indicate that evodia is analgesic and reduces blood pressure.

Caution Use evodia only under professional supervision.

Fagopyrum esculentum (Polygonaceae)

Buckwheat

Description Annual growing to about 50 cm (20 in). Has arrow-shaped leaves and clusters of white or pink 5-petalled flowers.

Habitat & Cultivation Buckwheat is native to central and northern Asia, and is cultivated extensively in temperate regions, especially the US. It is harvested in summer.

Parts Used Leaves, flowers.

Constituents Buckwheat contains bioflavonoids, especially rutin, which is strongly antioxidant. Rutin strengthens the inner lining of blood vessels.

History & Folklore Buckwheat's French name, *blé Sarrasin*, alludes to its ancient Middle Eastern origins. The grain was either introduced to Europe during the Crusades (11th and 12th centuries) or it was brought to Spain by the Arabs several centuries earlier.

Medicinal Actions & Uses Used for a wide range of circulatory problems, buckwheat is best taken as a tea or tablet, accompanied by vitamin C or lemon juice (*Citrus limon*, p. 82) to aid absorption. Buckwheat is used particularly to treat fragile capillaries (seen as small bruises with no apparent cause), but also helps strengthen varicose veins and heal chilblains. Often combined with lime flowers (*Tilia* spp., p. 277), buckwheat is a specific treatment for haemorrhage into the retina. Buckwheat is also commonly taken in combination with other herbs for high blood pressure.

Related Species Recent research has shown that the Chinese *F. dibotrys* and *F. cymosum* are immune-stimulant. They are prescribed for chronic bronchitis, inflamed gallbladder and pulmonary abscesses.

Cautions Interacts with blood-thinning medication. Do not take as a medicine if taking prescribed anticoagulants.

Self-help Uses High blood pressure & arteriosclerosis, p. 301; Poor circulation & high blood pressure, p. 319.

Feronia limonia (Rutaceae)

Wood Apple

Description A spiny tree growing to 9 m (30 ft), it has feathery leaves, red flowers, and round whitish fruit the size of oranges.

Habitat & Cultivation Native to southern India, wood apple is cultivated in tropical Asia.

Parts Used Fruit, leaves.

Constituents The fruit contains fruit acids, vitamins and minerals. The leaves contain tannins and a volatile oil.

Medicinal Actions & Uses Wood apple fruit is used mainly to stimulate the digestive system. In India, the fruit forms part of a paste applied to tone the breasts. The astringent leaves are used to treat indigestion, flatulence, diarrhoea, dysentery (particularly in children) and haemorrhoids. It is traditionally thought to act as a male contraceptive, although there is limited research to support this.

Ferula assa-foetida (Apiaceae)

Asafoetida,

Devil's Dung

Description Perennial plant growing to about 2 m (6½ ft). Has a fleshy taproot, hollow stem, compound leaves, and many white flowers in umbels.

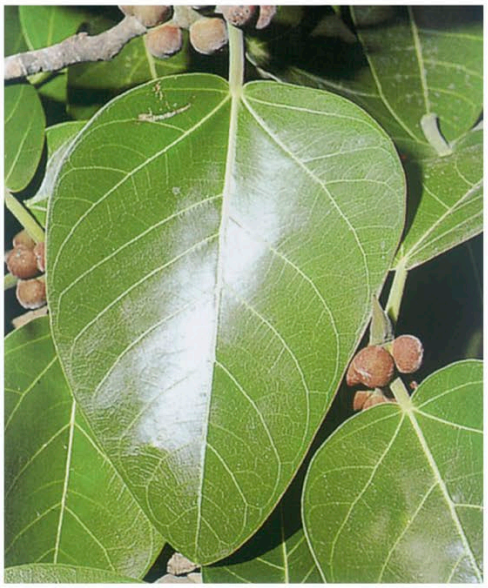
Habitat & Cultivation Native to Iran, Afghanistan and Pakistan, asafoetida produces a gum obtained in summer from 4-year-old plants. The stems are cut off and successive slices are made through the roots. The gum wells up and is collected after it has hardened.
Part Used Oleo-gum-resin.
Constituents Asafoetida exudate contains 6–17% volatile oil, as well as resin and gum. The volatile oil contains disulphides (about 58%), which have an expectorant action. The oil also settles the digestion. Asafoetida resin contains sesquiterpenoid coumarins, including foetidin.
History & Folklore In the 4th century BCE, *Charaka Samhita*, a Hindu medical treatise, proclaimed asafoetida the best remedy for clearing wind and bloating. The name devil's dung notwithstanding, the plant is thought to have been the most popular spice in ancient Rome. Asafoetida is as persistent in aroma as garlic (*Allium sativum*, p. 59), and is still used as a flavouring.
Medicinal Actions & Uses In Middle Eastern and Indian herbal medicine, asafoetida is used for simple digestive problems such as wind, bloating, indigestion and constipation. Asafoetida's volatile oil, like that of garlic, has components that leave the body via the respiratory system and aid the coughing up of congested mucus. Asafoetida is taken (usually in tablet form) for bronchitis, bronchial asthma, whooping cough and other chest problems. Asafoetida also lowers blood pressure and thins the blood. The herb has a reputation for helping in neurotic states.
Related Species *F. silphion* was used in ancient Rome as a contraceptive. It was overharvested and died out in about 300 CE. *F. persica* is used in the Middle East for rheumatic problems and backache. The central Asian *F. sumbul* is used as a nerve tonic. *F. jaeschkeana* has recently been investigated as a potential contraceptive. See also *F. gummosa (following entry)*.
Caution While safe in adults, asafoetida may be harmful to young babies.

Ferula gummosa syn. *F. galbaniflua* (Apiaceae)
Galbanum

Description Perennial with a smooth, hollow stem, finely toothed compound leaves and umbels of small white flowers.
Habitat & Cultivation Native to central Asia, galbanum produces a gum that is obtained when stems are cut off and successive slices are made through the roots. Gum wells to the surface and is collected after it has hardened.
Part Used Oleo-gum-resin.
Constituents Galbanum exudate contains a volatile oil, resins, gums and a coumarin (umbelliferone).
History & Folklore Galbanum has been used medicinally for centuries.
Medicinal Actions & Uses Galbanum is a digestive stimulant and antispasmodic, reducing flatulence, griping pains and colic. It is also expectorant. Applied as an ointment, the gum may help heal wounds.
Related Species See asafoetida (*F. assa-foetida, preceding entry*).
Self-help Use Acidity & indigestion, p. 307.

Ficus benghalensis (Moraceae)
Banyan Tree

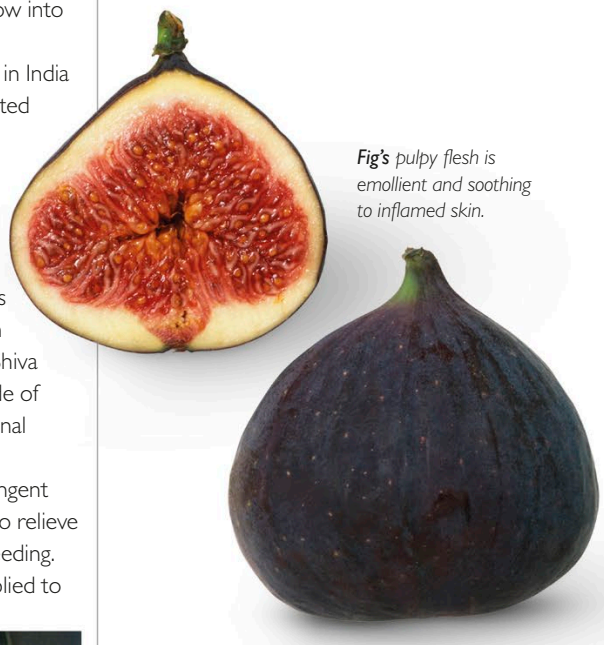
Description Tree growing to 20 m (65 ft) with oval leaves, fig-type fruit, and roots that grow into the ground from branches.
Habitat & Cultivation Growing wild in India and Pakistan, the banyan tree is also cultivated across the Indian sub-continent.
Parts Used Fruit, bark, leaves, latex, aerial roots.
Constituents Banyan tree contains ketones, sterols, ficusin and bergaptin.
History & Folklore The banyan tree is sacred to Hindus and is frequently found in the proximity of Hindu temples. The god Shiva is often shown sitting peacefully in the shade of a banyan tree. The Banyan tree is the national tree of India.
Medicinal Actions & Uses The astringent leaves and bark of the tree are employed to relieve diarrhoea and dysentery and to reduce bleeding. As with other *Ficus* species, the latex is applied to haemorrhoids, warts and aching joints. The fruit is laxative and the roots are chewed to prevent gum disease. The bark is used in Ayurvedic medicine for diabetes.
Research In laboratory studies an extract of the leaves was shown to counter diarrhoea. Glycosides in banyan have been shown to have an antidiabetic activity, lowering blood sugar levels.
Related Species See fig (*F. carica, following entry*).
Caution The latex is toxic and should not be taken internally.



Banyan tree *leaves are astringent and are used to tighten mucous membranes.*

Ficus carica (Moraceae)
Fig

Description Deciduous tree growing to 4 m (13 ft). Has large leaves and fleshy receptacles which ripen into purple-brown, pear-shaped fruit.



Fig's *pulpy flesh is emollient and soothing to inflamed skin.*

Habitat & Cultivation Native to western Asia, fig now grows wild and is cultivated in many temperate and sub-tropical regions. Fruit harvested in summer.
Parts Used Fruit, latex.
Constituents Figs contain around 50% fruit sugars (mainly glucose), flavonoids, vitamins and enzymes.
History & Folklore The fig leaf was used by Adam and Eve to hide their nakedness in the Garden of Eden. There are many other references to the plant in the Old Testament, mainly to the sweetness of the fruit and to its use as a medicine. Spartan athletes in Ancient Greece were said to eat figs in order to improve their performance.
Medicinal Actions & Uses The fruit sugars within the fig (especially the dried fruit) have a pronounced but gentle laxative effect; syrup of figs is still a remedy for mild constipation. The fruit's

emollient pulp helps relieve pain and inflammation, and it has been used to treat tumours, swellings and gum abscesses – the fruit often being roasted before application. Figs are also mildly expectorant and, when used with herbs such as elecampane (*Inula helenium*, p. 107), are helpful in treating dry and irritable coughs and bronchitis. The milky latex from leaves and stems is reputed to be analgesic, and has long been used to treat warts, insect bites and stings.

Related Species Research published in 1999 showed that an extract of leaves of *F. racemosa*, a native of northern India, had a marked protective activity on the liver in rats. The juice and powdered bark of the Central American *F. cotinifolia* are applied to wounds and bruises. *F. indica* is used in Ayurvedic medicine as a tonic, diuretic and treatment for gonorrhoea. *F. lacor* is used in Chinese herbal medicine to induce sweating, while *F. retusa*, which is native to China, Indonesia and Australia, is used in the Chinese tradition to treat toothache and tooth decay. See also banyan tree (*F. benghalensis, preceding entry*) and peepal (*F. religiosa, following entry*).

Cautions The latex is toxic and should not be used internally. Applied to the skin, it may cause an allergic reaction to sunlight.

Ficus religiosa (Moraceae)
Peepal

Description Tree growing to around 8 m (26 ft) with large, leathery, heart-shaped leaves and purple fruit growing in pairs.

Habitat & Cultivation Peepal grows in northern and central India, in forests and alongside water. It is also widely cultivated throughout the sub-continent and southern Asia. The fruit is gathered when ripe.

Parts Used Fruit, leaves, bark, latex.

Constituents The fruit contains fruit sugars, flavonoids and enzymes.

History & Folklore Sacred to Hindus and Buddhists, the peepal is the tree under which the Buddha attained enlightenment. It is a long-living tree; a peepal in Sri Lanka is thought to be over 2,000 years old.

Medicinal Actions & Uses Peepal's uses are similar to those of the banyan (*F. benghalensis*, p. 211). Its astringent bark and leaves are taken for diarrhoea and dysentery, whereas the leaves alone are used for constipation. The leaves are applied with *ghee* (clarified butter) as a poultice to boils and to swollen salivary glands in mumps. The powdered fruit may be taken for asthma and the latex is used to treat warts.

Related Species See preceding entries, fig (*F. carica*) and banyan tree (*F. benghalensis*).

Foeniculum vulgare (Apiaceae)
Fennel

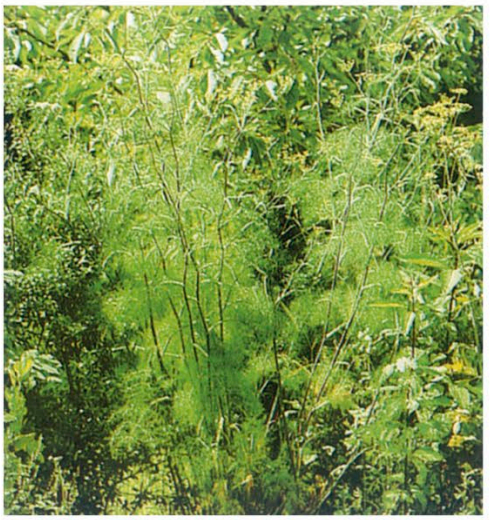
Description Aromatic perennial growing to about 1.5 m (5 ft). Has dark green, feathery leaves, umbels of yellow flowers and small, ridged oval-shaped seeds.

Habitat & Cultivation Native to the Mediterranean region, fennel is now cultivated in temperate regions around the world. The seeds are gathered in autumn.

Parts Used Seeds, essential oil.

Constituents "Sweet" fennel seeds contain about 8% volatile oil (about 80% anethole, plus fenchone and methylchavicol), flavonoids, coumarins (including bergapten) and sterols. The volatile oil relieves wind and is antispasmodic. "Bitter" fennel seeds contain significantly higher levels of fenchone.

History & Folklore Dioscorides, in the 1st century CE, states that "the juice, when put into the eye, aids vision, and into the ear, kills the worms (i.e. bacteria) that develop there".



***Fennel** has a long history of use as a remedy for ailments of the digestive tract.*

Medicinal Actions & Uses The primary use of fennel seeds is to relieve bloating, but they also settle stomach pain, stimulate the appetite and are diuretic and anti-inflammatory. Like anise (*Pimpinella anisum*, p. 248) and caraway (*Carum carvi*, p. 184), the seeds make an excellent infusion for settling the digestion and reducing abdominal distension. The seeds help in the treatment of kidney stones, and, combined with urinary antiseptics such as uva-ursi (*Arctostaphylos uva-ursi*, p. 170), make an effective treatment for cystitis. An infusion of the seeds may be taken as a gargle for sore throats and as a mild expectorant. Fennel is safe for children when taken at a low dose and, as an infusion or syrup, can be given for colic and painful teething in babies. Fennel increases breast-milk production and the herb is still used as an eyewash for sore eyes and conjunctivitis. The seeds have a long-standing reputation as an aid to weight loss and to longevity. Essential oil from the sweet variety is used for its digestive and relaxing properties. It also has oestrogenic activity and may prove helpful in relieving menopausal symptoms.

Cautions Fennel seeds are potentially toxic; do not exceed the recommended dose. Do not take the essential oil internally.

Self-help Uses **Acidity & indigestion**, p. 307; **Morning sickness & nausea**, p. 317; **Stomach spasm**, p. 305; **Wind & bloating**, p. 306.

Forsythia suspensa (Oleaceae)
Weeping Forsythia,
Lian Qiao (Chinese)

Description Deciduous shrub growing to 5 m (16 ft). Has toothed leaves, bright yellow flowers and woody fruit.

Habitat & Cultivation Native to China and Japan, weeping forsythia is grown for its bright yellow blossoms in temperate gardens all over the world. The fruit is harvested in autumn, just before it is fully ripe.

Part Used Fruit.

Constituents The fruit contains flavonoids, including rutin, lignans, glycosides and forsythin. Research suggests that forsythin is antimicrobial, anti-emetic and anti-inflammatory.

History & Folklore Weeping forsythia was first listed in the *Divine Husbandman's Classic (Shen'nong Bencaojing)*, written in the 1st century CE. Weeping forsythia features in a remedy for infections devised in the 18th century.

Medicinal Actions & Uses A bitter-tasting, pungent herb with antiseptic and antiviral activity, weeping forsythia is used to treat infections such as colds, flu, sore throats and tonsillitis. In traditional Chinese medicine, it is used to treat a range of other conditions (including boils, swollen glands and skin infections). The American herbal scientist James A. Duke recommends it is taken as a warm tea, combined with honeysuckle (*Lonicera* spp., p. 229) and lemon balm (*Melissa officinalis*, p. 113), at the onset of colds and similar viral infections.

Caution Not advisable in pregnancy.

Fragaria vesca (Rosaceae)
Wild Strawberry

Description Low-growing perennial herb spread by runners. Has 3-lobed leaves, white flowers and small red berries.

Wild strawberry was said to "comfort fainting spirits".

Habitat & Cultivation Wild strawberry is native to Europe and temperate regions of Asia. The leaves and fruit are gathered in early summer.
Parts Used Leaves, fruit.
Constituents The leaves contain flavonoids, tannins and a volatile oil. The fruit contains fruit acids and a volatile oil with methyl salicylate and borneol.
History & Folklore Wild strawberry appears to have been little used medicinally until the Middle Ages. Writing in 1652, Nicholas Culpeper listed its benefits: "the berries are excellent good to cool the liver, the blood and the spleen or a hot cholerick stomach … the leaves and roots thereof [are] also good to fasten loose teeth and to heal spongy foul gums."
Medicinal Actions & Uses Wild strawberry leaves are mildly astringent and diuretic. The plant is little used medicinally today, but it can be taken to treat diarrhoea and dysentery. The leaves were used as a gargle for sore throats, and in a lotion for minor burns and grazes. In Europe, the fruit is considered to have cooling and diuretic properties, and has been prescribed as part of a diet in cases of tuberculosis, gout, arthritis and rheumatism.

Fraxinus excelsior (Oleaceae)
Ash

Description Deciduous tree growing to 40 m (130 ft). Has pale grey bark, black conical leaf buds and bright green leaves with 7–13 oval leaflets.
Habitat & Cultivation Common in Europe, ash thrives in lowland and moorland. The leaves are gathered in summer, but the bark is gathered in spring.
Parts Used Leaves, bark, seeds.
Constituents Ash leaves contain flavonoids, tannins, mucilage, triterpenes and iridoids.
History & Folklore The ash was the "world-tree" of Norse mythology, its roots spreading to the domain of the gods, and its branches extending to the remotest corners of the universe. In Norse myth, the first man was carved from a piece of ash wood. In parts of Europe, ash bark was used as a cost-free substitute for quinine, in the home treatment of malaria. Such use probably continued in rural areas into the 20th century.
Medicinal Actions & Uses Ash bark is tonic and astringent. Little used in herbal medicine today, it is occasionally taken for fever. The leaves are also astringent, and they have a laxative and diuretic effect. They have been used as a mild substitute for senna (*Cassia senna*, p. 75).
Related Species The bark of the American white ash (*F. americana*) has been used as a bitter tonic and astringent. Several ash species exude a nutritious sap, called "manna", which is used as a laxative for children. In particular, the manna ash (*F. ornus*), which has antioxidant activity, has been cultivated in southern Europe for its high yield of manna sap.

Fucus vesiculosus (Fucaceae)
Bladderwrack,
Kelp

Description Brownish-green alga growing to 1 m (3 ft) in length. Has flat, usually forked, fronds containing air bladders.
Habitat & Cultivation Bladderwrack is native to the North Atlantic shores and western Mediterranean, and is harvested all year.
Part Used Whole plant.
Constituents Bladderwrack contains polyphenols, polysaccharides and minerals, especially iodine (up to 0.1%). The polysaccharides are immune-stimulant. The iodine may stimulate the thyroid gland.
History & Folklore Bladderwrack has been employed as a fuel, as a winter feed for cattle and as a source of iodine and potash.
Medicinal Actions & Uses Due to its iodine content, bladderwrack is taken as an anti-goitre remedy. The plant appears to raise the metabolic rate by increasing hormone production by the thyroid gland, though this increase may be limited to poorly functioning thyroids. Bladderwrack is reputedly helpful in rheumatic conditions.
Research In one clinical trial (Italy 1976), patients taking bladderwrack lost much more weight than the control group. In more recent German research, the polyphenols and polysaccharides appeared to have antiviral and anti-HIV activity.
Cautions Do not take if pregnant or breast-feeding. If suffering from a thyroid illness or taking insulin, take only under professional advice.

Fumaria officinalis (Fumariaceae)
Fumitory

Description Climbing annual growing to 30 cm (1 ft). Has compound leaves and maroon-tipped pink tubular flowers.
Habitat & Cultivation Native to Europe and North Africa, fumitory also grows in Asia, North America and Australia.
Parts Used Flowering aerial parts.
Constituents Fumitory contains isoquinoline alkaloids and flavonoids.
Medicinal Actions & Uses A notably bitter-tasting herb, fumitory has a stimulant and cleansing action on the liver and gallbladder, and is principally used to treat chronic itchy skin problems such as eczema. It is also diuretic and mildly laxative.
Related Species Fumitory is related to corydalis (*Corydalis yanhusuo*, p. 86), and *F. parviflora* from central Asia. The latter, like fumitory, is used as a detoxifying, laxative and diuretic herb.
Caution Fumitory is toxic in excessive doses. Use only with professional advice.

Fumitory may be applied externally as a treatment for eczema.

Galega officinalis (Fabaceae)

Goat's Rue

Description Bushy perennial growing to about 1 m (3 ft) in height. Goat's rue has compound leaves with lance-shaped leaflets, delicate pink pea-type flowers on terminal spikes, and produces red-brown seed pods in autumn.
Habitat & Cultivation Native to Asia and continental Europe, and naturalized in Britain, goat's rue grows in damp and low-lying areas. It is harvested in summer.

Goat's rue *was once taken to treat the plague.*

Parts Used Aerial parts.
Constituents Goat's rue contains alkaloids (including galegine), lectins, flavonoids and tannins. Galegine strongly reduces blood sugar levels.
History & Folklore Formerly used as a treatment for the plague, goat's rue has been widely cultivated as a cattle feed.
Medicinal Actions & Uses Today, goat's rue is chiefly used as an anti-diabetic herb, having the ability to reduce blood sugar levels. It is not a substitute for conventional drugs, but can be valuable in the early stages of late-onset diabetes and is best used as an infusion. The herb has the effect of increasing breast-milk production. It is also a useful diuretic.
Caution Use as part of the treatment of diabetes only under professional supervision.

Galipea officinalis
syn. *G. cusparia* (Rutaceae)

Angostura

Description Evergreen tree growing to 15 m (49 ft) with grey bark, shiny bright green leaflets and foul-smelling flowers.
Habitat & Cultivation Angostura is native to some Caribbean islands and to tropical South America. The bark is gathered throughout the year.
Part Used Bark.
Constituents Angostura bark contains bitter principles, quinoline alkaloids, including cusparine, and 1–2% volatile oil. The alkaloids have antimicrobial activity against the tuberculosis bacillus.
History & Folklore Angostura is a traditional tonic and fever remedy in South America, used chiefly for digestive infections. Native Amazonians also use the plant as a fish poison. Angostura has been used as a source of "bitters", although it is unknown whether it is an ingredient of the cocktail flavouring bearing its name as the drink's composition is a trade secret.
Medicinal Actions & Uses A strong bitter with tonic properties, angostura stimulates the stomach and digestive tract as a whole. It is antispasmodic and is reported to act on the spinal nerves, helping in paralytic conditions. Angostura is typically given for weak digestion, and is considered valuable as a remedy for diarrhoea and dysentery. In South America, it is sometimes used as a substitute for cinchona (*Cinchona* spp., p. 80) to control fevers.
Caution Use under professional guidance only.

Galium aparine (Rubiaceae)

Cleavers,

Goose Grass

Description Straggling, square-stemmed annual growing to a height of 1.2 m (4 ft) with whorls of lance-shaped leaves, clusters of small white flowers and small, round, green fruit with hooked prickles.
Habitat & Cultivation Common throughout Europe and North America, cleavers is found in many other temperate regions, including in Australia. It grows prolifically in gardens, by roadsides and in hedgerows, and is gathered when just about to flower in late spring.
Parts Used Aerial parts.
Constituents Cleavers contains iridoids (including asperuloside), polyphenolic acids, anthraquinones (only in the root), alkanes, flavonoids and tannins. Asperuloside is a mild laxative.
History & Folklore The name cleavers refers to the plant's ability to cling (or cleave) to fur or clothing. Dioscorides, a Greek physician of the 1st century CE, considered it useful for countering weariness, and described how shepherds used the stems to make sieves for straining milk.

Dried aerial parts

Medicinal Actions & Uses A valuable diuretic, cleavers is often taken for skin diseases such as seborrhoea, eczema and psoriasis; for swollen lymph glands; and as a general detoxifying agent in serious illnesses such as cancer. The plant is commonly prepared in the form of an infusion, but for conditions such as cancer, it is best taken as a juice, which is strongly diuretic. The juice and the infusion are also taken for kidney stones and other urinary problems.
Research According to French research (1947), an extract of the plant appears to lower blood pressure.
Related Species The Mexican *G. orizabense* is used by the Mazatecs to treat intestinal parasites and to relieve fever. *G. umbrosum* from New Zealand has been used to treat gonorrhoea. See also lady's bedstraw (*G. verum*, *following entry*).

Galium verum (Rubiaceae)

Lady's Bedstraw

Description Short, sprawling perennial growing to 80 cm (32 in). Has whorls of narrow dark green leaves and tufts of very small bright yellow flowers.
Habitat & Cultivation Found throughout Europe and western Asia, and naturalized in North America, lady's bedstraw thrives in dry meadows, hedgerows, and in wayside places. It is gathered when in flower in summer.
Parts Used Aerial parts.
Constituents Lady's bedstraw contains iridoids (including asperuloside), flavonoids, anthraquinones, alkanes and rennin.
History & Folklore The name of this pleasant-scented herb derives from its traditional use as a stuffing for mattresses. In medieval times, it was used as a "strewing" herb on floors. Lady's bedstraw curdles milk and gives a yellow colour to cheese produced from the curd. In his *Irish Herbal* (1735), K'Eogh states, "when applied to burns, the crushed flowers alleviate inflammation, and when applied to wounds, they can heal them".

Lady's bedstraw *is used as a diuretic.*

Medicinal Actions & Uses A slightly bitter-tasting remedy, lady's bedstraw is used mainly as a diuretic and for skin problems. Like its close relative, cleavers (*G. aparine*, *preceding entry*), the herb is given for kidney stones, bladder stones and other urinary conditions, including cystitis. It is occasionally used as a means to relieve chronic skin problems such as psoriasis, but, in general, cleavers is preferred as a treatment for this condition. Lady's bedstraw has had a long-standing reputation, especially in France, of being a valuable remedy for epilepsy, though it is rarely used for this purpose today.
Related Species *G. elatum* has also been considered a remedy for epilepsy in France. (*See also G. aparine, preceding entry.*)

Gardenia jasminoides syn. *G. augusta, G. florida* (Rubiaceae)

Gardenia,

Zhi Zi (Chinese)

Description Evergreen shrub growing to 2 m (6½ ft). Has green leaves, scented double flowers and orange-red fruit.

Gardenia *plays a significant role in Chinese herbalism.*

Habitat & Cultivation Native to south-eastern provinces of China, gardenia prefers humid, tropical climates. The fruit is gathered when it turns reddish-yellow.
Part Used Fruit.
Constituents Gardenia fruit contains iridoid glycosides. The flowers are the source of the essential oil.
History & Folklore Gardenia has been used in Chinese medicine for at least 2,000 years. It provides an important essential oil used to flavour teas. The oil is also used to make perfumes. Gardenia perfumes often blend gardenia, jasmine and tuberose.
Medicinal Actions & Uses In the Chinese herbal tradition (pp. 40–43), gardenia is a "bitter, cold" herb used mostly to relieve symptoms associated with heat. These include fever, irritability and restlessness, insomnia, cystitis, painful urination and jaundice. The fruit staunches bleeding and is taken for nosebleeds, and urinary and rectal bleeding. The essential oil is an antiseptic and has a reputation for being an aphrodisiac.
Related Species The fruit of the northern Indian *G. campanulata* is cathartic and used to expel worms. *G. gummifera*, from eastern India, is antiseptic and digestive. The Pacific region *G. taitensis* relieves headaches. The African *G. thunbergia* is used to relieve constipation.
Cautions Avoid in diarrhoea. Do not take if taking prescribed medication for high blood pressure.

Gaultheria procumbens (Ericaceae)

Wintergreen

Description Aromatic low-lying shrub growing to 15 cm (6 in). Has leathery, oval leaves, small white or pale pink bell-shaped flowers and brilliant red fruit.
Habitat & Cultivation Native to North America, wintergreen is found in woodland and exposed mountainous areas. The leaves and fruit are gathered in summer.
Parts Used Leaves, fruit, essential oil.
Constituents Wintergreen contains phenols (including gaultherin and salicylic acid), 0.8% volatile oil (up to 98% methyl salicylate), mucilage, resin and tannins.
History & Folklore Wintergreen was popular with Native Americans, who used it for treating back pain, rheumatism, fever, headaches, sore throats and many other conditions. Samuel Thomson, founder of the 19th-century Physiomedicalist movement, combined it with hemlock (*Conium maculatum*, p. 193) to treat severe fluid retention. The leaves have been used as a substitute for tea (*Camellia sinensis*, p. 181), for example during the American War of Independence (1776–1784).
Medicinal Actions & Uses Wintergreen is strongly anti-inflammatory, antiseptic, and soothing to the digestive system. It is an effective remedy for rheumatic and arthritic problems, and, taken as a tea, it relieves flatulence and colic. The essential oil, in the form of a liniment or ointment, brings relief to inflamed, swollen or sore muscles, ligaments and joints, and can also prove valuable in treating neurological conditions such as sciatica (pain resulting from pressure on a nerve in the lower spine) and trigeminal neuralgia (pain affecting a facial nerve). The oil is sometimes used to treat cellulitis, a bacterial infection causing the skin to become inflamed.
Cautions People who are sensitive to aspirin should not take wintergreen internally. Oil of wintergreen should never be taken internally, nor applied (even well diluted) to the skin of children under 12 unless under professional supervision.

Wintergreen *makes an effective liniment for sore muscles and joints.*

Gelidium amansii (Rhodophyceae)

Agar

Description Seaweed with red-brown, translucent, multi-branched ribbons and fronds growing to about 1 m (3 ft) in length. It has spherical fruit that appears in late autumn and winter.
Habitat & Cultivation Agar is native to the Pacific coasts of China and Japan, and the coast of South Africa. It grows to a depth of 30 m (100 ft) below sea level. Commercial harvesters rake plants off banks and rocks. The cleaned seaweed, after being boiled with sulphuric acid for 6 hours, yields agar, which sets to form a jelly. Around 6,500 ton(ne)s of processed agar are produced each year.
Part Used Seaweed extract (agar).
Constituents Agar contains polysaccharides, mainly agarose and agaropectin (up to 90%), which are very mucilaginous.
History & Folklore Agar is commonly used as a thickening agent in food preparation, but its most widespread application is in scientific research, where it is used as a culture medium for growing micro-organisms in petri dishes.
Medicinal Actions & Uses Like most seaweeds and their derivatives, agar is nutritious and contains large amounts of mucilage. Its chief medicinal use is as a bulk laxative. In the intestines, agar absorbs water and swells, stimulating bowel activity and the subsequent elimination of faeces.
Related Species While *G. amansii* is the main agar-producing species, *G. cartilagineum* (found on the Pacific coast of North America) and other closely related species around the world are being used as alternative sources.

Gelsemium sempervirens (Loganiaceae)

Yellow Jasmine,

Gelsemium

Description Evergreen woody climber growing to 6 m (20 ft). Has shiny, dark green leaves and clusters of fragrant, trumpet-shaped yellow flowers.
Habitat & Cultivation Native to southern US and Central America, yellow jasmine prefers damp sites. The rootstock is unearthed in autumn.
Part Used Rootstock.
Constituents Yellow jasmine contains indole alkaloids (including gelsemine and gelsedine), iridoids, coumarins and tannins. The alkaloids are toxic and act as a depressant to the central nervous system.

Dried rootstock

History & Folklore It is unclear whether yellow jasmine was used in Native American medicine. The plant came into regular use only in the middle of the 19th century. It was first employed by followers of the Eclectic herbal movement, and then later became an official medicine, listed in the *Pharmacopoeia of the United States* from 1863 to 1926.
Medicinal Actions & Uses A potent medicinal herb, yellow jasmine is prescribed in small doses as a sedative and antispasmodic, most commonly for neuralgia (pain caused by nerve irritation or damage). Yellow jasmine is often given for nerve pain affecting the face. The herb is also applied externally to treat intercostal neuralgia (nerve pain between the ribs) and sciatica (pain resulting from pressure on a nerve in the lower spine). Yellow jasmine's antispasmodic property is used in treating whooping cough and asthma. The herb is occasionally taken for migraine, insomnia and bowel problems, and also to reduce blood pressure. Yellow jasmine is also used in homeopathic medicine.
Cautions Yellow jasmine is an extremely toxic plant that should be used only under professional supervision. The plant is subject to legal restrictions in some countries.

Geranium maculatum (Geraniaceae)

American Cranesbill

Description Perennial growing to 60 cm (2 ft). Has deeply cleft leaves, pink-purple flowers and beak-shaped fruit.
Habitat & Cultivation Native to woodlands of eastern and central North America, the root is dug up in early spring, and the aerial parts are gathered in summer.
Parts Used Root, aerial parts.
Constituents American cranesbill contains up to 30% tannins.
History & Folklore Native American peoples used American cranesbill for sore throats, mouth ulcers, infected gums and oral thrush. The herb was later used by European settlers for diarrhoea, internal bleeding, cholera and venereal diseases.
Medicinal Actions & Uses An astringent and clotting agent, American cranesbill is used today much as in earlier times. The herb is often prescribed for irritable bowel syndrome and haemorrhoids, and it is used to staunch wounds. It may also be used to treat heavy menstrual bleeding and excessive vaginal discharge.
Related Species See herb robert (*G. robertianum, following entry*).
Caution American cranesbill should only be taken for a few weeks at a time.

Geranium robertianum (Geraniaceae)

Herb Robert

Description Strong-smelling annual or biennial herb growing to 50 cm (20 in). Has deeply cleft red-green leaves, bright pink flowers and pointed seed capsules.
Habitat & Cultivation Native to Europe and Asia, herb robert is naturalized in North America. It is gathered in summer.
Parts Used Aerial parts, root.
Constituents Herb robert contains tannins, a bitter principle (geraniin), traces of volatile oil and citric acid.
History & Folklore Herb robert's unpleasant odour has earned it the name "stinking Bob" in parts of England.
Medicinal Actions & Uses Herb robert is little used in contemporary European herbal medicine. It is occasionally employed in much the same way as American cranesbill (*G. maculatum, preceding entry*), as an astringent and wound healer. The herb bears closer investigation as a remedy. According to one authority it is effective against stomach ulcers and inflammation of the uterus, and it holds out potential as a treatment for cancer.

Geum urbanum (Rosaceae)

Avens

Description Downy perennial growing to 60 cm (2 ft). Has wiry stems, compound leaves, small, yellow 5-petalled flowers, and fruit covered with hooks.
Habitat & Cultivation Native to Europe and central Asia, avens is a common wayside plant. The root is dug up in spring, the aerial parts are picked in summer.
Parts Used Aerial parts, root.
Constituents Avens contains phenolic glycosides (including eugenol), tannins, a volatile oil, and possibly a sesquiterpene lactone (cnicin).
History & Folklore Once known as *herba benedicta* (blessed herb), avens was credited with significant magical powers in the Middle Ages. A German text of 1493 states that if avens root is in the house, the devil is powerless. According to tradition, the root should be unearthed on March 25th.
Medicinal Actions & Uses Avens is an astringent herb, used principally for problems affecting the mouth, throat and gastro-intestinal tract. The herb tightens up soft gums, heals mouth ulcers, makes a good gargle for infections of the pharynx and larynx, and reduces irritation of the stomach and gut. It may be taken for peptic ulcers, irritable bowel syndrome, diarrhoea and dysentery. Avens has been used in a lotion or ointment as a soothing remedy for haemorrhoids. The herb may also be used as a douche for treating excessive vaginal discharge. Avens reputedly has a mild quinine-type action in lowering fever.

Glechoma hederacea
syn. *Nepeta glechoma* (Lamiaceae)

Ground Ivy,

Alehoof

Description Creeping perennial herb growing to 15 cm (6 in). Has long rooting runners, notched kidney-shaped leaves and purple-blue flowers in whorls.
Habitat & Cultivation Native to Europe and western Asia, ground ivy is now naturalized in other temperate regions, including North America. It thrives on the outskirts of woods and alongside paths and hedges. It is gathered in summer.
Parts Used Aerial parts.
Constituents Ground ivy contains sesquiterpenes, flavonoids, a volatile oil, a bitter principle (glechomine), caffeic acids and tannins.
History & Folklore Known in parts of England as "alehoof", ground ivy was used to flavour and clarify ale, the traditional drink of the Anglo-Saxons. In Medieval times, it was recommended for fever, and was a popular treatment for chronic coughs. The 16th-century herbalist John Gerard considered it a valuable remedy for tinnitus.
Medicinal Actions & Uses Ground ivy is tonic, diuretic and anticatarrhal, and is used to treat many problems involving the mucous

membranes of the ear, nose, throat and digestive system. A well-tolerated herb, it can be given to children to clear lingering catarrh and to treat chronic conditions such as "glue ear" and sinusitis. Throat and chest problems, especially those due to excess catarrh, also benefit from this remedy. Ground ivy is also a valuable treatment for gastritis and acid indigestion. Further along the gastro-intestinal tract, its binding nature helps to counter diarrhoea and to dry up watery and mucoid secretions. Ground ivy has been employed to prevent scurvy and as a spring tonic, and is considered beneficial in kidney disorders.

***Ground ivy** is useful for many disorders of the digestive system.*

Glycine max (Fabaceae)
Soya

Description Annual growing to 2 m (6½ ft). Has leaves with 3 leaflets, white or purple flowers and pods with 2–4 beans.
Habitat & Cultivation Soya is native to south-western Asia, and is cultivated in warm temperate regions. The pods are gathered when ripe.
Parts Used Beans, sprouts.
Constituents Soya contains protein (about 30%), fixed oil (about 17%), including lecithin (2% or more), linoleic acid and alpha-linolenic acid, isoflavones, coumestrol, sterols, saponins, vitamins and minerals. Coumestrol and the isoflavones closely mimic oestrogen within the body.
History & Folklore A staple food in much of Asia, soya has been used in China for at least 5,000 years. Soya was introduced in the United States in 1804 and has become a major crop in the south and mid-west. It is now one of the world's most important food crops.
Medicinal Actions & Uses Although soya beans and soya produce have little direct medicinal value, they are highly important as foods, providing unusually high levels of protein, lecithin and essential fatty acids. However, the beans may have a protective role against cancer, notably breast cancer. Their significant oestrogenic activity makes them a particularly good medicinal food for women going through the menopause, helping to relieve symptoms such as hot flushes and to protect against osteoporosis. In Chinese medicine, soya bean sprouts (also highly nutritious) are thought to help relieve "summer heat" and fever.
Research Soya bean is a remarkable nutrient, rich in protein, fats and oestrogenic substances, all of which make it an excellent food. The isoflavones, sterols, saponins and fibre contribute to soya's protective activity against cancer, and countries such as Japan are thought to have lower levels of cancer because of the great quantity of soya produce eaten there. The isoflavones, coumestrol and sterols are all phytoestrogens. These appear to inhibit oestrogen within the body when oestrogen levels are too high (for example in menstrual disorders), and to compensate when oestrogen levels are low (such as during the menopause). Unrefined soya oil contains high levels of lecithin and polyunsaturated essential fatty acids, which support healthy levels of blood fat such as cholesterol.

Gnaphalium uliginosum (Asteraceae)
Marsh Cudweed

Description Annual plant growing to 20 cm (8 in). Has narrow silver-grey leaves and tiny yellow flowerheads.
Habitat & Cultivation Marsh cudweed is native to Europe, the Caucasus and western Asia, and is naturalized in North America. It prefers damp areas, and is gathered in summer when in flower.
Parts Used Aerial parts.
Constituents Marsh cudweed contains a volatile oil and tannins.
Medicinal Actions & Uses While little used medicinally today, marsh cudweed has astringent, antiseptic and anticatarrhal properties. In British herbal medicine, it is occasionally taken for tonsillitis, sore throat and hoarseness, and for catarrh in the throat, nasal passages and sinuses. Marsh cudweed is used in Russia to reduce high blood pressure. It is thought to be antidepressant and aphrodisiac.
Related Species A North American relative, *G. polycephalum*, was used to treat respiratory and intestinal catarrh, and was applied as a poultice for bruises. *G. keriense*, native to New Zealand, is also considered a remedy for bruises.

***Marsh cudweed** is commonly found in damp areas in Europe, North America and Asia.*

Gossypium herbaceum (Malvaceae)
Cotton

Description Biennial or perennial growing to about 2.5 m (8 ft). Has lobed leaves, large white or pink flowers, and seed capsules surrounded by fluffy white tufts.
Habitat & Cultivation Native to the America, Africa and Asia, cotton thrives in warm temperate and tropical climates. It is widely cultivated for its fibre. The root and seeds of the plant are harvested in autumn.
Parts Used Root bark, seed oil.
Constituents Cotton root bark contains gossypol (a sesquiterpene) and flavonoids. Cotton seed contains a fixed oil, which is about 2% gossypol, and flavonoids. Gossypol causes infertility in men.
History & Folklore In India and the Middle East, cotton has been cultivated since the earliest times for its fibre and medicinal properties. The plant was particularly valued for its ability to induce menstruation. Cotton seed oil's contraceptive effect in men was first discovered in China when men became infertile after eating food cooked in the oil.
Medicinal Actions & Uses Cotton root bark is rarely used medicinally today. It was once employed as a substitute for ergot (*Claviceps purpurea*), the widely used labour-inducing herb. Cotton root bark is both milder-acting and safer in effect, stimulating uterine contractions and hastening a difficult labour. It also promotes abortion or the onset of a period, and reduces menstrual flow. Cotton root bark encourages the blood to clot and the secretion of breast-milk. Cotton seed oil is used to treat heavy menstrual bleeding and endometriosis.

Research Cotton seeds and seed oil cause infertility in men, and have been tested as a male contraceptive in China. However, in addition to lowering sperm count, cotton seed oil causes the degeneration of sperm-producing cells.
Related Species The American species *G. hirsutum* was used extensively as a medicinal herb by the Maya and Aztecs, and was also cultivated for its fibre. Columbus carried samples of this species back to Europe from his first voyage. Native American people used the bark to ease the pain of childbirth, and by the 19th century it was used as an inducer of menstruation and abortion.
Cautions Cotton root bark and seed oil are potentially toxic and should only be used under professional supervision. Do not use during pregnancy.

Grindelia camporum syn. *G. robusta* t *rigida* (Asteraceae)

Gumplant

Description Perennial herb growing to 1 m (3 ft). Has triangular leaves and yellow-orange daisy-type flowers.
Habitat & Cultivation Native to south-western US and Mexico, gumplant grows in arid and saline soil. It is harvested in late summer when in flower.
Parts Used Leaves, flowering tops.
Constituents Gumplant contains diterpenes (including grindelic acid), resins and flavonoids.
History & Folklore Gumplant was used by Native Americans to treat bronchial problems and skin afflictions. Gumplant was officially recognized in the *Pharmacopoeia of the United States* from 1882 to 1926.
Medicinal Actions & Uses Gumplant is a valuable remedy for bronchial asthma, and for states where phlegm in the airways impedes respiration. Both antispasmodic and expectorant, gumplant helps to relax the muscles of the smaller bronchial passages and to clear congested mucus. Additionally, it is thought to desensitize the nerve endings in the bronchial tree and to slow the heart rate, both leading to easier breathing. Gumplant is also taken for bronchitis and emphysema, and to clear catarrh in the throat and nose. It has been employed in the treatment of whooping cough, hay fever and cystitis, and externally to help speed the healing of skin irritation and burns.
Related Species *G. squarrosa*, a North American species used interchangeably with *G. camporum*, was taken by Native Americans to treat respiratory problems such as colds, coughs and tuberculosis.
Cautions Toxic in excessive doses. Only take under professional supervision. Do not take if suffering from kidney or heart problems.

Guaiacum officinale (Zygophyllaceae)

Lignum Vitae,

Guayacan (Spanish)

Description Evergreen tree growing to 10 m (33 ft). Has compound oval leaves, small, deep blue star-shaped flowers, and heart-shaped seed capsules.
Habitat & Cultivation Lignum vitae is native to South America and the Caribbean islands. It grows in tropical rainforests. The tree is felled for its timber, and resin is extracted from the heartwood.
Parts Used Wood, resin.
Constituents Lignum vitae contains lignans (furoguaiacidin, guaiacin and others), triterpene saponins, 18–25% resin, and volatile oil.

Lignum vitae *was once in high demand in Europe as a purported cure for syphilis.*

History & Folklore In 1519, Ulrich von Hutten, a German satirist, was said to have cured himself of syphilis after a 40-day regime involving fasting, profuse sweating and drinking decoctions of lignum vitae. Furthermore, in 1526, Oviedo, one of the earliest chroniclers of American natural history, wrote that "Caribbean Indians cure themselves very easily" of venereal disease with this plant. For some years, lignum vitae was in great demand in Europe but it slowly fell into disrepute, its use as a cure for syphilis being seen as a long-lasting hoax. However, it is possible that the herb might have some effect if combined with an intensive naturopathic regime.
Medicinal Actions & Uses Used in Europe, especially in Britain, as a remedy for arthritic and rheumatic conditions, lignum vitae has anti-inflammatory properties that help to reduce joint pain and swelling. It is also diuretic, laxative and sweat-inducing and speeds the elimination of toxins, which makes it valuable for treating gout. Tincture of lignum vitae is commonly used as a friction rub on rheumatic areas. Cottonwool moistened with the resin may be applied to aching teeth. A decoction of the woodchips acts as a local anaesthetic, and is used to treat rheumatic joints and herpes blisters.
Related Species *G. sanctum*, which grows in Central America and parts of Florida, and *G. coulteri*, native to Mexico, are used in the same manner as lignum vitae.
Caution Lignum vitae is subject to legal restrictions in some countries.

Guarea rusbyi syn. *G. guidonia* (Meliaceae)

Cocillana,

Guapi Bark

Description Evergreen tree growing to 45 m (150 ft) with pale grey bark, compound lance-shaped leaves and green-white flowers.
Habitat & Cultivation Cocillana is native to the eastern Andes. The bark is gathered throughout the year.
Part Used Bark.
Constituents Cocillana contains anthraquinones, proanthocyanids and a volatile oil.
History & Folklore Cocillana has been used as an emetic in traditional South American and Caribbean medicine, probably for many centuries. The plant was first introduced to Western medicine by H. H. Rusby, who collected samples in Bolivia in 1886.
Medicinal Actions & Uses Cocillana is used in cough mixtures, being an even more powerful expectorant than ipecacuanha (*Cephaelis ipecacuanha*, p. 186). Cocillana is taken as a treatment for coughs, excessive mucus production in the throat and chest, and bronchitis. At a high dosage, the plant induces vomiting.
Related Species A gum resin derived from the Caribbean *G. guara* is used as a clotting agent, and a decoction of the leaves is taken as a treatment for internal bleeding.
Caution Use cocillana only under professional supervision.

Gymnema sylvestre (Asclepiadaceae)

Gymnema,

Gurmar (Hindi)

Description Large, evergreen, twining plant, climbing up through forest trees, sometimes to a considerable height. Has dull green leaves about 5 cm (2 in) long, and umbels of small yellow flowers.

Habitat & Cultivation Gymnema is native to forests of central and southern India, South-East Asia, and as far south as northern Australia. It prefers loamy soil.
Parts Used Leaves.
Constituents Gymnema contains saponins (gymnemic acids), and a polypeptide (gurmarin).
History & Folklore Gymnema has long been used in Indian domestic medicine as a remedy for sugar-craving and diabetes. Its Hindi name means "sugar destroyer".
Medicinal Actions & Uses Gymnema has real value in treating diabetes, especially in the early stages of the type of diabetes that develops in middle to old age. If taken consistently for a year or more, it will help to prevent the condition deteriorating. Gymnema may help to regenerate cells in the pancreas which secrete insulin, so it may be possible to control or reverse mild diabetes with diet and gymnema. The plant's remarkable ability to block sweet tastes means that it can reduce sugar-craving and contribute to weight loss programmes.
Research In recent research in India and Japan, gymnema has shown promise as a safe and effective natural treatment for diabetes. In two clinical trials in India, patients with diabetes needed less insulin or other treatments to lower blood-sugar levels. There is an indication that gymnema may encourage repair of the islet cells of the pancreas, responsible for insulin secretion. The leaves have been shown to anaesthetize the sweet taste buds of the tongue, and temporarily reduce appetite.

Haronga madagascariensis (Guttiferae)

Haronga

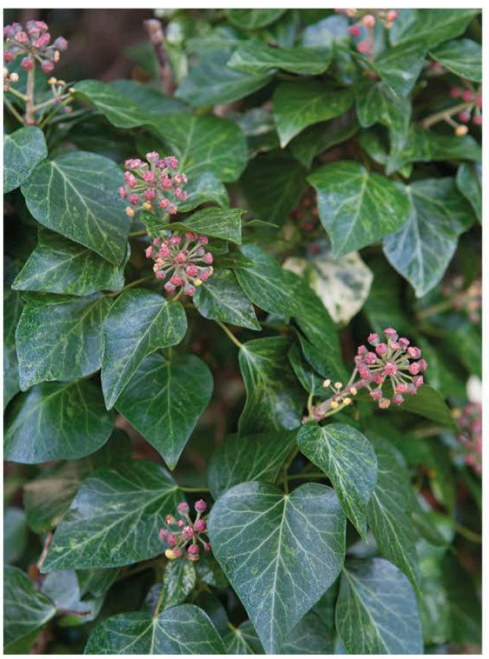
Description Small evergreen tree growing to 8 m (26 ft). Has black-dotted leaves with a dark green upper surface and red-brown hairs underneath, and clusters of creamy-white flowers.
Habitat & Cultivation Haronga is native to Madagascar and East Africa, and grows in tropical areas. The leaves and bark are collected throughout the year.
Parts Used Leaves, bark.
Constituents Haronga bark contains phenolic pigments, triterpenes, anthraquinones and tannins. The leaves contain phenolic pigments, the diterpene hypericin, flavonoids and tannins. Hypericin, which is also found in St John's wort (*Hypericum perforatum*, p. 106), has antiviral properties.
History & Folklore Haronga resin has traditionally been used in Africa to secure arrowheads on to shafts.
Medicinal Actions & Uses Thought to stimulate bile secretion, haronga is used in European herbal medicine to treat indigestion and poor pancreatic function. In African herbal medicine, haronga is chiefly employed as an astringent and mild laxative, and is also given for digestive system ailments such as diarrhoea and dysentery.

Hedera helix (Araliaceae)

Ivy,

English Ivy

Description A woody climber growing to 30 m (100 ft) with leathery, dark green leaves, clusters of greenish-yellow flowers and black or orange berries.
Habitat & Cultivation Native to Europe and northern and central Asia, ivy has been introduced, often as a garden climber, in many parts if the world. In the wild, it typically grows on trees and in hedges.
Parts Used Leaves, berries.
Constituents Ivy contains saponins, sterols, polyacetylenes, a volatile oil and flavonoids. The saponins are expectorant, amoebicidal, antifungal and kill liver flukes.
History & Folklore In the classical world, common ivy was dedicated to Dionysius the god of wine making and intoxication. Ivy was thought to be able to prevent or undo drunkenness. The leaf was traditionally used in England to treat corns and warts – it was soaked in vinegar and bound on as a poultice, or placed inside a sock, overlying the corn.
Medicinal Actions & Uses Ivy is chiefly used for catarrhal problems of the ear, nose and throat, as well as for bronchitis. It acts as an expectorant, stimulating the coughing up and clearance of phlegm. It has a beneficial effect on mucus membranes and is generally combined with tonic herbs, especially thyme (*Thymus vulgaris*, p. 143). Ivy extracts are common ingredients in cosmetic formulations for cellulite.
Caution Fresh leaves can irritate the skin.



***Ivy** was thought, in the classical world, to undo drunkenness.*

Herniaria glabra (Caryophyllaceae)

Rupturewort

Description Prostrate annual or perennial with bright green oval leaves and clusters of green flowers.
Habitat & Cultivation Rupturewort is found throughout Europe and western Asia. It thrives in barren areas, in lime and sandy soils. It is gathered when in flower.
Parts Used Aerial parts.
Constituents Rupturewort contains coumarins (including 3% herniarin and scopoletin), flavonoids, phenolic acids and saponins.
History & Folklore Rupturewort was first documented in European herbals of the 16th century. Its genus name, *Herniaria*, refers to its reputed ability to heal hernias.
Medicinal Actions & Uses Rupturewort is of value chiefly as a diuretic herb. The fresh plant treats urinary problems such as cystitis, irritable bladder and kidney stones. It is also astringent, and has been applied as a poultice to speed the healing of ulcers. The whole plant appears to have an antispasmodic effect on the bladder.

Hibiscus sabdariffa (Malvaceae)

Hibiscus,

Jamaica

Description Shrub growing to 2 m (6½ ft) in height.
Habitat & Cultivation Native to North Africa and South-East Asia, hibiscus grows in tropical regions around the world. It is primarily cultivated across Africa and in Thailand, China and Mexico.
Parts Used Calyx (the outer base of the flower), flowers, leaves.
Constituents The calyx and flowers contain flavonoids, including anthocyanins.
History & Folklore "Hibiscus" means "plant that is consecrated to the ibis", a bird held sacred in ancient Egypt.
Medicinal Actions & Uses Hibiscus makes a refreshing, pleasant-tasting tea that is cooling and mildly sedative, soothing hot and feverish

conditions. The calyces are gently tonic and will ease colds, coughs and chest problems. They also aid digestion and gently stimulate appetite. Both the calyces and flowers act to reduce cholesterol levels. All parts of hibiscus are demulcent, mildly soothing sore or inflamed mucus membranes within the digestive and respiratory tracts.
Research Various clinical studies have shown that hibiscus helps to lower high blood pressure.

Hieracium pilosella syn. *Pilosella officinarum* (Asteraceae)

Mouse-ear Hawkweed

Description Perennial herb growing to a height of 20 cm (8 in) from a rosette of basal leaves. Stems bear single bright yellow flowerheads.
Habitat & Cultivation Mouse-ear hawkweed is common throughout much of Europe and temperate regions of Asia and North America. Found growing in dry pastures and on sandy soil, it is collected when in flower in summer.
Parts Used Aerial parts.
Constituents Mouse-ear hawkweed contains a coumarin (umbelliferone), flavonoids and caffeic acid. It is thought to be mildly antifungal.
History & Folklore In his *Irish Herbal* (1735), K'Eogh summarizes mouse-ear hawkweed's medicinal benefits: "good against the spitting of blood, all kinds of flow, coughs, ulcers of the lungs, mouth and eyes, and shingles".
Medicinal Actions & Uses Mouse-ear hawkweed relaxes the muscles of the bronchial tubes, stimulates the cough reflex and reduces the production of catarrh. This combination of actions makes the herb effective in respiratory problems, including asthma and wheeziness, whooping cough, bronchitis and other chronic and congested coughs. The herb is used to control heavy menstrual bleeding, and to ease the coughing up of blood. It may be applied as a poultice to heal wounds.

Hippophae rhamnoides (Elaeagnaceae)

Sea Buckthorn

Description Thorny deciduous shrub growing to 5 m (16 ft). Has narrow silvery leaves, male or female flowers and clusters of brownish-orange berries.
Habitat & Cultivation Native to Europe and Asia, sea buckthorn grows mainly in sandy coastal areas and in dry riverbeds in mountainous regions. The berries are harvested in the autumn.

Sea buckthorn *is distinguished by its thorny stems and narrow silvery leaves. The berries help improve the body's resistance to infection.*

Parts Used Berries.
Constituents The fruit contains flavonoids, flavones, carotenoids, vitamins A, C (present in very high quantities) and E, and high levels of minerals including sulphur, selenium, zinc and copper. The seeds contain appreciable levels of alpha-linolenic acid.
History & Folklore The sour-tasting berries have traditionally been eaten with milk and cheese by Siberians and Tartars, who also used them to make a pleasant-tasting jelly.
Medicinal Actions & Uses Sea buckthorn berries are very high in vitamin C. They have principally been used to help improve resistance to infection. The berries are mildly astringent, and a decoction of them has been used as a wash to treat skin irritation and eruptions, and to promote healing.
Research Research into sea buckthorn fruit, seed and seed oil indicates that they have definite therapeutic value. The fruit especially supports heart and circulatory health and is useful in treating conditions such as capillary fragility, arteriosclerosis and a weak heart. The seed oil nourishes the skin, promotes tissue healing and will often prove useful in treating eczema.

Hoodia gordonii (Apocynaceae)

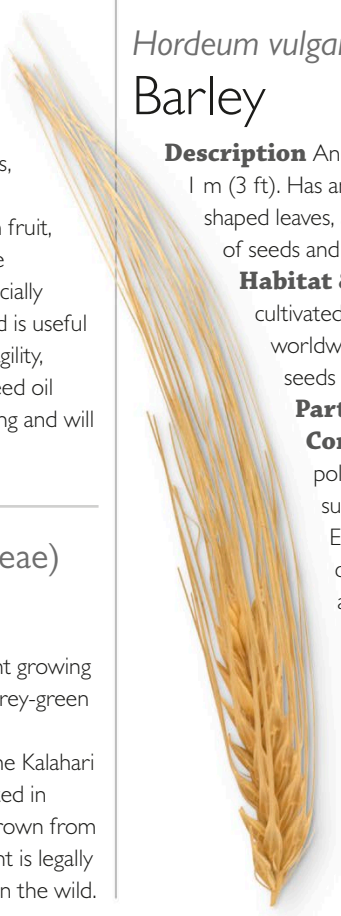
Hoodia

Description Unusual-looking succulent growing to 1 m (3 ft), hoodia has multiple spiny, grey-green stems and light purple flowers.
Habitat & Cultivation Native to the Kalahari desert, hoodia is now extensively cultivated in Namibia and South Africa. The plant is grown from seed or cuttings. Trade in the hoodia plant is legally restricted due to its threatened survival in the wild.
Parts Used The peeled stem.
Constituents Hoodia contains a steroidal glycoside, which is thought to act as an appetite suppressant.
History & Folklore The San people of the Kalhari traditionally used this plant to suppress sensations of thirst and hunger, when on journeys through the desert. Such use was first recorded in 1937.
Medicinal Actions & Uses Hoodia provides a cautionary tale for herbal medicines and supplements in the 21st century. There is little evidence that taking it leads to weight loss beside the plant's traditional use as an appetite suppressant, while its safety profile is unknown. Despite this, after media coverage by the BBC in 2003, sales of hoodia supplements rocketed, with prices in the *LA Times* reaching $40 per ounce (£27 for 30 g) in 2006. At such a price, it is not hard to see why hoodia's survival in the wild is severely threatened. It would seem sensible to opt instead for herbs that are endorsed for their use for weight loss by scientific studies and where there is no risk of the herb disappearing from the wild, such as Gymnema (*Gymnema sylvestre,* p. 218).
Cautions Seek professional advice before taking hoodia products, especially if taking prescribed blood-thinning medication for conditions such as diabetes or high blood pressure.

Hordeum vulgare (Poaceae)

Barley

Description Annual grass growing to about 1 m (3 ft). Has an erect hollow stem, lance-shaped leaves, and ears bearing twin rows of seeds and long bristles.
Habitat & Cultivation Barley is cultivated in temperate regions worldwide. It is harvested when the seeds are mature.
Parts Used Seeds.
Constituents Barley contains polysaccharides, proteins, sugars, fats and vitamins B and E. The young seedlings also contain the amines tyramine and gramine.

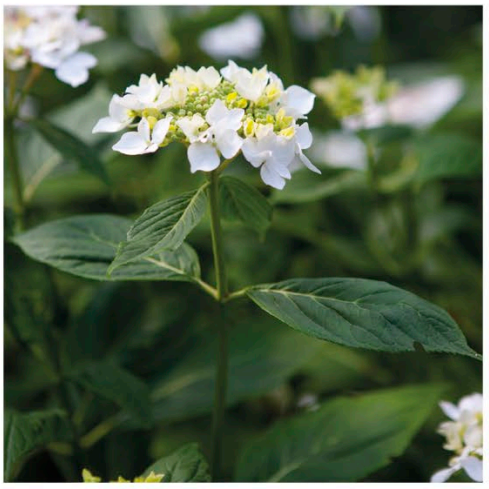


Barley *has been eaten since Neolithic times.*

History & Folklore Barley has been consumed for many thousands of years. Dioscorides (1st century CE) recommended it "to weaken and restrain all sharp and subtle humours, and sore and ulcerated throats".
Medicinal Actions & Uses An excellent food for convalescence in the form of porridge or barley water, barley is soothing to the throat and provides easily assimilated nutrients. It can also be taken to clear catarrh. Its demulcent quality soothes inflammation of the gut and urinary tract. Barley aids in the digestion of milk and is given to babies to prevent the development of curds within the stomach. It is commonly given to children suffering from minor infections or diarrhoea, and it is particularly recommended as a treatment for feverish states. Made into a poultice, barley is an effective remedy for soothing and reducing inflammation in sores and swellings.
Research The fibre in barley, like that in oats, has an established action in reducing fat absorption from the gut, aiding lower cholesterol levels. In common with other fibre foods, it may also help to stabilize blood sugar levels and to prevent bowel cancer.

Hydrangea arborescens (Hydrangeaceae)
Wild Hydrangea

Description Woody-stemmed deciduous shrub growing to a height of about 3 m (10 ft). Has oval leaves and clusters of small, creamy-white flowers.
Habitat & Cultivation Native to eastern US from New York to Florida, wild hydrangea grows in woodland and on riverbanks. The root is dug up in autumn.
Part Used Root.
Constituents Hydrangea is thought to contain flavonoids, a cyanogenic glycoside (hydrangein), saponins and a volatile oil.



Wild hydrangea *is used to treat kidney and bladder stones.*

History & Folklore The Cherokee used hydrangea as a remedy for kidney and bladder stones. The 19th-century Physiomedicalist herbal movement used a formula comprising hydrangea, couch grass (*Agropyron repens*, p. 162) and hollyhock (*Althaea rosea*) to treat serious kidney disorders, including nephritis.
Medicinal Actions & Uses Western herbal medicine considers the diuretic hydrangea as being particularly helpful in the treatment of kidney and bladder stones. It is thought both to encourage the expulsion of stones and to help dissolve those that remain. The herb is given for many other troubles affecting the genito-urinary system, including cystitis, urethritis, enlarged prostate and prostatitis.
Cautions Do not take during pregnancy or while breast-feeding. Best taken on professional advice.

Hygrophila spinosa (Acanthaceae)
Gokulakanta

Description Thorny, red-stemmed annual growing to 60 cm (2 ft). Has bright blue flowers and small, flat, dark red seeds.
Habitat & Cultivation Native to India, gokulakanta is now widely distributed throughout tropical regions. It is gathered when in flower.
Parts Used Aerial parts, root.
Constituents Gokulakanta contains mucilage, fixed and volatile oils and an alkaloid.
Medicinal Actions & Uses Commonly used as a remedy in India, gokulakanta is taken chiefly for its reputed aphrodisiac properties. Both the aerial parts and ash of the burned plant are strongly diuretic, and are used to flush water from the body in cases of excess fluid retention.
Related Species The South American *H. guayensis* is bactericidal and has been used as a local treatment for the tropical disease, leishmaniasis.

Hyoscyamus niger (Solanaceae)
Henbane

Description Annual or biennial herb growing to 1 m (3 ft). Has delicate, slightly lobed leaves and bell-shaped flowers, pale yellow in colour with fine purple veining.
Habitat & Cultivation Native to western Asia and southern Europe, henbane is now found across much of western and central Europe, and North and South America. It is cultivated for therapeutic use in parts of Europe, including England, and in North America. The leaves and flowers are picked just after the plant has flowered, in the first year for the annual variety and in the second year for the biennial.
Parts Used Leaves, flowering tops.
Constituents Henbane contains 0.045–0.14% tropane alkaloids, especially hyoscyamine and hyoscine, and flavonoids. Hyoscyamine and hyoscine are common to other members of the *Solanaceae* family, but henbane's relatively high hyoscine content gives it a more specifically sedative action than its relatives thornapple (*Datura stramonium*, p. 200) and deadly nightshade (*Atropa belladonna*, p. 69).
History & Folklore Henbane has been used as a medicinal herb for thousands of years. Babylonian accounts and the Egyptian Ebers papyrus (*c.* 1500 BCE) record that henbane was smoked to relieve toothache. In Greek myth, the dead were adorned with henbane when they arrived in Hades. Writing in the 1st century CE, Dioscorides recommended henbane for insomnia, coughs, catarrh, heavy menstrual bleeding, eye pain, gout, and as a general pain reliever, and advised that the herb should be used within a year as it deteriorates quickly. In the Middle Ages, henbane had the Latin name *dentaria*, denoting its use as a remedy against toothache. Henbane reputedly produces a sensation of lightness, as though one were flying, and it was one of the chief components of witches' "flying ointments".

Henbane *has distinctive yellow flowers veined with purple. The plant was used in classical times as a general painkiller.*

Medicinal Actions & Uses Henbane is used extensively in herbal medicine as a sedative and painkiller. Its specific use is for pain affecting the urinary tract, especially pain due to kidney stones, though it is also given for abdominal cramping. Its sedative and antispasmodic effect makes it a valuable treatment for the symptoms of Parkinson's disease, relieving tremor and rigidity during the early stages of the illness. Henbane has also been used to treat asthma and bronchitis, usually as a "burning powder" or in the form of a cigarette. Applied externally as an oil, it can relieve painful conditions such as neuralgia, sciatica and rheumatism. Henbane reduces mucus secretions, as well as saliva and other digestive juices. Like its cousin deadly nightshade, it dilates the pupils. Hyoscine is commonly employed as a pre-operative anaesthetic and in travel sickness formulations.
Related Species Other *Hyoscyamus* species are used in a similar way. The North African *H. muticus* is traditionally smoked by Bedouins to relieve toothache. See also deadly nightshade (*Atropa belladonna*, p. 69).
Cautions Use only under professional supervision. Potentially toxic in overdose, henbane is subject to legal restrictions in some countries.

Hyssopus officinalis (Lamiaceae)
Hyssop

Description Semi-evergreen shrub growing to 60 cm (2 ft). Has narrow leaves and clusters of blue double-lipped flowers.
Habitat & Cultivation Native to southern Europe, hyssop grows freely in Mediterranean countries, especially in the Balkans and Turkey.

***Hyssop** has a positive effect on respiratory infections.*

It prefers sunny, dry sites and is a common garden herb. The flowering tops are harvested when the plant is in flower in summer.
Parts Used Flowering tops, essential oil.
Constituents Hyssop contains terpenes (including marubiin, a diterpene), a volatile oil (consisting mainly of camphor, pinocamphone and beta-pinene), flavonoids, tannins and resin. Marubiin is a strong expectorant. Pinocamphone is toxic, and the volatile oil can sometimes cause epileptic seizures.
History & Folklore In the past, hyssop was so highly esteemed it was regarded as a virtual cure-all. An old saying went, "Whoever rivals hyssop's virtues, knows too much." In the 1st century CE, Dioscorides recommended a recipe containing a mixture of hyssop, figs (*Ficus carica*, p. 211), rue (*Ruta graveolens*, p. 265), honey and water for treating a number of conditions, including pleurisy, asthma, tight-chestedness, respiratory catarrh and chronic coughs.
Medicinal Actions & Uses Currently an undervalued medicinal herb, hyssop is potentially useful as it is both calming and tonic. It has a positive effect when used to treat bronchitis and respiratory infections, especially where there is excessive mucus production. Hyssop appears to encourage the production of a more liquid mucus, and at the same time gently stimulates expectoration. This combined action clears thick and congested phlegm. Hyssop can irritate the mucous membranes, so it is best given after an infection has peaked, when the herb's tonic action encourages a general recovery. As a sedative, hyssop is a useful remedy against asthma in both children and adults, especially where the condition is exacerbated by mucus congestion. Like many herbs with a strong volatile oil, it soothes the digestive tract and can be an effective remedy against indigestion, wind, bloating and colic.
Cautions Hyssop essential oil can induce epileptic seizures. It should only be used under professional supervision. Hyssop essential oil is subject to legal restrictions in some countries.

Ilex paraguariensis syn. *I. paraguensis* (Aquifoliaceae)
Maté

Description Evergreen shrub or small tree growing to 6 m (20 ft). Has large leaves, white flowers and small reddish fruit.
Habitat & Cultivation Maté grows wild in northern Argentina, Paraguay, Uruguay and southern Brazil, and is widely cultivated in Argentina, Spain and Portugal. The leaves are picked when the berries are ripe, are heated over a wood fire, ground and then stored in sacks for a year before being sold.
Parts Used Leaves.
Constituents Maté contains xanthine derivatives, including about 1.5% caffeine, about 0.2% theobromine, theophylline, and up to 16% tannins. The high tannin content means that maté should not be consumed with meals, as tannins impair the absorption of nutrients.

***Maté** makes a pleasant-tasting tea that has a stimulant, mildly analgesic and diuretic effect.*

Medicinal Actions & Uses Maté is a traditional South American tea that increases short-term physical and mental energy levels. It is taken as a fortifying beverage in much the same way as tea (*Camellia sinensis*, p. 181) is consumed throughout Asia and Europe. Maté has properties similar to those of tea and coffee (*Coffea arabica*, p. 192). It stimulates the nervous system and is mildly analgesic and diuretic. As a medicinal herb, maté is used to treat headaches, migraine, neuralgic and rheumatic pain, fatigue and mild depression. It has also been used in the treatment of diabetes.
Related Species *I. guayusa*, from Ecuador, is used in much the same way as maté but is also employed medicinally to treat malaria, liver pain, and syphilis. It is thought to aid digestion and cleanse the digestive tract.

Illicium verum (Schisandaceae)
Star Anise,
Ba Jiao Hui Xian (Chinese)

Description Evergreen tree growing to 18 m (59 ft). Has tapering leaves, pale greenish-yellow flowers and star-shaped segmented fruit (seed pods).
Habitat & Cultivation Native to China, India and Vietnam, star anise grows in tropical regions across the world. The fruit is harvested when ripe.
Parts Used Fruit and seeds.

Dried star anise *fruit is a digestive, stimulant and diuretic remedy.*

Constituents Star anise contains a volatile oil (mostly anethole), sesquiterpenoids, and flavonoids, including quercetin. Anethole calms the digestive system and relieves wind. The sesquiterpenoids have analgesic activity. Shikimic acid, found in the seed pods, was until recently used as the main source for the production of Tamiflu, a prescribed anti-viral medicine.
History & Folklore Due to its high anethole content, star anise has a similar taste to anise (*Pipinella anisum*, p. 248), and both are used principally as spices. The herb's Chinese name, *ba jiao hui xian*, means "8-horned fennel".
Medicinal Actions & Uses Used in Chinese herbal medicine as a remedy for rheumatism, back pain and hernias, star anise has stimulant, diuretic and digestive properties. It makes an effective remedy for wind and indigestion – especially colic – and can safely be given to children. To treat hernias of the intestine or bladder, star anise is often mixed with fennel (*Foeniculum vulgare*, p. 212). Both herbs help to relax the organ's muscles and relieve spasm. Star anise is also used for toothache.
Caution Japanese star anise (*Illicium anisatum*), which is very similar to star anise, contains a toxic compound and can cause serious side effects.

Imperatoria ostruthium syn. *Peucedanum ostruthium* (Apiaceae)

Masterwort

Description Perennial growing to 60 cm (2 ft) with green leaves divided into 3 leaflets with 3 lobes each, white flowers on large umbels, and winged seeds.
Habitat & Cultivation Native to central and southern Europe, and Asia, masterwort is most often found in the wild. The root is unearthed in autumn or spring.
Part Used Root.
Constituents Masterwort contains a camphoraceous volatile oil (including limonene, phellandrene, alpha-pinene and a sesquiterpene), peucadanin, oxipeucadanin and ostrutol.
History & Folklore From the late Middle Ages onwards, masterwort was held in high regard by herbalists. Pierandrea Matteoli's *Materia Medica* of 1548 explains: "Masterwort powerfully resolves all flatulence in the body, stimulates urine and menstruation, is an admirable remedy for paralysis and cold conditions of the brain and helps against pestilence and the bites of rabid dogs." A century later, Nicholas Culpeper was no less fulsome in recommending masterwort for rheumatic conditions, shortness of breath, kidney and bladder stones, water retention, and "falling sickness".
Medicinal Actions & Uses Masterwort is little used today, but may well be a herb that bears further investigation. The root is aromatic, warms central areas of the body and is a bitter tonic. It has a strong action within the stomach and gut, settling indigestion and relieving wind and griping. Masterwort is also beneficial for chest conditions, and is used for colds, asthma and bronchitis. It can also be helpful for menstrual problems.
Caution If applied to the skin, masterwort may cause an allergic reaction to sunlight.

Ipomoea purga syn. *Convolvulus jalapa* (Convolvulaceae)

Jalap

Description Evergreen vine reaching about 4 m (13 ft). Has heart-shaped leaves and trumpet-like purple flowers.
Habitat & Cultivation Native to Mexico, jalap is cultivated in Central America, the West Indies and South-East Asia. The root is unearthed in summer.
Part Used Root.
Constituents Jalap contains the resin convolvulin.
History & Folklore Spanish colonizers learned of jalap's strong purgative effect from Mexican native peoples. Introduced into Europe in 1565, the herb was used for all types of illnesses until the 19th century.
Medicinal Actions & Uses Jalap is such a powerful cathartic that its medicinal value is questionable. Even in moderate doses it stimulates the elimination of profuse watery stools, and in larger doses it causes vomiting.
Related Species *I. turpethum*, native to Asia and Australia, is also a drastic purgative. Other *Ipomoea* species, such as the sweet potato (*I. batatas*, from South America), are important food plants. The seeds of morning glory (*I. violacea*), native to Mexico, contain compounds similar to LSD, and were taken ritually by the Zapotecs and Aztecs.
☠ **Caution** Do not take jalap under any circumstances.

Iris versicolor (Iridaceae)

Blue Flag,

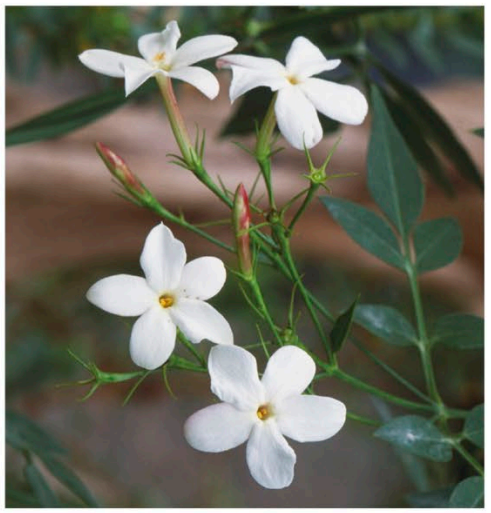
Wild Iris

Description Perennial growing to about 1 m (3 ft). Has erect stems and long sword-shaped leaves. Each stem bears 3–5 resplendent blue to violet flowers with white-veined areas on the petals.
Habitat & Cultivation Blue flag is native to North America. Preferring damp and marshy areas in the wild, it is also widely cultivated as a garden plant. The rhizome is unearthed in autumn.
Part Used Rhizome.
Constituents Blue flag contains triterpenoids, salicylic and isophthalic acids, a very small amount of volatile oil, starch, resin, an oleo-resin and tannins.
History & Folklore Blue flag was one of the medicinal plants most frequently used by Native Americans. Different tribes made use of it variously as an emetic, cathartic and diuretic, to treat wounds, and for colds, earache and cholera. In the Anglo-American Physiomedicalist tradition, blue flag was used as a glandular and liver remedy. Blue flag is Quebec's provincial flower.
Medicinal Actions & Uses Blue flag is currently used mainly to detoxify the body. It increases urination and bile production, and has a mild laxative effect. This combination of cleansing actions makes it a useful herb for chronic skin diseases such as acne and eczema, especially where gallbladder problems or constipation contribute to the condition. Blue flag is also given for biliousness and indigestion. However, in large doses blue flag will itself cause vomiting. The traditional use of blue flag for gland problems persists. It is also believed by some to aid weight loss.
Cautions Excessive doses cause vomiting. Do not take this plant during pregnancy.

Blue flag *was very widely used by Native Americans to treat wounds and sores.*

Jasminum grandiflorum (Oleaceae)
Jasmine

Description Slender evergreen rambler growing to 6 m (20 ft). Has dark green compound leaves and large, sweetly scented tubular white flowers.
Habitat & Cultivation Native to northern India, Pakistan and the north-western Himalayas, jasmine is now cultivated as a garden plant and for its essential oil.
Parts Used Flowers, essential oil.



Jasmine flowers are the source of an essential oil that is used to treat stress and depression.

Constituents Jasmine's volatile oil contains benzyl alcohol, benzyl acetate, linalool and linalyl acetate.
History & Folklore Jasmine was introduced to Europe in the 16th century, and is mainly used as a source of perfume.
Medicinal Actions & Uses Jasmine flowers make a calming and sedative infusion, taken to relieve tension. The oil is considered antidepressant and relaxing. It is used externally to soothe dry or sensitive skin. Due to frequent adulteration, the oil is rarely used in aromatherapy.
Related Species Actually native to South-East Asia, Arabian jasmine (*J. sambac*) is used as an eyewash, is added to tea (*Camellia sinensis*, p. 181) to produce jasmine tea, and is used in Buddhist ceremonies.
Caution Jasmine essential oil should not be taken internally.

Jateorhiza palmata (Menispermaceae)
Calumba

Description Creeping vine with a perennial rootstock, growing to a great height and often reaching the tops of trees. Has large palm-shaped leaves, small greenish-white flowers, with male and female flowers on separate plants, and round, fleshy fruit.
Habitat & Cultivation Native to the rainforests of eastern Africa, especially Mozambique and Madagascar, calumba is also grown in other tropical regions. The roots are dug up in dry weather in March and dried.
Parts Used Bark.
Constituents Calumba contains isoquinoline alkaloids (notably palmatine, columbamine and jatrorrhizine), diterpene bitter principles, mucilage and volatile oil (about 1%).
Medicinal Actions & Uses Profoundly bitter, calumba is an extremely good remedy for an underactive or weakened digestion, stimulating stomach acid production and increasing the appetite. It is a specific for loss of appetite and anorexia, and by making the stomach more acidic (and therefore hostile to pathogens) helps to prevent digestive infections and improve the breakdown and absorption of foods. It is a useful treatment for chronic intestinal infection such as dysentery.
Research Calumba's bitterness is due both to the bitter principles and the alkaloids. Palmatine and jatrorrhizine reduce blood pressure, palmatine is a uterine stimulant, and jatrorrhizine is sedative and antifungal.
Other Species Calumba has much in common with gentian (*Gentiana lutea*, p. 99), although it owes its bitterness to a different range of constituents.
Caution Avoid during pregnancy.

Juglans cinerea (Juglandaceae)
Butternut

Description Deciduous tree growing to 30 m (100 ft). Has grey bark, long leaves with many leaflets, male catkins and female flowers, and an oval-shaped fruit containing a hard dark-coloured nut.
Habitat & Cultivation Native to North American forests, butternut is cultivated for its timber in other temperate regions. The bark is collected in autumn.
Part Used Inner bark.
Constituents Contains naphthaquinones (including juglone, juglandin and juglandic acid), a fixed and a volatile oil, and tannins. The naphthaquinones have an approximately similar laxative effect to the anthraquinones found in plants such as senna (*Cassia senna*, p. 75) and Chinese rhubarb (*Rheum palmatum*, p. 126). Juglone is purgative, antimicrobial, antiparasitic and cancer-inhibiting.
History & Folklore Butternut bark was employed by Native Americans and New World settlers as a laxative and tonic remedy. Butternut was used to treat a variety of conditions, including rheumatic and arthritic joints, headaches, dysentery, constipation and wounds.
Medicinal Actions & Uses Used to this day as a laxative and tonic, butternut is a valuable remedy for chronic constipation, gently encouraging regular bowel movements. It is especially beneficial if combined with a carminative herb, such as ginger (*Zingiber officinale*, p. 155) or angelica (*Angelica archangelica*, p. 168). Butternut also lowers cholesterol levels, and promotes the clearance of waste products by the liver. It has a positive reputation in treating intestinal worms, and, being antimicrobial and astringent, it has been prescribed as a treatment for dysentery.
Related Species Black walnut (*J. nigra*) is used in the same way as butternut. The bark of the walnut tree (*J. regia*) is used as a gentle purgative, and is also applied to skin afflictions. The nut is used in Chinese herbal medicine as a kidney tonic. The nuts of both varieties are highly nutritious, lower cholesterol levels and contain significant quantities of alpha-linolenic acid.

Juniperus communis (Cupressaceae)
Juniper

Description Coniferous shrub sometimes growing to 15 m (49 ft). Has slender twigs with whorls of needle-like leaves, yellow male, and blue female flowers on separate plants, and spherical blue-black fruit.
Habitat & Cultivation Juniper is found in Europe, south-western Asia up to the Himalayas, and North America, where it grows from southern coastal sites to more northerly moorland and mountainous regions. The ripe fruit (berries) is gathered in autumn.
Parts Used Fruit, essential oil.
Constituents Juniper contains 1–2% volatile oil, consisting of over 60 compounds, which include myrcene, sabinene, alpha- and beta-pinene, and cineole. Juniper also contains tannins, diterpenes, sugars, resin and vitamin C.
History & Folklore Juniper is the main flavouring used in gin. Juniper berries are still mostly gathered from the wild. In former times, sprigs of juniper flung into the fire were thought to protect against evil spirits.
Medicinal Actions & Uses Juniper is tonic, diuretic and strongly antiseptic within the urinary tract. It is a valuable remedy for cystitis, and helps relieve fluid retention, but should be avoided in cases of kidney disease. In the digestive system, juniper is warming and settling, easing colic and supporting the function of the stomach. Taken internally or applied externally, juniper is helpful

Juniper is powerfully antiseptic in the urinary tract.

in the treatment of chronic arthritis, gout and rheumatic conditions. Applied externally as a diluted essential oil, it has a slightly warming effect on the skin and is thought to promote the removal of waste products from underlying tissues. Juniper also stimulates menstruation and tends to increase menstrual bleeding.

Related Species Oil of Cade is produced from *J. oxycedrus* and is applied to treat skin rashes. Savin (*J. sabina*) is toxic and a powerful abortifacient. The Japanese *J. rigida* is used as a diuretic.

Cautions Do not use juniper during pregnancy or if prone to heavy menstrual bleeding. Do not take if suffering from a kidney infection or kidney disease. Do not take the essential oil internally except under professional supervision.

Self-help Use Urinary infections, p. 314.

K. pinnata syn. *K. africana* (Bignoniaceae)

Kigelia,

African Sausage Tree

Description Semi-deciduous tree growing to 25 m (80 ft) with smooth, grey-brown bark and brown-purple flowers. The tree gets its name from the spectacular sausage-shaped fruit, up to 1 m (3 ft) in length, which hangs from a rope-like stalk and weighs up to 10 kg (22 lb).

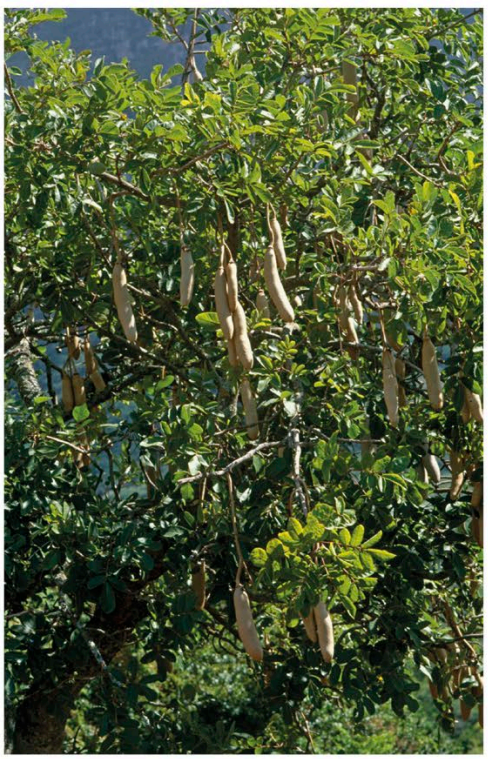
Habitat & Cultivation Kigelia grows throughout sub-Saharan Africa but is native to the eastern half of the continent from Tanzania to South Africa. The tree is cultivated from seed or cuttings and flowers after 6 years. The fruit is harvested when ripe.

Parts Used Fruit pulp, leaves, bark, roots.

Constituents Kigelia fruit contains norviburtinal, coumarins, iridoids, flavonoids, fatty acids, sterols, glycosides and napthaquinones. Norviburtinal has tumour-reducing activity, the iridoids and sterols are anti-inflammatory, the flavonoids are anti-fungal and the napthaquinones are thought to be cytotoxic.

History & Folklore Prized by traditional healers throughout sub-Saharan Africa, kigelia has been put to many uses. The Shona of southern Africa use the bark or root to treat skin infections and ulcers, toothache, backache and pneumonia. In Central Africa, the unripe fruit is used as a dressing for wounds, haemorrhoids and rheumatism. In West Africa, the leaves are given for stomach and kidney problems, and the fruit is used as a purgative and applied as a paste to sores. Kigelia is commonly included in traditional herbal formulations for malaria.

Medicinal Actions & Uses Thanks to the knowledge and experience of African traditional healers, kigelia is now understood to be a valuable remedy for skin problems, particularly sores and ulcers, produced by bacterial and fungal infection. Kigelia has been described as a "natural antibacterial". Given its marked anti-inflammatory and wound healing properties, kigelia is also being investigated as a skin toner and restorer, as well as potential treatment for skin disorders such as eczema, psoriasis, and solar keratosis (a pre-cancerous skin problem caused by overexposure to sunlight). Various patents exist for kigelia products and over time kigelia may become widely known as a key herbal resource for the skin.



Kigelia is a key remedy for treating skin problems.

Cautions Take kigelia internally only under professional guidance. Do not take during pregnancy or while breast-feeding.

Krameria triandra (Krameriaceae)

Rhatany

Description Dense evergreen shrub growing to 90 cm (3 ft). Has a deep root, oblong leaves and large red flowers.

Habitat & Cultivation Rhatany is found in Ecuador, Peru and Bolivia on western slopes of the Andes at altitudes of 900–3,000 m (3,000–9,800 ft). The root is unearthed throughout the year.

Part Used Root.

Constituents Rhatany contains 10–20% tannins, including phlobaphene, benzofurans and n-methyltyrosine.

History & Folklore A traditional South American remedy, rhatany was used by indigenous peoples as an astringent and a tooth preservative. Its Spanish name, *raiz para los dientes* (root for the teeth), points to this traditional usage.

Medicinal Actions & Uses Rhatany is astringent and antimicrobial. It is a useful remedy taken principally for problems affecting the gastro-intestinal tract. It is most commonly used for diarrhoea and dysentery. In addition, rhatany makes a good mouthwash and gargle for bleeding and infected gums, mouth ulcers and sore throats. The plant's astringency makes it useful in the form of an ointment, suppository or wash for treating haemorrhoids. Rhatany may also be applied to wounds to help staunch blood flow, to varicose veins and over areas of capillary fragility that may be prone to easy bruising.

Related Species The Mexican *K. cystisoides* is an astringent remedy used in much the same way as rhatany. Another species native to North and Central America, *K. parvifolia*, was used by the Papago as an eyewash.

Lactuca virosa (Lamiaceae)

Wild Lettuce

Description Hollow-stemmed biennial growing to about 1.2 m (4 ft). Has broad spiny leaves and clusters of pale yellow composite flowers. All parts of the plant exude a white milky latex.

Habitat & Cultivation Common throughout Europe, wild lettuce grows on wasteground, roadsides and in hedgerows. It is gathered when in flower in late summer.

Parts Used Leaves, latex, seeds.

Constituents The latex contains sesquiterpene lactones (including lactucopicrin and lactucerin);

the leaves also contain flavonoids and coumarins. The sesquiterpene lactones have a sedative effect.
History & Folklore In Assyrian herbal medicine, lettuce seeds were reportedly used with cumin (*Cuminum cyminum*, p. 197) as a poultice for the eyes. Dioscorides (1st century CE) wrote that the plant's effect resembled that of the opium poppy (*Papaver somniferum*, p. 244).
Medicinal Actions & Uses Wild lettuce is a safe sedative that can be given to adults and children to encourage a sound night's sleep or to calm overactivity or overstimulation. Most commonly, it is recommended for excitability in children. It is also taken to treat coughs, often in combination with herbs such as liquorice (*Glycyrrhiza glabra*, p. 101). Wild lettuce is thought to lower the libido. It may also be used to relieve pain.
Research A 2011 Egyptian clinical trial found that lettuce seed oil improved sleep in people suffering from insomnia. Lettuce seed oil has traditionally been used in Egypt for sleep problems.
Related Species Garden lettuce (*L. sativa*) may be used like wild lettuce, but has a much weaker therapeutic action.

Lamium album (Lamiaceae)
White Deadnettle

Description Perennial growing to 60 cm (2 ft). Has a square stem, toothed oval leaves and clusters of white double-lipped flowers.

White deadnettle is used to treat gynaecological conditions.

Habitat & Cultivation White deadnettle is native to and widespread in Europe and central and northern Asia. It thrives in fields and on wasteground. It is gathered when in flower in summer.
Parts Used Flowering tops.
Constituents White deadnettle contains a saponin, flavones, mucilage and tannins.
History & Folklore Deadnettle is so called because it resembles true nettle (*Urtica dioica*, p. 146), without the stinging hairs. It was also known as archangel, a plant "to make the heart merry, to make a good colour in the face, and to refresh the vital spirits" (John Gerard, *The Herball*, 1597).
Medicinal Actions & Uses White deadnettle is astringent and demulcent. It is chiefly used as a uterine tonic, to arrest intermenstrual bleeding and to reduce excessive menstrual flow. It is also a traditional treatment for abnormal vaginal discharge. The herb is sometimes taken to relieve painful periods. Its astringency helps treat diarrhoea, and, used externally, it can relieve haemorrhoids and varicose veins.

Larix decidua
syn. *L. europaea* (Pinaceae)
Larch

Description Deciduous conifer growing to 50 m (165 ft). Has clusters of needle-like leaves, male and female flowers and small, light brown cones.
Habitat & Cultivation Native to the Alps and the Carpathian mountains of eastern Europe, larch grows to altitudes of 2,000 m (6,600 ft). It is widely cultivated for its timber. The resin is tapped in autumn; the bark is collected when the tree is felled.
Parts Used Inner bark, resin.
Constituents Larch contains lignans, resins and volatile oil (consisting mainly of alpha- and beta-pinene and limonene).
Medicinal Actions & Uses Larch has astringent, diuretic and antiseptic properties. The bark may be used to treat bladder and urinary tubule infections such as cystitis and urethritis, and respiratory problems, including bronchitis. The resin is applied to wounds, where it protects and counters infection. A decoction of the bark is used to soothe eczema and psoriasis.
Caution Do not take if suffering from kidney disease.

Larrea tridentata (Zygophyllaceae)
Chaparral,
Creosote Bush

Description Thorny shrub growing to 2 m (6½ ft), with small finely divided leaves.
Habitat & Cultivation Chaparral is found in large numbers in the deserts of south-western US and Mexico.
Parts Used Aerial parts.
Constituents Chaparral contains about 12% resin and lignans, including nordihydroguaiauretic acid. The latter is reportedly harmful to the lymph glands and kidneys, though recent research shows that it has beneficial anti-diabetic properties. US research published in 1996 demonstrated that other lignans have antiviral activity against HIV.
History & Folklore Widely used by Native Americans, chaparral was taken in the form of a decoction to treat stomach troubles and diarrhoea. Young twigs were used for toothache. The leaves were applied as a poultice for respiratory problems and as a wash for skin problems.
Medicinal Actions & Uses Until the 1960s, chaparral remained in wide use in the US, with an average of 9.07 tonnes (10 tons) consumed there each year. It was thought to be a beneficial remedy for rheumatic disease, venereal infections, urinary infections and certain types of cancer, especially leukaemia. Chaparral was also taken internally for skin afflictions such as acne and eczema, and applied as a lotion to sores, wounds and rashes. In the early 1990s sales of chaparral were banned in the US and Britain due to concern over its potential toxic effect on the liver. It now seems likely that this is another herb that can, in rare cases, cause liver damage, as with some conventional medicines. In view of the uncertainty about its safety, any potential benefit from taking the herb must be weighed against the risks.
Related Species The North American *L. divaricata*, a close relative of chaparral, contains lignans, which have been shown to inhibit lymphoid tumour growth with no apparent harmful effect on normal lymphatic tissue.
Cautions Only take chaparral on professional advice. People with a history of liver disease should never take chaparral.

Laurus nobilis (Lauraceae)
Bay Laurel

Description Aromatic evergreen shrub or tree growing to 20 m (65 ft). Has leathery, dark green leaves, small yellow male and female flowers and shiny black berries.
Habitat & Cultivation Native to Mediterranean countries, bay laurel prefers damp and shady sites. It is also a popular garden herb, cultivated largely for culinary use. The leaves are picked all year round.
Parts Used Leaves, essential oil.
Constituents Bay laurel contains up to 3% volatile oil (including 30–50% cineole, linalool, alpha-pinene, alpha-terpineol acetate, mucilage, tannin and resin).
History & Folklore In ancient Greece, bay laurel was used in divination by the Delphic Oracle. From ancient Rome comes the tradition that the sudden withering of a bay laurel tree bodes disaster

for the household. In ancient Rome, bay laurel leaves were used as a medicine, a spice and a decorative garland during the December festival of Saturnalia. Bay laurel was sacred to the gods Apollo and Aesculapius, who together oversaw healing and medicine. The herb was thought to be greatly protective and healing. An infusion of the leaves was taken for its warming and tonic effect on the stomach and bladder, and a plaster made from the leaves was used to relieve wasp and bee stings.

Bay laurel adorned victors in ancient Greece.

Medicinal Actions & Uses Bay laurel is used mainly to treat upper digestive tract disorders and to ease arthritic aches and pains. It is settling to the stomach and has a tonic effect, stimulating the appetite and the secretion of digestive juices. When used as an ingredient in cooking, bay laurel leaves promote the digestion and absorption of food. The leaves have much the same kind of positive effect as spearmint (*Mentha spicata*) and rosemary (*Rosmarinus officinalis*, p. 128) in assisting the breakdown of heavy food, especially meat. Bay laurel has also been used to promote the onset of menstrual periods. The essential oil is chiefly employed as a friction rub, being well diluted in a carrier oil and massaged into aching muscles and joints. A decoction of the leaves may be added to a bath to ease aching limbs.
Cautions Never take bay laurel essential oil internally. An allergic reaction may result from external use, therefore the oil should only be applied in very dilute (2%) concentrations.

Lawsonia inermis
syn. *L. alba* (Lythraceae)

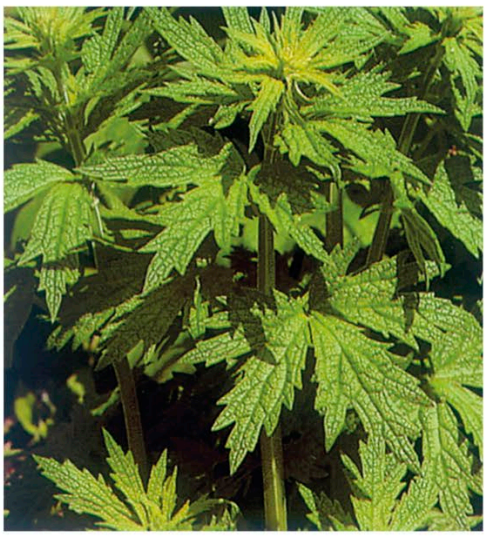
Henna

Description Heavily scented evergreen shrub or tree growing to 6 m (20 ft). Has narrow pointed leaves, clusters of small white or pink flowers and blue-black berries.
Habitat & Cultivation Native to the Middle East, North Africa and the Indian sub-continent, henna grows in sunny positions and is widely cultivated for use as a hair restorative and dye. The leaves are picked during the growing season.
Parts Used Leaves, bark.
Constituents Henna contains coumarins, naphthaquinones (including lawsone), flavonoids, sterols and tannins.
History & Folklore Henna has been used for thousands of years in North Africa and Asia as a red dye and as a scent. Mummies were wrapped in henna-dyed cloth in ancient Egypt. In Arabia and India, the leaves have traditionally been used to make a pigment for dyeing intricate linear patterns on the fingers, palms and feet. The leaves have also been used to dye not only human hair but the manes and tails of horses. Before meeting Antony, Cleopatra reputedly soaked the sails of her barge in heady henna flower oil.
Medicinal Actions & Uses Used mainly within Ayurvedic and Unani medicine, henna leaves are commonly taken as a gargle for sore throats, and as an infusion or decoction for diarrhoea and dysentery. The leaves are astringent, prevent haemorrhaging and strongly promote menstrual flow. A decoction of the bark is used to treat liver problems. Applied in the form of a plaster, henna treats fungal infections, acne and boils.

Leonurus cardiaca (Lamiaceae)

Motherwort

Description Perennial herb growing to 1.5 m (5 ft). Has toothed, palm-shaped leaves and double-lipped pink flowers blossoming in clusters.
Habitat & Cultivation Native to central Asia, motherwort is now naturalized in much of Europe and North America. It grows wild in woodlands, on wasteground and along roadsides. It is also cultivated as a garden plant. Motherwort is harvested when it comes into flower in summer.
Parts Used Aerial parts.
Constituents Motherwort contains alkaloids (including L-stachydrine), an iridoid (leonurine), diterpenes, flavonoids, caffeic acid and tannins.
History & Folklore As its species name *cardiaca* indicates, motherwort has long been considered a heart remedy. The herbalist Nicholas Culpeper stated that "there is no better herb to drive away melancholy vapours from the heart, to strengthen it and make the mind cheerful" (1652). The Italian physician and herbalist Pierandrea Matteoli held it "useful for palpitations and a pounding heart, spasms and paralysis… [it] thins thick and viscid humours [and] stimulates urine and menstrual bleeding" (1548).
Medicinal Actions & Uses A remedy for the heart and nerves and often prescribed for palpitations, motherwort strengthens heart function, especially where it is weak. Antispasmodic and sedative, the herb promotes relaxation rather than drowsiness. However, motherwort stimulates the muscles of the uterus, and is particularly suitable for delayed periods, period pain and premenstrual tension (especially if shock or distress is a factor). It should not be used if menstrual bleeding is heavy.



Motherwort has been used to treat palpitations since at least the 16th century.

Related Species Two east Asian species, *L. heterophyllus* (from China) and *L. sibiricus* (from Siberia), are both used therapeutically for the same purposes as motherwort. *L. heterophyllus* appears to lower blood pressure and to induce menstruation.
Cautions Do not take motherwort during pregnancy. It should also be avoided where there is heavy menstrual bleeding.
Self-help Uses **Menstrual problems – irregular cycle**, p. 315; **Panic attacks**, p. 302.

Lepidium virginicum (Brassicaceae)

Virginia Peppergrass

Description Annual herb growing to about 60 cm (2 ft). Has slender lance-shaped leaves and small white flowers.
Habitat & Cultivation Virginia peppergrass is native to eastern North America and the Caribbean,

and is naturalized in Australia. The leaves are gathered in spring and are consumed as food. The seedpods can serve as a subsitute for black pepper.
Parts Used Leaves, root.
Constituents Virginia peppergrass contains high levels of vitamin C.
History & Folklore The Menominee of eastern North America applied a lotion of Virginia peppergrass (or a bruised fresh plant) to poison ivy eruptions.
Medicinal Actions & Uses Virginia peppergrass is nutritious and generally detoxifying. It has been used to treat vitamin C deficiency and diabetes, and to expel intestinal worms. The herb is also diuretic and of benefit in easing rheumatic pain. The root is taken to treat excess catarrh within the respiratory tract.
Related Species Maca (*L. meyenii*) is a low-growing Andean perennial. The root is valued as a staple food and medicine by Andean peoples, notably to support immune function and for hormonal disorders including sterility. Maca is now commonly available in health stores and has acquired a reputation as a tonic, hormone balancer and aphrodisiac.

Leptandra virginica syn. *Veronicastrum virginicum* (Scrophulariaceae)

Black Root

Description Perennial herb growing to 1 m (3 ft). Has an erect stem, lance-shaped leaves and white flowers.
Habitat & Cultivation Black root grows across North America in meadows and woodlands. The root is unearthed in autumn.
Part Used Dried root.
Constituents Black root contains a volatile oil, saponins, sugars and tannins.
History & Folklore Known to the Native Americans of Missouri and Delaware as a violent purgative, black root was used in moderate doses as a laxative, detoxifier and a remedy for liver disorders. In the 19th century Physiomedicalist tradition, black root was taken to stimulate bile production.

Root

Medicinal Actions & Uses Black root is used in small doses today as a laxative and a remedy for liver and gallbladder disorders. The herb also treats flatulence and bloating, and eases the discomfort of haemorrhoids, chronic constipation and rectal prolapse.
Cautions Do not use the fresh root. Do not take during pregnancy.

Levisticum officinale syn. *Ligusticum levisticum* (Apiaceae)

Lovage

Description Perennial growing to 2 m (6½ ft). Has glossy, toothed compound leaves, greenish-yellow flowers, and tiny oval seeds.
Habitat & Cultivation Lovage is found in southern Europe and south-western Asia. It thrives on sunny mountain slopes. The leaves are gathered in spring or early summer, the seeds in late summer, the root in autumn.
Parts Used Root, seeds, leaves.
Constituents Lovage root contains a volatile oil (about 70% phthalides), coumarins (including bergapten, psoralen and umbelliferone), alkynes, plant acids, sterols, resins and gums. The phthalides are sedative and anticonvulsant.
History & Folklore The *Trotula* texts, written in Salerno during the 12th century, recommend lovage for skin lightening. The Irish herbalist K'Eogh follows this recommendation – "lovage clears the sight and removes spots, freckles and redness from the face".
Medicinal Actions & Uses Lovage is a warming and tonic herb for the digestive and respiratory systems. It treats indigestion, poor appetite, wind and colic, and bronchitis. Lovage is significantly diuretic and antimicrobial and is commonly taken for urinary tract complaints. It also promotes menstruation and relieves period pain. Its warming nature improves poor circulation.
Related Species The Chinese *chuan xiong* (*Ligusticum chuanxiong*) is used principally as a means to bring on absent menstrual periods and to treat period pain. The Chinese *gao ben* (*Ligusticum sinense*) is also used for pain.
Cautions Do not take during pregnancy. Do not take if you suffer from kidney disease. Can increase sensitivity to sunlight.
Self-help Use Heavy menstrual bleeding, p. 315.

Lippia alba (Verbenaceae)

Lippia,

Bushy Lippia, Prontoalivio

Description Multi-branched, square-stemmed, aromatic shrub growing to 1.5 m (5 ft), with opposite leaves and small white or pink flowers close to the leaf axils.
Habitat & Cultivation Lippia grows throughout South and Central America from northern Argentina to the southern US. It is a common garden herb, and may be grown from seed or cuttings, the latter being used for commercial cultivation.
Parts Used Leaves.
Constituents Lippia leaves contain about 0.15% volatile oil with different plant strains, or chemotypes, producing several essential oils with quite a distinct range of compounds, notably citral and carvone. The citral chemotype oil is thought to have strong anti-*Candida* activity.
History & Folklore In many parts of Central and South America, Lippia is valued for its ability to resolve common illnesses, such as stomach upset, nausea, wind and bloating, coughs, colds, sore throat and headache. Its Colombian name, Prontoalivio (meaning "quick relief") points to its place in popular Latin American medicine.
Medicinal Actions & Uses Lippia has pain-relieving, anti-inflammatory, relaxant and anti-spasmodic properties, making it useful in many non-severe health problems. In Brazil, where it is regulated as a medicinal herb, the herb is typically used for upper digestive problems, coughs, colds and bronchitis, as well as for high blood pressure and as a sedative. The herb has been little researched, though a small clinical trial in Brazil found it effective in treating migraine headache. The essential oil is increasingly used in pharmaceutical and cosmetic preparations, for example, within Europe, and has significant antifungal and antibacterial activity on the skin.
Related Species The sweet tasting *L. dulcis* has broadly similar medicinal use and is found across Central America and the Caribbean. See also Lemon Verbena (*Lippia citriodora, following entry*).

Lippia citriodora syn. *Aloysia triphylla* (Verbenaceae)

Lemon Verbena

Description Deciduous shrub growing to 2 m (6½ ft). Has strongly scented lance-shaped leaves and clusters of tubular, pale green to mauve flowers.
Habitat & Cultivation Lemon verbena is native to South America. It is cultivated in temperate climates as an aromatic, ornamental plant and for its leaves, which are used to make herbal tea. The leaves are gathered in late summer.
Parts Used Leaves.
Constituents Lemon verbena contains a volatile oil (mainly consisting of citral, cineole, limonene and geraniole), mucilage, tannins and flavonoids.
History & Folklore Lemon verbena was introduced to Europe in 1784. In Spain, France and elsewhere in Europe, the infusion is a popular drink.
Medicinal Actions & Uses An undervalued medicinal herb, lemon verbena shares qualities with lemon balm (*Melissa officinalis*, p. 113). Both herbs contain a strong lemon-scented volatile oil that has calming and digestive properties. Lemon verbena has a gentle sedative action and a reputation for

soothing abdominal discomfort. Its tonic effect on the nervous system is less pronounced than that of lemon balm, but it nonetheless helps to lift the spirits and counter depression.
Related Species Yerba dulce (*L. dulcis*), native to Mexico, is used therapeutically as a demulcent and expectorant remedy. In Mexico, many other *Lippia* species are used for their antispasmodic, period-inducing and stomach-soothing properties. *L. adoensis* is drunk as a tea in West Africa. See also lippia (*Lippia alba, preceding entry*).
Self-help Use Wind & bloating, p. 306.

Liquidambar orientalis (Hamamelidaceae)

Levant Storax

Description Deciduous tree growing to 6 m (20 ft). Has purplish-grey bark, lobed leaves and small single yellow-white flowers.
Habitat & Cultivation Levant storax is found in south-western Turkey. Storax balsam, a viscid grey-brown liquid, is extracted from the bark, which is prised off the tree in autumn.
Part Used Bark extract.

Levant storax *is used to relieve congestive chest problems.*

Constituents Levant storax contains cinnamic acid, cinnamyl cinnamate, phenylpropyl cinnamate, triterpene acids and a volatile oil.
History & Folklore Levant storax has been the *Liquidambar* species most commonly used medicinally since the 19th century. Levant storax is also employed as a fixative for perfumes.
Medicinal Actions & Uses Levant storax balsam acts as both an irritant and an expectorant within the respiratory tract, and it is one of the ingredients of Friar's Balsam, an expectorant mixture that is inhaled to stimulate a productive cough. In addition, levant storax balsam is applied externally to encourage the healing of skin diseases and problems such as scabies, wounds and ulcers. Mixed with witch hazel (*Hamamelis virginiana*, p. 102) and rosewater (*Rosa species*), levant storax makes an astringent face lotion. In China, storax balsam is used to clear mucus congestion and to relieve pain and constriction in the chest.
Related Species American storax (*L. styraciflua*), which grows mainly in Honduras but is also found further north, has been used since the time of the Maya for its healing properties.

Lobaria pulmonaria (Stictaceae)

Tree Lungwort

Description Grey or light green lichen with forked irregular lobes measuring up to 1.5 cm (⅝ in) across.
Habitat & Cultivation Found throughout Europe, tree lungwort grows on trees and rocks in woodland areas. It is gathered all year round.
Part Used Lichen.
Constituents Tree lungwort contains a variety of plant acids (including stictic and sticinic acid), fatty acids, mucilage and tannins.
History & Folklore Tree lungwort has been used since ancient times as a remedy for lung problems. The Italian physician and herbalist Pierandrea Matteoli (1501–77) recommended it for healing pulmonary ulcers and for treating blood-flecked phlegm. It was also used to treat wounds, heal ulcers, reduce excessive menstrual bleeding, relieve dysentery and halt "choleric vomiting".
Medicinal Actions & Uses A beneficial but under-used remedy, tree lungwort has expectorant and tonic properties. It aids in clearing congested mucus, reduces catarrh and helps to increase the appetite. In a decoction sweetened with honey, it is appropriate for all conditions that are marked by chronic respiratory catarrh, especially coughs and bronchitis. The plant also treats asthma, pleurisy and emphysema. Being astringent and demulcent, tree lungwort makes a useful treatment for pulmonary ulcers as well as for a variety of gastro-intestinal problems. It is highly suitable for treating ailments in children.

Lomatium dissectum (Apiaceae)

Lomatium, Toza

Description Erect perennial, growing to 2 m (6½ ft), with a large woody taproot, divided, triangular leaves, and flowers in flat-topped umbels.
Habitat & Cultivation Native to coastal and inland regions of western North America from California as far north as British Columbia.
Parts Used Root.
Constituents Lomatium contains flavonoids, coumarins, tetronic acids and volatile oil.
History & Folklore One of the most important medicinal plants of the Pacific north-west, lomatium was "big medicine" for Native Americans and widely used for respiratory infections such as coughs, colds and flu. In Nevada, lomatium root was combined with yarrow (*Achillea millefolium*, p. 56) to treat sexually transmitted diseases. In Oregon, a decoction of the root was applied to horses to rid them of ticks. During the 1917 influenza epidemic an American doctor, Ernest Krebbs, successfully used lomatium in his own practice, after noting the effective use of the herb by Native Americans.
Medicinal Actions & Uses Lomatium is today used mostly by botanical practitioners in North America to treat a broad range of viral infections, from chronic fatigue syndrome to influenza and herpes infections. A good tonic herb, it promotes peripheral blood flow and stimulates immune function. It is usually combined with other herbs such as echinacea (*Echinacea* spp., p. 92) or wild indigo root (*Baptisia tinctoria*, p. 176).
Research The tetronic acids have been shown to be markedly antimicrobial and toxic to fish (Native Americans used to place the fresh root in streams or pools in order to stun fish). Preliminary studies in Canada and the US suggest that lomatium has significant antiviral activity.
Cautions A red measles-like rash, which clears on stopping treatment, may develop when taking lomatium. Like other members of the carrot family, lomatium can increase sensitivity to sunlight.

Lonicera spp. (Caprifoliaceae)

Honeysuckle, & Jin Yin Hua

Description A climber growing to 4 m (13 ft) that is deciduous (honeysuckle, *L. caprifolium*) or semi-evergreen (*jin yin hua*, *L. japonica*). Has paired oval leaves, yellow-orange (honeysuckle) or yellow-white (*jin yin hua*) tubular flowers, and red (honeysuckle) or black (*jin yin hua*) berries.
Habitat & Cultivation Honeysuckle is native to southern Europe and the Caucasus. *Jin yin hua* is native to China and Japan. Both plants are commonly found growing on walls, trees and in hedges. The flowers and leaves are gathered in summer just before the flowers open.
Parts Used Flowers, leaves, bark.
Constituents In Europe, *L. caprifolium* and *L. japonica* are often used interchangeably and

contain approximately the same quantity of volatile oil. Nonetheless, Romanian research indicates that the Asian species contains a much wider range of therapeutically active antiseptic compounds.

History & Folklore Honeysuckle is one of the Bach Flower Remedies, and in this system of herbal cures it is believed to counter feelings of nostalgia and homesickness. *Jin yin hua* has long been used in Chinese medicine to "clear heat and relieve toxicity".

Medicinal Actions & Uses Honeysuckle flowers from both species can be successfully used to treat fever, colds and upper respiratory tract infections. The leaves are traditionally used as a gargle for sore throats and as a mouthwash. In Chinese herbal medicine, honeysuckle finds frequent use in inflammatory conditions, such as conjunctivitis, mastitis (inflammation of the breasts) and rheumatoid arthritis.

Research Chinese research indicates that the Asian species has significant antimicrobial activity, including against the tuberculosis bacillus. Clinical studies suggest that this species can also help to lower high blood pressure.

Caution Do not eat the berries, which are thought to be toxic.

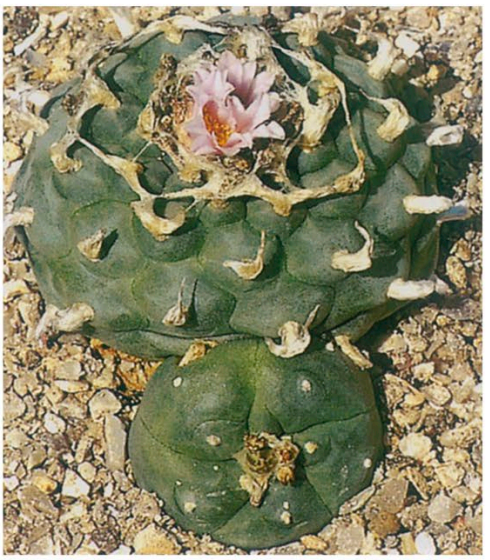
Lophophora williamsii (Cactaceae)

Peyote

Description Cactus growing to 5 cm (2 in). Has a squat grey-green body with tufted hairs, and pink or white flowers.

Habitat & Cultivation Peyote is found in semi-arid areas of south Texas and north and east Mexico.

Part Used Whole plant.



***Peyote** is a powerful hallucinogen. It is used in Native American ceremonies.*

Constituents Peyote contains alkaloids, principally mescaline, which is a powerful hallucinogen.

History & Folklore Peyote has been used in Native American religious ceremonies for over 3,000 years. Its use as a hallucinogen was popularized by Aldous Huxley in his book *The Doors of Perception*.

Medicinal Actions & Uses Peyote is a shamanistic plant, taken in Native American rituals to deepen spiritual understanding. It plays an important part in the emotional and mental state of the community. It is also used to treat fevers, as a painkiller for rheumatism and to treat paralysis. It is applied as a poultice for fractures, wounds and snake bite. Peyote is also used to induce vomiting.

Caution The use of peyote and mescaline is illegal in most countries.

Luffa cylindrica syn. *L. aegyptica* (Cucurbitaceae)

Loofah,

Si Gua Luo (Chinese)

Description Annual vine climbing to 15 m (49 ft). Has large lobed leaves, tendrils, and yellow female flowers producing long cylindrical marrow-like fruit.

***Loofah** fruit is dried and used in Chinese medicine to treat muscle and joint pain.*

Habitat & Cultivation Loofah is native to the tropics of Asia and Africa. It is now grown as a fruit in tropical regions around the world. It is harvested when ripe in summer.

Part Used Fruit.

Constituents Loofah contains polysaccharides, xylan, xylose and galactan.

History & Folklore Loofah was brought from India to China in the Tang Dynasty (618–907 CE). It is best known in the West as a bathroom accessory – the fibrous skeleton makes a good skin scrubber.

Medicinal Actions & Uses In Chinese medicine, the inner skeleton of the dried fruit is used to treat pain in the muscles, joints, chest and abdomen. It is prescribed for chest infections accompanied by fever and pain, and is used to clear congested mucus. Loofah is also given to treat painful or swollen breasts.

Research Chinese research indicates that the fresh vine has a stronger expectorant effect than the dried fruit. German research (1999) using a homeopathic preparation of the plant showed it to be as effective as a standard nasal spray for relief of hay fever.

Lycopodium clavatum (Lycopodiaceae)

Club Moss

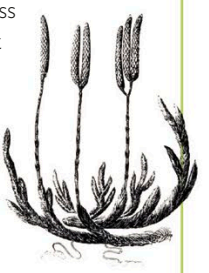
Description Creeping evergreen moss growing to 12 cm (4¾ in). Has numerous straggling branchlets covered with bright green linear leaves, and scaly spikes bearing yellow spores.

Habitat & Cultivation Club moss is found throughout temperate regions of the northern hemisphere. It is common on mountains and in moorland. The plant is gathered in summer.

Parts Used Moss, spores.

Constituents Club moss contains about 0.1–0.2% alkaloids (including lycopodine), polyphenols, flavonoids and triterpenes.

History & Folklore Club moss has been used medicinally since at least the Middle Ages. The whole plant was employed as a diuretic to aid in the flushing out of kidney stones. In Wales, club moss was used for certain back problems and for colds and sore throats. Being strongly water-resistant, the spores are still used to coat tablets. The spores ignite explosively and have been used in making fireworks.



Club moss

Medicinal Actions & Uses Club moss is diuretic, sedative and antispasmodic, and is particularly useful for treating chronic urinary complaints. The herb may also be taken for indigestion and gastritis. The spores can be applied to the skin to relieve itchiness. Club moss is frequently used in homeopathic medicine, being prescribed for headache, liver complaints and digestive symptoms such as wind and burping.

Caution Club moss is potentially toxic in overdose. This plant should only be used with the supervision of a professional practitioner.

Lycopus virginicus (Lamiaceae)

Bugleweed

Description Perennial herb growing to 60 cm (2 ft). Has a square stem, lance-shaped leaves and whorls of whitish flowers.
Habitat & Cultivation Bugleweed is common throughout most of North America, thriving close to water. It is harvested in summer when in flower.
Parts Used Aerial parts.
Constituents Bugleweed contains phenolic acids (including derivatives of caffeic, chlorogenic and ellagic acids).
History & Folklore In the 19th-century Physiomedicalist tradition, bugleweed was regarded as astringent and calming to the nerves, and was given for loose coughs, internal bleeding and urinary incontinence. Herbal practitioners once considered the plant to be a mild narcotic.
Medicinal Actions & Uses Bugleweed has sedative properties and today the herb is principally prescribed to treat an overactive thyroid gland and the racing heartbeat that often accompanies this condition. Bugleweed is also considered an aromatic and tonic astringent that reduces the production of catarrh.
Research Studies indicate that bugleweed and, to some degree, gipsywort (*see Related Species*, below) reduce the activity of the thyroid gland.
Related Species Gipsywort (*L. europaeus*), a European native, has astringent and cardiotonic properties. It is taken for palpitations and anxiety, and has been used to lower fever.
Cautions Take only under professional supervision. Do not take during pregnancy.

Lysimachia vulgaris (Primulaceae)

Yellow Loosestrife

Description Attractive perennial growing to 1 m (3 ft) with whorls of broadly lance-shaped leaves and bright yellow flowers.
Habitat & Cultivation Native to Europe, yellow loosestrife commonly grows in damp hedgerows and near water. It is also cultivated as a garden plant. It is gathered when in flower in summer.
Parts Used Aerial parts.
Constituents Yellow loosestrife contains a benzoquinone, triterpenoid saponins, flavonoids and tannins.
History & Folklore Pliny (23–79 CE) recorded that *lysimachia*, the plant's Latin name, was a tribute to King Lysimachus of Sicily, who discovered its medicinal benefits. The name "loosestrife" refers to the plant's reputed power to prevent conflict, particularly between animals, and to repel insects. The Greek physician Dioscorides (40–90 CE) recommended loosestrife to staunch wounds and for nosebleeds, and noted that its smoke would drive away snakes and flies.
Medicinal Actions & Uses An astringent herb, yellow loosestrife is principally used to treat gastro-intestinal conditions such as diarrhoea and dysentery, to stop internal and external bleeding, and to cleanse wounds. It makes a serviceable mouthwash for sore gums and mouth ulcers, and may be used to treat nosebleeds. Yellow loosestrife has also been taken as an expectorant.
Related Species The yellow pimpernel (*L. nemorum*), another European native, is astringent and staunches blood. *Jin qian cao* (*L. christinae*), from China, is a diuretic used to treat urinary pain. A Chinese trial showed that the latter is also effective in treating both kidney stones and gallstones.

Lythrum salicaria (Lythraceae)

Purple Loosestrife

Description Attractive perennial growing to about 1.5 m (5 ft). Has straight red stems, pointed lance-shaped leaves and spikes of brilliant purple flowers.
Habitat & Cultivation Purple loosestrife is native to Europe but well-established in the wild in North America. It thrives in marshes and along rivers and streams, to altitudes of 1,000 m (3,300 ft). It is gathered when in flower in summer.
Parts Used Aerial parts.
Constituents Purple loosestrife contains salicarin, a glycoside (vitexin), tannins, a volatile oil, mucilage and plant sterols.
History & Folklore In 1654, the herbalist Nicholas Culpeper praised this herb, writing that "the distilled water is a present remedy for hurts and blows on the eyes, and for blindness … it also cleareth the eyes of dust or any other thing gotten into them, and preserveth the sight". A common plant in Ireland, purple loosestrife was much used there against diarrhoea.
Medicinal Actions & Uses The astringent purple loosestrife is mainly employed as a treatment for diarrhoea and dysentery. It can be safely taken by people of all ages; some herbalists recommend it to help arrest diarrhoea in breast-feeding babies. The herb may also be used to treat heavy periods and for inter-menstrual bleeding. Externally, it is applied as a poultice or lotion to wounds, leg ulcers and eczema, and used to treat excess vaginal discharge and vaginal itching. Purple loosestrife is now little used to treat eye problems, but, as Culpeper's experience suggests, the herb could be worth further investigation as a remedy for disorders of the eyes and vision.
Research In animal experiments, extracts of the flowers and leaves have been shown to be hypoglycaemic – lowering blood sugar levels. The plant is also thought to have antibiotic activity.

Purple loosestrife is used to relieve diarrhoea and dysentery in breast-feeding babies.

Madhuca spp. (Sapotaceae)

Butter Tree

Description Deciduous tree growing to 20 m (65 ft). Has leathery leaves, clusters of scented white flowers and greenish fruit.
Habitat & Cultivation Madhuca species are native to central and northern India. The flowers, leaves and seeds are gathered in summer.
Parts Used Flowers, seed oil.
Constituents The leaves contain an alkaloid and a saponin; the seeds a saponin and fixed oil.
History & Folklore Butter tree has been a source of food and medicine in India for at least 2,000 years. Its flowers are eaten and are fermented to make alcoholic drinks.
Medicinal Actions & Uses The expectorant flowers are used to treat chest problems such as bronchitis. They are also taken to increase breast-milk production. The leaves are applied as a poultice to eczema. The seed oil is laxative and is taken for constipation and to loosen the stool of haemorrhoid sufferers.

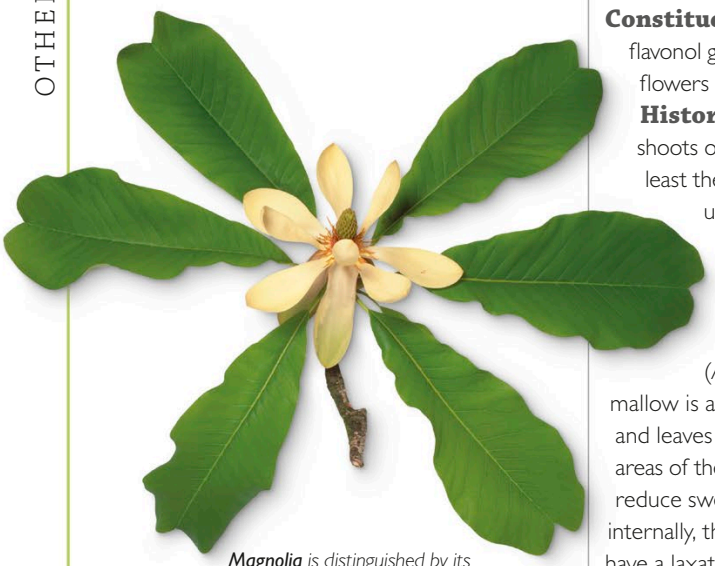
Magnolia officinalis (Magnoliaceae)

Magnolia,

Hou Po (Chinese)

Description Deciduous tree growing to 25 m (80 ft). Has aromatic bark, large leaves and fragrant creamy-white flowers.

Habitat & Cultivation Native to China, magnolia grows wild in mountainous regions. It is now planted in many parts of the world as an ornamental tree. The bark is stripped in spring.



Magnolia *is distinguished by its beautiful creamy-white flowers.*

Part Used Bark.

Constituents Magnolia bark contains alkaloids, coumarins, flavonoids and lignans. The lignan, honokiol, found in the bark of several magnolia species appears to have anti-tumour and anti-anxiety activity. Another lignan, magnolol, has anti-bacterial and anti-anxiety activity.

Medicinal Actions & Uses Magnolia bark is aromatic, warming and pungent. It relieves griping pain and flatulence, and is taken for abdominal distension, indigestion, loss of appetite, vomiting and diarrhoea. It is now also used to treat anxiety, chronic stress and lowered mood, and as a neuroprotective remedy that aids memory and mental function.

Research Research suggests that magnolia bark extract is antimicrobial and may have specific use as an oral antiseptic to control bacteria and relieve bad breath (halitosis). Two Italian clinical studies found that magnolia extract helped relieve anxiety and support positive mood in menopausal women. A 2012 Korean study concluded that magnolia may be useful in treating Alzheimer's disease.

Related Species North American species, notably *M. grandiflora*, are used in much the same way as magnolia (above), with traditional uses including for fever and rheumatism.

Caution Do not take during pregnancy.

Malva sylvestris (Malvaceae)

Common Mallow

Description Biennial growing to 1.5 m (5 ft). Has a pulpy taproot, 5-lobed scalloped leaves, and pink to mauve flowers.

Habitat & Cultivation Common mallow is native to Europe and Asia. It is naturalized in the Americas and Australasia, growing on wasteground and on hedges and fences. The leaves are gathered in spring, the flowers when in bloom in summer.

Parts Used Leaves, flowers, root.

Constituents Common mallow contains flavonol glycosides, mucilage and tannins. The flowers also contain malvin (an anthocyanin).

History & Folklore The young leaves and shoots of this plant have been eaten since at least the 8th century BCE. The plant's many uses gave rise to the Spanish adage, "A kitchen garden and mallow, sufficient medicines for a home."

Medicinal Actions & Uses Though less useful than marshmallow (*Althaea officinalis*, p. 165), common mallow is an effective demulcent. The flowers and leaves are emollient and good for sensitive areas of the skin. It is applied as a poultice to reduce swelling and draw out toxins. Taken internally, the leaves reduce gut irritation and have a laxative effect. When common mallow is combined with eucalyptus (*Eucalyptus globulus*, p. 96), it makes a good remedy for coughs and other chest ailments. As with marshmallow, the root may be given to children to ease teething.

Mandragora officinarum (Solanaceae)

Mandrake

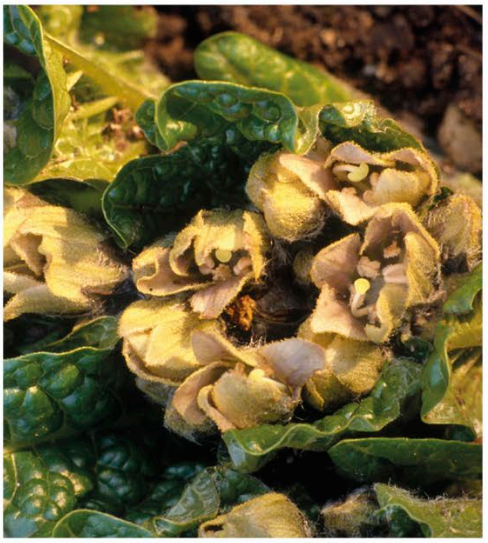
Description Perennial growing to 5 cm (2 in). Has a deep branching root, a rosette of broad floppy leaves, funnel-shaped white to purple flowers and yellow fruit.

Habitat & Cultivation Native to the Mediterranean region of Europe, mandrake grows on dry riverbeds. Its leaves are picked in summer.

Part Used Root.

Constituents Mandrake contains 0.4% tropane alkaloids (hyoscine and hyoscyamine).

History & Folklore Legend held that the mandrake, on being uprooted, emitted a scream that was so powerful it could kill the person harvesting the plant. Consequently, reported one classical authority, mandrake was pulled up by dogs that had the stems tied to their tails. The fantastic powers attributed to the plant were partly due to the narcotic-like properties of the root. Also influential was the root's shape, which often vaguely resembles the human form. The roots have been carved and used as talismans for thousands of years, especially to aid fertility in women, and as a charm against misfortune. From Roman times onwards, mandrake root bark was used as an anaesthetic and analgesic, and as a treatment for insanity.



Mandrake's *narcotic properties and human-shaped root have inspired much legend and lore.*

Medicinal Actions & Uses Mandrake has now largely fallen out of use. The herb is sometimes applied as a poultice or plaster for rheumatic and arthritic pains, or, as a decoction, for ulcers and similar kinds of skin disorders.

☠ **Cautions** Mandrake is toxic. Do not take internally. Use externally only under professional supervision. The plant is subject to legal restrictions in some countries.

Manihot esculenta (Euphorbiaceae)

Cassava,

Manioc

Description Shrub growing to 2 m (6½ ft). Has fleshy roots, woody stems, large palm-shaped leaves and green flowers.

Habitat & Cultivation Cassava is native to tropical Central and South America. Possibly the most grown root crop in the world, bitter and sweet varieties are grown commercially throughout the tropics (Nigeria, Thailand and Brazil being the foremost producers). The plant was first cultivated in Peru around 4,000 years ago. The root is unearthed 8 to 24 months after planting.

Part Used Root.

Constituents Cassava contains cyanogenic glycosides (0.02–0.03% in the bitter varieties, 0.007% in the sweet) and starch.

Cassava is a staple food in many tropical regions of the world.

History & Folklore Bitter cassava has large quantities of highly toxic glycosides, and must be carefully soaked and cooked before it is safe to eat. (Sweet cassava is safe to eat without such processing.) *Tapioca* is a native Brazilian name for the processed root, which is used in commercial food preparation as a thickening agent. The Witoto of the Colombian Amazon poison fish with the water used to wash bitter cassava. The Makuna use the wash water to treat scabies.

Medicinal Actions & Uses Cassava root is easily digestible and makes a suitable, if low-protein, food for convalescence. The bitter variety may be used to treat scabies, diarrhoea and dysentery. Cassava flour may be used to help dry weeping skin. In China, a poultice is made of cassava, wheat flour and ginger (*Zingiber officinale*, p. 155) to draw out pus when infection is present.

Caution Raw bitter cassava is toxic and has caused many deaths. The root must be carefully soaked and cooked before eating.

Maranta arundinacea (Marantaceae)

Arrowroot

Description Perennial growing to 2 m (6½ ft). Has a creeping rhizome, many long-stemmed oval leaves, and flowering stems with clusters of creamy-white flowers.

Habitat & Cultivation Native to northern South America and the Caribbean islands, arrowroot is cultivated mostly on the island of St Vincent. The rhizome is unearthed 10 to 11 months after planting.

Part Used Rhizome.

Constituents Arrowroot contains 25–27% neutral starch.

History & Folklore In Central America, the Maya made the root into a poultice for smallpox sores, and an infusion for urinary infections. Arrowroot was a staple food of the Arawak people of the Caribbean. The plant reputedly gets its name from its use to treat poisoned arrow wounds – presumably as a drawing poultice.

Medicinal Actions & Uses Arrowroot is used in herbal medicine in much the same manner as slippery elm (*Ulmus rubra*, p. 145), as a soothing demulcent and a nutrient of benefit in convalescence and for those with weak digestions. It helps to relieve acidity, indigestion and colic, and is mildly laxative. It may be applied as an ointment or poultice mixed with antiseptic herbs such as myrrh (*Commiphora molmol*, p. 85).

Self-help Use Acidity & indigestion, p. 307.

Marrubium vulgare (Lamiaceae)

White Horehound

Description Square-stemmed perennial growing to about 50 cm (20 in). Has toothed, downy leaves and double-lipped white flowers.

Habitat & Cultivation Native to Europe, white horehound is naturalized in North and South America. It flourishes on wasteground and in dry, bare areas, and is gathered in spring.

Parts Used Leaves.

Constituents White horehound contains the diterpenes marrubiin (0.3–1.0%) and marrubenol, tannins, 0.06% volatile oil. Marrubiin is thought to be chiefly responsible for the herb's expectorant and bitter activity. It also acts on the heart to correct irregular an heart beat.

Dried herb

History & Folklore White horehound has been a remedy for chest problems since ancient times, perhaps most frequently taken as a syrup made with honey or sugar. The Greek physician Dioscorides (40–90 CE) recommended a decoction of white horehound as a treatment for tuberculosis, asthma and coughs.

Medicinal Actions & Uses White horehound is helpful for wheeziness, bronchitis, bronchiectasis (a damaged air passage within the lung), bronchial asthma, non-productive coughs and whooping cough. The herb apparently causes the secretion of a more fluid mucus, which is readily cleared by coughing. As a bitter tonic, white horehound increases the appetite and supports the function of the stomach. It is widely used in Mexico to help control late onset diabetes. The herb may also act to normalize heart rhythm, improving its regularity.

Marsdenia condurango syn. *Gonolobus condurango* (Asclepiadaceae)

Condurango

Description Climbing vine growing to 10 m (33 ft). Has heart-shaped leaves and funnel-shaped, white-green flowers.

Habitat & Cultivation Condurango is native to deciduous forests of the Andes in Peru and Ecuador. It generally grows at altitudes between 1,000–2,000 m (3,300–6,600 ft). The bark is collected year-round.

Parts Used Bark, latex.

Constituents Condurango bark contains glycosides (based on condurangogenins), a volatile oil and phytosterols.

History & Folklore Early in the last century, condurango was erroneously yet widely believed to be a remedy for cancer.

Medicinal Actions & Uses The bark's main effect is to stimulate stomach secretions. It is often used in South American folk medicine as a potent bitter and digestive tonic. Condurango is a specific treatment for nervous indigestion and anorexia nervosa, since its bitterness slowly increases the appetite as well as the stomach's ability to process more food. The herb is also thought to stimulate the liver and pancreas, and may be taken for liver disorders. Condurango also encourages menstruation. The caustic white latex has been applied topically to remove warts.

Research The condurangogenins in condurango may act to counter tumours. The whole plant, however, does not seem to impede cancer development.

Caution The latex is poisonous and should not be taken internally.

Medicago sativa (Fabaceae)

Alfalfa,

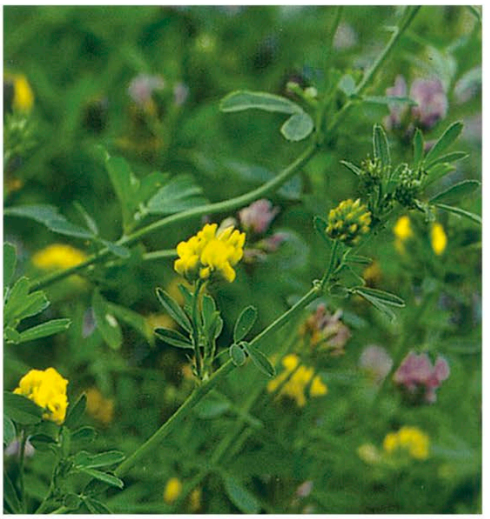
Lucerne

Description Perennial herb growing to 80 cm (32 in). Has 3-lobed leaves, flowers that range in colour from yellow to violet-blue, and spiralling seed pods.

Habitat & Cultivation Native to Europe, Asia and North Africa, alfalfa is found in meadows, on wasteground and in cultivated areas. Grown as a fodder crop in temperate climates, it is harvested in summer.

Parts Used Aerial parts, seeds, sprouting seeds.

Constituents Alfalfa contains isoflavones, coumarins, alkaloids, vitamins and porphyrins. The isoflavones and coumarins are oestrogenic.



Alfalfa has been cultivated for centuries for its nutritional and medicinal properties.

History & Folklore Though mostly used as an animal feed, alfala seeds have been consumed as food for thousands of years. Pliny (23–79 CE) records that alfalfa was brought to Greece by Darius, King of Persia (550–486 BCE), during his attempt to conquer Athens.
Medicinal Actions & Uses Alfalfa is perhaps more therapeutically useful as a food than a medicine as the seeds are taken to help lower cholesterol levels. In view of alfalfa's oestrogenic activity, it can prove useful in treating problems relating to menstruation and the menopause.
Cautions Do not take alfalfa alongside the anticoagulant medication, warfarin. Avoid sprouted seeds in compromised immune states. Using large amounts is not advisable in pregnancy or in auto-immune diseases.

Melaleuca leucadendron (Myrtaceae)
Cajuput

Description Aromatic, evergreen tree growing to 40 m (130 ft). Has peeling bark, pale green, oval leaves and clusters of small white flowers on long spikes.
Habitat & Cultivation Native to South-East Asia, cajuput is cultivated for its essential oil and timber. The leaves and twigs are gathered throughout the year.
Part Used Essential oil.
Constituents The volatile oil contains terpenoids, mainly cineole (50–60%), beta-pinene, alpha-terpineol and others. Cineole is strongly antiseptic. Early investigations suggest the fruit may have antiviral properties.
Medicinal Actions & Uses Cajuput is normally combined with other essential oils such as eucalyptus (*Eucalyptus globulus*, p. 96). Its antiseptic properties treat colds, sore throats, coughs and, especially, chest infections. The diluted oil may either be steam inhaled or applied to the chest or throat to treat laryngitis, tracheitis and bronchitis. As cajuput stimulates the circulation and is antispasmodic, it is used as a friction rub for rheumatic joints and neuralgia.
Related Species Niaouli (*M. viridiflora*), of New Caledonia has properties similar to those of cajuput. See also tea tree (*M. alternifolia*, p. 112).
Cautions Take internally only under professional supervision. Do not use during pregnancy. Cajuput essential oil is subject to legal restrictions in some countries.
Self-help Use Chesty coughs & bronchitis, p. 310.

Melilotus officinalis syn. *M. arvensis* (Fabaceae)
Melilot

Description Biennial herb growing to about 1 m (3 ft). Has 3-lobed leaves, spikes of yellow flowers and brown seedpods.

Melilot is an effective remedy for venous disorders.

Habitat & Cultivation Melilot is native to Europe, North Africa and temperate regions of Asia, and is naturalized in North America. It grows in dry areas and on wasteground. It is harvested in late spring.
Parts Used Aerial parts.
Constituents Melilot contains flavonoids, coumarins, resin, tannins and volatile oil. If allowed to spoil, the plant produces dicoumarol, a powerful anticoagulant.
History & Folklore The Irish herbalist K'Eogh reported in 1735, "a gentlewoman of my acquaintance … had a swelling for a year or more on her right side, which was cured by three or four times rubbing the grieved part with an oil made of this herb".
Medicinal Actions & Uses As with horse chestnut (*Aesculus hippocastanum*, p. 58), long-term use of melilot – internally or externally – can help varicose veins and haemorrhoids. Melilot also helps reduce the risk of phlebitis and thrombosis. The plant is mildly sedative and antispasmodic, and is given for insomnia (especially in children) and anxiety. It has been used to treat flatulence, indigestion, bronchitis, problems associated with the menopause, and rheumatic pains.
Cautions Do not take melilot if using anticoagulants. If harvested from the wild, melilot should be dried or used immediately, as the spoiled plant is toxic.

Mentha haplocalyx (Lamiaceae)
Bo He (Chinese), Corn Mint

Description Perennial herb growing to 60 cm (2 ft). Has a square stem, oval toothed leaves, and whorls of pale lilac flowers growing from the leaf axils.
Habitat & Cultivation *Bo he* is native to temperate regions of the northern hemisphere, and is widely cultivated in China. Harvested 2–3 times a year, the best crops are in early summer and early autumn.
Parts Used Aerial parts.
Constituents *Bo he* contains a volatile oil comprising mainly menthol (up to 95%) with menthone, menthyl acetate, camphene, limonene and other terpenoids.
History & Folklore *Bo he* was first mentioned in *Grandfather Lei's Discussion of Herb Preparation* (*c.* 470 CE). A 15th-century Chinese prescription recommends *bo he* for dysentery with blood.
Medicinal Actions & Uses In Chinese herbal medicine (see pp. 40–43) *bo he* is a popular treatment for colds, sore throats, sore mouth and tongue, and a host of other conditions ranging from

toothache to measles. Like peppermint (*M.* × *piperita*, p. 114), it helps to lower the temperature, has anticatarrhal properties, and may be taken for dysentery and diarrhoea. The juice has also been used to treat earache. *Bo he* is often combined with *ju hua* (*Chrysanthemum* × *morifolium,* p. 78) to treat headaches and bloodshot or sore eyes.
Related Species The Japanese variety of *bo he* (*M. arvensis*) is widely cultivated as a source of menthol. The closely related spearmint (*M. spicata*) native to Europe and Asia, is used mainly as a flavouring and culinary herb. See also peppermint (*M.* × *piperita*, p. 114) and pennyroyal (*M. pulegium, following entry*).

Mentha pulegium (Lamiaceae)
Pennyroyal

Description Powerfully aromatic perennial growing to 40 cm (16 in). Has oval, toothed leaves and whorls of lilac flowers.
Habitat & Cultivation Pennyroyal is native to Europe and western Asia, and has become naturalized in the Americas. It thrives in damp areas and is gathered when in flower in summer.
Parts Used Aerial parts.
Constituents Pennyroyal's volatile oil contains pulegone (27–92%), isopulegone, menthol and other terpenoids. Pennyroyal also contains bitters and tannins.
History & Folklore The Roman natural historian Pliny (23–79 CE) wrote that pennyroyal was considered a better medicinal herb than roses, and that it purified bad water. His contemporary, Dioscorides, stated that pennyroyal "provokes menstruation and labour". In 1597, John Gerard wrote that "a garland of pennie royal made and worne about the head is of great force against the swimming of the head, and the pains and giddiness thereof ". The name pulegium derives from the Latin word for flea, referring to pennyroyal's traditional use as a flea-repellent.
Medicinal Actions & Uses Similar in many respects to peppermint (*M.* × *piperita*, p. 114), pennyroyal is a good digestive tonic. It increases the secretion of digestive juices, relieves flatulence and colic, and occasionally is used as a treatment for intestinal worms. It makes a good remedy for headaches and for minor respiratory infections, helping to check fever and reduce catarrh. Pennyroyal powerfully stimulates the uterine muscles and encourages menstruation. An infusion of pennyroyal can be used externally to treat itchiness and formication (a sensation of ants crawling over the body) and rheumatic conditions including gout.
Related Species *See* peppermint (*M.* × *piperita*, p. 114) and *bo he* (*M. haplocalyx, preceding entry*). American pennyroyal (*Hedeoma pulegoides*), while only distantly related, has constituents similar to those of pennyroyal. American pennyroyal is traditionally used as a remedy for colds, headaches and delayed menstrual periods.
Cautions Do not use the essential oil, which is highly toxic. Do not take pennyroyal during pregnancy, or if menstrual periods are heavy.
Self-help Uses Digestive headaches & biliousness, p. 309; Nausea with headache, p. 306

Menyanthes trifoliata (Menyanthaceae)
Bogbean

Description Perennial aquatic plant growing to 23 cm (9 in). Has trefoil leaves and spikes of pink and white flowers with fringed petals.
Habitat & Cultivation Bogbean is native to Europe, Asia and America. It is found in shallow fresh water. The leaves are picked in summer.
Parts Used Leaves.
Constituents Bogbean contains iridoid glycosides, flavonol glycosides, coumarins, phenolic acids, sterols, triterpenoids, tannin and very small amounts of pyrrolizidine alkaloids. The iridoids are strongly bitter and stimulate digestive secretions.

Bogbean leaves are gathered in summer, after the plant has come into flower.

History & Folklore Long used as a folk remedy for rheumatism and arthritis, bogbean has also been taken to treat fluid retention, scabies and fever. In the past, because of the herb's pronounced bitterness, it was used as an adulterant of, or a substitute for, hops (*Humulus lupulus*, p. 104).
Medicinal Actions & Uses Bogbean is a strongly bitter herb that encourages the appetite and stimulates digestive secretions. It is taken to improve an underactive or weak digestion, particularly if there is abdominal discomfort. This herb is also used as an aid to weight gain. Bogbean is thought to be an effective remedy for rheumatoid arthritis, especially when this condition is associated with weakness, weight loss and lack of vitality. In the main, bogbean is prescribed in combination with other herbs such as celery seed (*Apium graveolens*, p. 64) and white willow (*Salix alba,* p. 129).
Cautions Do not take if suffering from diarrhoea, dysentery or colitis. Excessive doses may cause vomiting.

Milletta reticulata (Fabaceae)
Ji Xue Teng

Description Climber growing to 5 m (16 ft) with compound leaves and clusters of pea-type flowers producing large beanpods.
Habitat & Cultivation Native to China, *ji xue teng* is cultivated in the south-east of that country.
Parts Used Root, vine.
Constituents It contains flavonoids and isoflavones. In common with other members of the bean family, it also contains rotenone, a naturally occurring broad-spectrum insecticide.
History & Folklore This plant was first recorded in Chinese medical texts in about 720 CE. It is called *ji xue teng,* literally "chicken blood vine", on account of the red sap that exudes when the stem is cut.
Medicinal Actions & Uses In Chinese herbal medicine (*see* pp. 40–43), pain is often thought to be due to poor or obstructed blood flow. In this tradition, *ji xue teng* is classified as a herb that invigorates the blood, and is mainly used to treat menstrual problems. *Ji xue teng* is used to relieve period pain or normalize an irregular or absent cycle, especially where this may be due to anaemia. This herb is also prescribed for certain types of arthritic pain, as well as for numbness of the hands and feet.
Research Limited investigation indicates that *ji xue teng* may be anti-inflammatory and may lower blood pressure.
Caution Do not take during pregnancy or while breast-feeding.

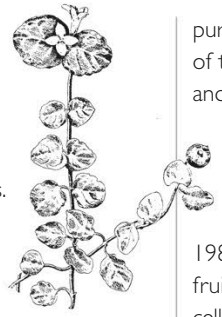
Mitchella repens (Rubiaceae)
Squaw Vine,
Partridge Berry

Description Evergreen herb growing to 30 cm (1 ft) and forming mats on the ground. Has rounded shiny leaves, a flowering stem bearing fragrant white flowers and small, bright red berries.

Habitat & Cultivation Squaw vine is native to eastern and central US. It grows in dry sites in woodlands, and is harvested in late summer.

Parts Used Aerial parts, berries.

Constituents Squaw vine is believed to contain tannins, glycosides and saponins.



Aerial parts

History & Folklore An infusion of squaw vine was commonly taken by Native American women to hasten childbirth. It was also occasionally used for a variety of other complaints, including insomnia, rheumatic pain and fluid retention.

Medicinal Actions & Uses Squaw vine is still extensively used to aid labour and childbirth, and is considered to have a tonic action on the uterus and the ovaries. It is taken to normalize menstruation and to relieve heavy periods and period pain. This herb has also been recommended for stimulating breast-milk production, but other herbs with a similar action, such as fennel (*Foeniculum vulgare*, p. 212), are preferred. The berries, crushed and mixed with tincture of myrrh (*Commiphora molmol*, p. 85), are helpful for sore nipples. An astringent herb, squaw vine has also been prescribed for diarrhoea and colitis.

Caution Do not take during the first 6 months of pregnancy.

Momordica charantia (Cucurbitaceae)

Bitter Melon, Kerala

Description Annual climber growing to about 2 m (6½ ft). Has deeply lobed leaves, yellow flowers and orange-yellow fruit.

Habitat & Cultivation Native to southern Asia, bitter melon is common throughout tropical regions of the world. It is harvested all year round.

Parts Used Leaves, fruit, seeds, seed oil.

Constituents Bitter melon contains a fixed oil, an insulin-like peptide, cucurbitacins, glycosides (mormordin and charantin), and an alkaloid (mormordicine). The peptide is known to lower sugar levels in the blood and urine.

History & Folklore Bitter melon is traditionally taken in Asia, Africa and the Caribbean to treat the symptoms of diabetes.

Medicinal Actions & Uses The unripe fruit is mainly used to treat late-onset diabetes. The ripe fruit is a stomach tonic, and induces menstruation. In Turkey, it is used to treat ulcers. The fruit is much used in the West Indies for worms, urinary stones and fever. The fruit juice is taken as a purgative, and is prescribed for colic. A decoction of the leaves is taken for liver problems and colitis, and it may be applied to skin conditions. The seed oil is used to help heal wounds.

Research Bitter melon seeds are androgenic and inhibit sperm production and were tested as a contraceptive in China in the 1980s. In diabetic laboratory animals, bitter melon fruit juice stimulated regeneration of the pancreatic cells, which secrete insulin. A major body of evidence now supports the traditional use of bitter melon fruit juice to treat non-insulin-dependent diabetes.

Related Species The seeds of the Asian *M. cochinchinensis* are applied as a poultice to relieve abscesses, haemorrhoids and scrofula. Recent research indicates that a paste of the seeds may help psoriasis and ringworm.

Cautions While bitter melon is relatively safe at low dosage, do not use for more than 4 weeks. Do not take if prone to low blood sugar levels.

Monarda punctata (Lamiaceae)

Horsemint

Description Strongly aromatic perennial growing to 90 cm (3 ft). Has downy lance-shaped leaves, and double-lipped, red-spotted yellow flowers growing in whorls from the leaf axils.

Habitat & Cultivation Native to eastern and central US, horsemint is found in dry and sandy areas. It is gathered when in flower in summer and autumn.

Parts Used Aerial parts.

Constituents Horsemint's volatile oil has thymol as the main constituent.

Horsemint strongly encourages sweating and the onset of menstruation.

History & Folklore Horsemint's genus name, *Monarda*, was bestowed in honour of Nicolas Monardes, a Spanish physician, whose herbal of 1569 detailed the medicinal uses of a number of New World plants. Horsemint was used by the Winnebagos and Dakotas as a stimulant and as a treatment for cholera. Other Native Americans used the herb for a wide variety of problems, including nausea, backache, fluid retention, chills, and headache.

Medicinal Actions & Uses Having a strong volatile oil, horsemint is primarily used for digestive and upper respiratory problems. It is taken as an infusion to relieve nausea, indigestion, flatulence and colic. It is also employed to reduce fevers and upper respiratory catarrh. The herb has an antiseptic action within the chest. Taken internally or applied externally, horsemint reduces fever by encouraging sweating. It also strongly stimulates menstruation.

Related Species In 19th-century America, Oswego tea (*M. didyma*) was considered a tonic for young mothers, and was traditionally given to brides. It is thought to be a mild menstrual regulator and an appetite stimulant.

Caution Do not take during pregnancy.

Monsonia ovata (Geraniaceae)

Monsonia

Description Small herbaceous plant with multi-branched stems, very small oblong leaves and white solitary or paired geranium-like flowers.

Habitat & Cultivation Native to South Africa and Namibia, monsonia is found growing in arid conditions. It is gathered when in flower.

Parts Used Aerial parts.

History & Folklore In Zulu medicine, monsonia is used to treat snake bite.

Medicinal Actions & Uses Monsonia is used throughout south-western Africa as a treatment for diarrhoea, acute and chronic dysentery, and ulcerative colitis. The plant's astringent properties act to tighten and protect the inner linings of the intestinal tract. Given monsonia's long traditional use for intestinal disorders and infections, it is possible – but as yet unsubstantiated by research – that the plant has a direct antimicrobial effect.

Montia perfoliata (Portulacaceae)

Miner's Lettuce

Description Annual growing to 10 cm (4 in) with pointed oval leaves (one pair enveloping the stem), and white 5-petalled flowers.

Habitat & Cultivation Miner's lettuce is native to western North America, and has become naturalized in temperate regions around the world, especially in Australia. The plant thrives in acid sandy soils. It is generally gathered from

the wild before and during the flowering period. It has also been cultivated as a vegetable.
Parts Used Aerial parts.
Constituents Miner's lettuce is rich in vitamin C.
History & Folklore Miner's lettuce was a readily available salad vegetable on the west coast of America. It most probably acquired its name during the Californian gold rush of 1849. Itinerant miners may have later taken the plant with them to Australia, where it is now common.

Miner's lettuce may have been spread around the world by itinerant miners.

Medicinal Actions & Uses
Apart from its value as a vegetable, miner's lettuce, like its relative purslane (*Portulaca oleracea*, p. 255), may also be taken as an invigorating spring tonic and an effective diuretic.

Morinda citrifolia (Rubiaceae)
Noni,
Indian Mulberry

Description Shrub or small tree, growing to 8 m (26 ft), with 4-angled stems, and elliptical to oval leaves to 35 cm (14 in) long. Large creamy-white flowers produce a fruit resembling a breadfruit, about 12 cm (4¾ in) long, green turning yellow to white, with a pungent, very unpleasant odour.
Habitat & Cultivation Originally native only to South-East Asia, noni has spread to India in the west and across the Pacific to eastern Polynesia and Hawaii. It prefers volcanic soils in coastal areas and lowland forests up to about 400 m (1,300 ft) above sea level, and until recently was infrequently cultivated. The fruit is gathered when ripe; other parts of the tree are picked as required.
Parts Used Fruit and juice, leaves, bark.
Constituents Noni fruit contains polysaccharides, coumarins, iridoids, flovonods and alkaloids. No active compounds unique to noni have been identified.
History & Folklore Different parts of the plant have been used in Polynesia for at least 2,000 years, chiefly to counter infection and to treat chronic disease. For example, noni leaves are used to treat boils and stomach ulcers and, chewed, are applied as a poultice to relieve inflammation. In Hawaii, traditional healers have long used noni in order to promote recovery from bouts of serious illness.
Medicinal Actions & Uses Since the late 1990s, word of noni's reputed medicinal benefits has spread and noni is being presented as a medicinal food with an astonishing variety of potential uses. These include treating obesity, diabetes, cancer, pain, lowered immunity, high blood pressure, heart disease and depression. With lists like this many people are justifiably sceptical about noni's value as a medicinal food. Nonetheless, noni fruit and juice is highly unlikely to do harm and may well prove useful in treating chronic illness, including pain, inflammatory disorders, heart and circulatory problems and cancer. Traditionally, juice from the fruit is used as a mouthwash and gargle for infections in the mouth and throat. Noni juice is probably best drunk on an empty stomach.
Research The limited research into noni suggests that it may support immune function and be useful in treating chronic inflammation. A 2012 review of noni research concluded that the fruit "may have a small degree of anti-cancer activity". One theory advanced is that noni contains appreciable levels of proxeronine, which the body needs to produce xeronine. This alkaloid appears to enable cells throughout the body to counter inflammation, promote healing and support cellular regulation. In times of stress or infection, the body's need for xeronine increases, and many people are thought to lack sufficient proxeronine to maintain adequate xeronine levels.

Morinda officinalis (Rubiaceae)
Morinda,
Ba Ji Tian (Chinese)

Description Deciduous plant with white flowers and a root that yields a yellow dye.
Habitat & Cultivation Morinda is native to China. It is cultivated in Guangdong, Guangxi and Fujian provinces. The root is unearthed in early spring.
Part Used Root.
Constituents Morinda contains anthraquinones, terpenoids and polysaccharides.
History & Folklore The earliest written record of morinda's use is in the *Divine Husbandman's Classic* (*Shen'nong Bencaojing*) of the 1st century CE.
Medicinal Actions & Uses Pungent and sweet-tasting, morinda root is an important tonic herb within traditional Chinese medicine. It has hormonal and antidepressant properties. As a sexual tonic, it is commonly used to treat impotence and premature ejaculation in men, and is taken to by both sexes to aid fertility. Morinda is employed in various other conditions, notably in the treatment of menstrual disorders. Researchers are investigating the root for its potential to prevent bone loss and help in treating osteoporosis.

Morus alba (Moraceae)
White Mulberry,
Sang Ye (Chinese)

Description Deciduous tree growing to about 15 m (49 ft). Has toothed leaves, flowers in catkins and white berries.
Habitat & Cultivation White mulberry is native to China. It is grown worldwide as a garden ornamental. The leaves are gathered in late autumn, the twigs in early summer, and the berries when ripe in summer. The root is dug up in winter.
Parts Used Leaves, twigs, fruit, root bark.
Constituents The leaves contain flavonoids, anthocyanins and artocapin. The flavonoids are antioxidant. The fruit contains the vitamins A, B_1, B_2 and C.

White mulberry is grown to feed silkworms.

History & Folklore White mulberry has been cultivated for over 5,000 years for its leaves (*sang ye*), the preferred food of the silkworm. The silkworm's faeces are used in Chinese medicine to treat vomiting.
Medicinal Actions & Uses White mulberry leaves are expectorant, encouraging the loosening and coughing up of catarrh, and are prescribed in China as a treatment for coughs. The leaves are also taken to treat fever, sore and inflamed eyes, sore throats, headaches, dizziness and vertigo.

The fruit juice is cleansing and tonic, and has often been used as a gargle and mouthwash. The root bark may be used for toothache, and it is considered laxative. An extract of the leaves has been given by injection for elephantiasis. The twigs are used to combat excess fluid retention and joint pain. The fruit is taken to prevent premature greying of the hair, and to treat dizziness, ringing in the ears, blurred vision and insomnia.
Related Species The black mulberry (*M. nigra*), native to Iran, is cultivated for its sweet, deep red fruit.

Murraya koenigii (Rutaceae)
Curry Tree

Description Aromatic deciduous shrub or tree growing to 6 m (20 ft). Has strongly scented leaves, clusters of small, fragrant white flowers and pink to black berries.
Habitat & Cultivation Curry tree is native to sub-tropical forests in much of southern Asia. It is widely cultivated in India for its leaves.
Parts Used Leaves, berries.
Constituents Curry tree contains over 20 alkaloids, a glycoside (koenigin), volatile oil and tannins.
History & Folklore Curry tree is a common flavouring in Indian food.
Medicinal Actions & Uses Curry tree leaves increase digestive secretions and relieve nausea, indigestion and vomiting. They are also used to treat diarrhoea and dysentery. Curry tree aids healing, for example in gastric ulcers, and the leaves are applied as a poultice on wounds and burns. It helps to stabilize blood sugar levels and is useful for late-onset diabetes.
Related Species The very bitter leaves of cosmetic bark (*M. paniculata*) are taken to treat stomach ache, dysentery, toothache and bruises.

Musa spp. (Musaceae)
Banana,
Plantain

Description Evergreen, palm-like perennials growing to 9 m (30 ft). Have large, shiny green leaves, hanging flowering stems and bunches of elongated green fruit that turn yellow on ripening.
Habitat & Cultivation *Musa* species are native to India and Southeast Asia, and are extensively cultivated in tropical and sub-tropical regions. The fruit is generally picked when immature and then allowed to ripen. The leaves are gathered as required.

Bananas are picked before they fully ripen. They are a useful remedy for diarrhoea.

Parts Used Fruit, leaves, root.
Constituents The fruit contains flavonoids and is rich in vitamins B, C and E, potassium, serotonin and noradrenaline.
History & Folklore The delicious and highly nutritious banana fruit is the yield of careful horticulture, which had its origins with wild plants in prehistoric times.
Medicinal Actions & Uses Ripe banana fruit is gently laxative, while the unripe fruit is astringent and used to treat diarrhoea. The fruit stimulates haemoglobin production and can therefore prove useful in preventing or treating anaemia. Banana makes a simple addition to diets aimed at lowering high blood pressure. Given the fruit's serotonin content, some practitioners recommend taking 3 bananas a day to help treat migraine and depression. A syrup made from plantain is taken for coughs and chest conditions such as bronchitis.

Myrica cerifera (Myricaceae)
Bayberry

Description Evergreen shrub or small tree growing to 10 m (33 ft). Has narrow leaves, small yellow flowers in catkins and waxy grey berries.
Habitat & Cultivation Bayberry is found in coastal regions of the eastern and the southern US, as far west as Texas. The root bark is collected in autumn or spring.
Part Used Root bark.
Constituents Bayberry contains triterpenes (including taraxerol, taraxerone and myricadiol), flavonoids, tannins, phenols, resins and gums. Myricadiol has a mild effect on potassium and sodium levels.
History & Folklore Settlers in North America extolled the medicinal benefits of bayberry. A 1737 account stated that the plants "expel wind and ease all manner of pains proceeding from cold, therefore are good in colic, palsies, convulsions, epilepsies, and many other disorders". The root bark was listed in the *US National Formulary* from 1916 to 1936.
Medicinal Actions & Uses Bayberry is used to increase circulation, stimulate perspiration and keep bacterial infections in check. Colds, flu, coughs and sore throats benefit from treatment with this herb. It helps to strengthen resistance to infection and to tighten and dry mucous membranes. An infusion is helpful for spongy gums, and a gargle is used for sore throats. Bayberry's astringency is beneficial for irritable bowel syndrome and mucous colitis. An infusion can help treat excess vaginal discharge. A paste of the powdered root bark may be used externally on ulcers and sores.
Caution Do not take in pregnancy.

Myrica gale (Myricaceae)
Sweet Gale,
Bog Myrtle

Description Low-growing, fragrant shrub, growing to 2 m (6½ ft), with lance-shaped leaves. Male plants produce resinous catkins in spring.
Habitat & Cultivation Sweet gale thrives in wet and damp heaths and moorlands across northerly regions of the northern hemisphere. The leaves are collected in summer, the catkins in spring.
Parts Used Leaves, branches, catkins.
Constituents Sweet gale contains an essential oil (chiefly alpha-pinene and delta-cadinene), flavonoids and resin.
History & Folklore In Scotland, where the plant grows freely, Highlanders slept on fleaproof beds of sweet gale and placed it among linen to repel moths. Enterprising anglers are also reported to have worn sprigs of sweet gale to keep away midges. In Scotland and Sweden, a strong decoction was used to kill insects and intestinal worms.
Medicinal Actions & Uses Sweet gale is mostly used as an insect repellent and insecticide and offers a safe and ecologically sound way to protect against insect bites. Over-the-counter preparations are available, though a decoction of the plant bathed on exposed areas will also prove effective.
Research Since the 1990s, the essential oil of sweet gale has become recognized as an effective insect repellent (especially of midges), and is now available in blended formulations. In one trial in Scotland, volunteers exposed their arms to midges, with one arm covered in a gel containing essential oil of sweet gale. After 10 minutes, the protected arms averaged 1.6 bites, the unprotected arms 9.4.

Cautions Do not take the essential oil internally. Do not use sweet gale internally in pregnancy or while breast-feeding. The essential oil is thought to be toxic.

Myroxylon pereirae
syn. *M. balsamum* var. *pereirae*
(Fabaceae)

Peruvian Balsam

Description Evergreen tree growing to 35 m (115 ft). Has grey bark, compound leaves dotted with oil glands, white pea-like flowers and yellow seed pods.
Habitat & Cultivation Native to Central America, Peruvian balsam grows wild in tropical forests. It is cultivated in Central and South America and India. Oleo-resin (balsam) is taken from cuts in the bark.
Part Used Oleo-resin.
Constituents The oleo-resin contains 50–65% volatile oil (mainly benzyl benzoate and benzyl cinnamate) and resins.
Medicinal Actions & Uses Peruvian balsam is strongly antiseptic and stimulates repair of damaged tissue. It is most commonly taken internally as an expectorant and anticatarrhal remedy to treat bronchitis, emphysema and bronchial asthma. It may also be taken to treat sore throats and diarrhoea, and applied topically to skin disorders.
Related Species The balsam from similar species was used by the Inca to relieve fevers and colds.
Caution Peruvian balsam may cause allergic skin reactions.

Myrtus communis (Myrtaceae)

Myrtle

Description Evergreen shrub growing to a height of 3 m (10 ft). Has dark green leaves, white flowers and purple-black berries.
Habitat & Cultivation Myrtle is native to the Mediterranean region and it is cultivated for its essential oil. The leaves are gathered in spring.
Parts Used Leaves, essential oil.
Constituents Myrtle contains tannins, flavonoids and a volatile oil (mainly alpha-pinene, cineole and myrtenol).
History & Folklore In ancient Greece, myrtle was dedicated to Aphrodite, who was the goddess of love, and brides bedecked themselves with myrtle leaves. A liqueur is made from the berries.
Medicinal Actions & Uses Myrtle leaves are astringent, tonic and antiseptic. An infusion of the leaves can be used externally to clean and heal wounds and ulcers, or internally to remedy disorders of the digestive and urinary systems. The essential oil is strongly antiseptic and anti-catarrhal, and in Spain is used to treat bronchial and lung infections.
Caution Do not take the essential oil internally except with professional advice.

***Myrtle** was described by the Greek physician Dioscorides as "a friend to the stomach".*

Nasturtium officinale (Cruciferae)

Watercress

Description Creeping perennial growing to 60 cm (2 ft), with compound leaves, spikes of white 4-petalled flowers and small sickle-shaped pods.
Habitat & Cultivation Found in temperate regions throughout the world, watercress thrives alongside or in fresh running water. While commonly found in the wild, it is also widely cultivated as a salad herb. Watercress is best gathered before it flowers in summer.
Parts Used Aerial parts.
Constituents Watercress contains isothiocyanates and is rich in vitamins A, B_1, B_2, C and E, and minerals (especially iodine, iron and phosphorus). Allyl isothiocyanate has broad-spectrum antibiotic activity. Research in the 1960s suggested that watercress might have anti-tumour activity.
History & Folklore Watercress has long been valued as a food and medicinal plant. Xenophon, a Greek general in the 5th century BCE, attributed other virtues to it, recommending the Persians to feed it to their children to build up their strength. In European folk medicine, watercress has primarily been considered a "blood-cleanser", and was used in former times as a spring tonic.
Medicinal Actions & Uses Watercress provides excellent, easily digested nutrition. Its high mineral and vitamin C content makes it particularly suited for chronic ill health and convalescence. It is thought to stimulate appetite, ease indigestion, and counter catarrh. A detoxifying herb and food, watercress cleanses the liver, blood, kidneys and lungs.

Nepeta cataria (Lamiaceae)

Catnip

Description Downy, aromatic perennial growing to 1 m (3 ft). Has heart-shaped, grey-green leaves and whorls of white flowers with purple spots.
Habitat & Cultivation Catnip is native to Europe and naturalized in North America. It grows in dry wayside places and in mountainous regions up to altitudes of 1,500 m (5,000 ft). Catnip is gathered when in flower in summer and autumn.
Parts Used Aerial parts.

***Catnip** helps to lower fever by strongly encouraging sweating.*

Constituents Catnip contains iridoids, tannins and volatile oil (mainly comprising alpha- and beta-nepetalactone, citronellol and geraniol).
History & Folklore Pechey's *Compleat Herbal* (1694) describes catnip: "'Tis hot and dry. 'Tis chiefly used for obstructions of the womb, for barrenness, and to hasten delivery, and to help

expectoration. 'Tis used outwardly in baths for the womb, and the itch." Catnip has an excitatory effect on cats.

Medicinal Actions & Uses Catnip settles the stomach, is sedative and, as it stimulates sweating, reduces fever. The herb's pleasant taste and gentle action make it suitable for colds, flu and fever in children, especially when mixed with elderflower (*Sambucus nigra*, p. 132) and sweetened with honey. Catnip is markedly antiflatulent, helping to settle indigestion and colic. The herb is also useful in treating headaches related to digestive problems. A tincture is beneficial as a friction rub for rheumatism and arthritis.

Self-help Use Digestive infections, p. 305.

Nicotiana tabacum (Solanaceae)
Tobacco

Description Annual or biennial plant growing to 1 m (3 ft). Has an erect stem, large oval leaves and pink or white flowers.

Habitat & Cultivation Tobacco is native to tropical America. It is now grown worldwide, chiefly for smoking tobacco but also as the source of an insecticide. Leaves for smoking are gathered, dried and cured.

Parts Used Leaves.

Constituents Tobacco contains alkaloids (notably nicotine) and a volatile oil. Nicotine is stimulant and addictive.

History & Folklore Even in 17th-century England, opinions on smoking were sharply divided. King James I unsuccessfully tried to ban "a custome loathsome to the eye, hatefull to the nose, harmfull to the braine [and] dangerous to the lungs". In Central America, tobacco was prescribed by the Maya as a treatment for asthma, convulsions and skin disease. Tobacco has been used as part of rituals in many Native American cultures.

Medicinal Actions & Uses Tobacco is no longer used medicinally. The dried leaves make a good insecticide, but external application should be avoided as nicotine is readily absorbed through the skin.

Caution Tobacco should not be taken in any form.

Nigella sativa (Ranunculaceae)
Black Cumin

Description Annual herb growing to 30 cm (1 ft). Has an upright branching stem, fine deeply cut leaves, grey-blue flowers, and toothed seedpods.

Habitat & Cultivation Native to western Asia, black cumin is grown throughout much of Asia and the Mediterranean region for its seeds and as a garden plant. The seeds are gathered once they are ripe.

Parts Used Seeds.

Constituents The seeds contain 40% fixed oil, a saponin (melantin), alkaloids and up to 1.4% volatile oil.

History & Folklore Black cumin was found in the tomb of Tutankhamun, but its role in ancient Egypt, medicinal or otherwise, is unknown. Dioscorides, a Greek physician of the 1st century CE recorded that black cumin seeds were taken to treat headaches, nasal catarrh, toothache and intestinal worms, and, in large quantities, as a diuretic, to promote menstrual periods and to increase breast-milk production.

Medicinal Actions & Uses Like many culinary herbs, black cumin seeds are beneficial for the digestive system, soothing stomach pain and spasms and easing wind, bloating and colic. The seeds are also antiseptic and are used to treat intestinal worms, especially in children. Cumin seeds are much used in India to increase the production of breast-milk.

Research Recent research indicates that black cumin seed may prove useful in metabolic syndrome, a condition that typically involves raised cholesterol levels, raised blood pressure and late-onset diabetes. The seeds are also antiviral and show promise in the treatment of chronic viral infections, such as hepatitis C.

Caution Love-in-a-mist (*N. damascena*) should not be used as a substitute for black cumin seeds.

Notopterygium incisium (Apiaceae)
Notopterygium Root, Qiang Huo (Chinese)

Description Carrot-family member with an upright ridged stem, deeply cut leaves and flowers in dense clusters.

Habitat & Cultivation Notopterygium root is native to central and western China. The root is unearthed in spring or autumn.

Part Used Root.

Constituents Notopterygium root contains furanocoumarins, sterols and a volatile oil.

Medicinal Actions & Uses Notopterygium root is taken mainly for colds and chills, fevers, headache, general aches and pains, and malaise. The herb is warming and pungent, counters cold and damp conditions, and promotes sweating, especially in fevers. It is also prescribed for neck and back pain.

Caution At high dosage notopterygium root may cause vomiting.

Nymphaea alba (Nymphaceae)
White Water Lily

Description Perennial aquatic plant with deep roots, plate-shaped leaves on long cylindrical stems, and large-petalled white flowers occasionally tinged with pink.

Habitat & Cultivation Native to Europe, white water lily is found in ponds and in still water in lakes, rivers and canals. The rhizome is gathered in autumn.

Parts Used Rhizome, flowers.

Constituents The rhizome contains alkaloids (nymphaeine and nupharine), resin, glycosides and tannins.

History & Folklore According to the 17th-century herbalist Nicholas Culpeper, "The leaves do cool all inflammations … the syrup helpeth much to procure rest, and to settle the brains of frantic persons."

White water lily *flowers have a sedative effect, calming nervous tension and anxiety.*

Medicinal Actions & Uses The rhizome of the white water lily is astringent and antiseptic. A decoction treats dysentery, or diarrhoea due to irritable bowel syndrome. White water lily has also been employed to treat bronchial catarrh and kidney pain, and taken as a gargle for sore throats. The rhizome may be used to make a douche for vaginal soreness and discharge, or to make a poultice for boils and abscesses. White water lily flowers have long been reputed to reduce sexual drive. Their generally calming and sedative effect on the nervous system makes them useful in the treatment of insomnia, anxiety and similar disorders of this nature.

Research Studies suggest that white water lily may, as has been claimed, act as an anaphrodisiac, diminishing sexual drive. The plant has been found to lower blood pressure in animals.

Related Species The white pond lily (*N. odorata*) is a close American relative used for much the same purposes. The rhizome of the white lotus (*N. lotus*),

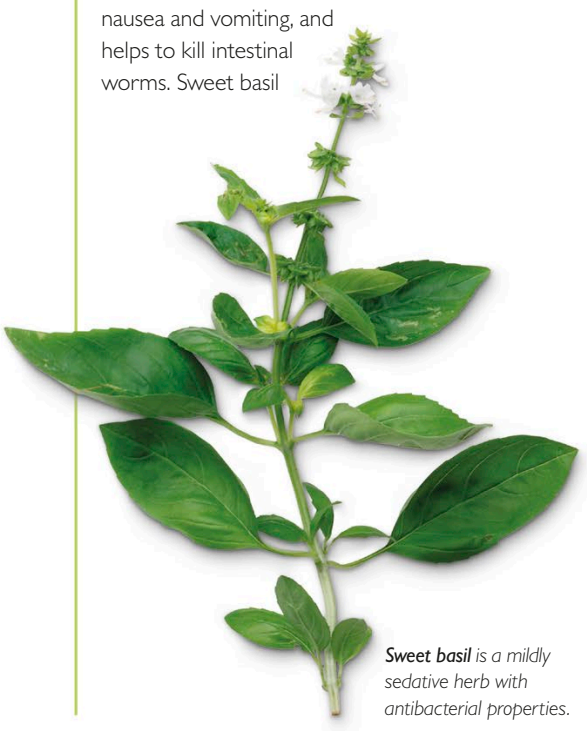
native to tropical Africa and Asia, has been used medicinally since the earliest times, and is taken for indigestion, dysentery and other gastro-intestinal problems.

Ocimum basilicum (Lamiaceae)

Sweet Basil,

Basil

Description Strongly aromatic annual growing to 50 cm (20 in). Has shiny oval leaves, a square stem and small white flowers in whorls.
Habitat & Cultivation Sweet basil, also known as basil, is probably native to India. Over 150 varieties are now grown around the world for their distinctive flavour and essential oil. The leaves and flowering tops are gathered as the plant comes into flower.
Parts Used Leaves, flowering tops, essential oil.
Constituents Sweet basil contains a volatile oil (about 1%), which consists principally of linalool and methylchavicol, along with small quantities of methyl cinnamate, cineole and other terpenes.
History & Folklore In his 1st-century CE *Materia Medica*, the Greek physician Dioscorides described the African belief that eating sweet basil stopped the pain caused by a scorpion's sting. The herb was used in Roman times to relieve flatulence, to counteract poisoning, as a diuretic and to stimulate breast-milk production. Basil also has a history of use in ayurvedic medicine.
Medicinal Actions & Uses Sweet basil acts principally on the digestive and nervous systems, easing flatulence, stomach cramps, colic and indigestion. It can be used to prevent or relieve nausea and vomiting, and helps to kill intestinal worms. Sweet basil has a mildly sedative action, proving useful in treating nervous irritability, depression, anxiety and difficulty in sleeping. It may also be taken for epilepsy, migraine and whooping cough. The herb has been traditionally taken to increase breast-milk production. Applied externally, sweet basil leaves act as an insect repellent. The juice from the leaves brings relief to insect bites and stings. Sweet basil has an established antibacterial action.
Related Species See also holy basil (*Ocimum tenuiflorum*, p. 116). Bush basil (*O. basilicum* var. *minimum*) has a much milder action than sweet basil, and is used to relieve griping pain and flatulence.
Caution Sweet basil essential oil should not be taken internally.
Self-help Use Minor bites, stings & swellings, p. 303.



***Sweet basil** is a mildly sedative herb with antibacterial properties.*

Oenothera biennis (Onagraceae)

Evening Primrose

Description Biennial herb growing to 20 cm (8 in). Has red blotches on stem, crinkled lance-shaped leaves, 4-petalled yellow flowers and elongated seed capsules.
Habitat & Cultivation Native to North America, evening primrose is now commonly found in many temperate zones around the world. It thrives on wasteground, especially in dunes and sandy soil. Evening primrose is grown commercially for its seed oil.
Parts Used Leaves, stem bark, flowers, seed oil.
Constituents Evening primrose oil is rich in essential fatty acids – linoleic (about 70%) and gammalinolenic acid (about 9%) in particular. Its action mostly depends on the gammalinolenic acid (GLA), which is a precursor of prostaglandin E_1. The oil is often combined with vitamin E to prevent oxidation.
Medicinal Actions & Uses The flowers, leaves and stem bark of evening primrose have astringent and sedative properties. All three parts have been employed in the treatment of whooping cough. Evening primrose has also been taken for digestive problems and asthma, and used as a poultice to ease the discomfort of rheumatic disorders. The oil, applied externally, is beneficial in the treatment of eczema, certain other itchy skin conditions and breast tenderness. Taken internally, the oil has an effect in lowering blood pressure, and in preventing the clumping of platelets. The oil is now commonly taken for premenstrual problems, including tension and abdominal bloating and may prove helpful in conditions as diverse as dry eyes and multiple sclerosis.
Caution Do not take evening primrose oil if suffering from epilepsy.

Evening primrose

Olea europaea (Oleaceae)

Olive

Description Evergreen tree growing to 10 m (33 ft). Has a deeply grooved grey trunk, small leathery leaves, clusters of small greenish-white flowers and a green fruit ripening to black.

***Olive** harvesting is carried out in many groves much as it was centuries ago.*

Habitat & Cultivation Olive trees grow wild in the Mediterranean region and are cultivated in Mediterranean countries and in regions with a similar climate in the Americas. The leaves may be gathered throughout the year, the fruit in late summer. The leaves of wild trees are believed to contain a higher concentration of active principles.
Parts Used Leaves, oil.
Constituents Olive leaves contain oleoropine, oleasterol and leine. Olive oil contains about 75% oleic acid, a mono-unsaturated fatty acid.
History & Folklore The olive was probably first cultivated in Crete in around 3500 BCE. The tree has many symbolic associations: the olive branch is an emblem of peace, and the leaves crowned victors in the ancient Olympic Games. The leaves have been used since those times to clean wounds. The oil has been used for ritual anointing in some religions.
Medicinal Actions & Uses Olive leaves lower blood pressure and help to improve the function of the circulatory system. They are also mildly diuretic and may be used to treat conditions such as cystitis. Possessing some ability to lower blood sugar levels, the leaves have been taken for diabetes. The oil is nourishing and improves the balance of fats within the blood. It is traditionally taken with lemon juice in teaspoonful doses to treat gallstones. The oil has a generally protective action on the digestive tract and is useful for dry skin.

Research Clinical trials have shown that olive leaves lower blood pressure.
Self-help Uses Cradle cap, p. 318; Stretch marks, p. 317.

Ononis spinosa (Fabaceae)

Spiny Restharrow

Description Spiny perennial with 3 small leaflets per leaf, bright pink, pea-like flowers and small seed pods.
Habitat & Cultivation A relatively common European plant, spiny restharrow thrives in dry grassland and along roadsides.
Part Used Root.
Constituents Spiny restharrow root contains phenols, lectins, triterpenoids and a volatile oil (comprising mainly trans-anethole). The volatile oil in the root is diuretic, the non-volatile oil content is anti-diuretic. A decoction of the root has an anti-diuretic effect, as the volatile oil is lost in the steam. If a diuretic is desired, the root is made into an infusion.
Medicinal Actions & Uses The root is used as a diuretic and to prevent kidney and bladder stones. It is of value in a range of urinary system problems, including stones, gout and cystitis. For excess fluid retention, spiny restharrow is best taken as a short-term treatment, in the form of an infusion.

Operculina turpethum (Convolvulaceae)

Turpeth

Description Twining climber with white tuberous roots, hairy, oval leaves, white funnel-shaped flowers and round fruit.
Habitat & Cultivation Native to tropical India, turpeth is now found in tropical regions around the world. The root is unearthed throughout the year.
Part Used Root.
Constituents Turpeth root contains turpethin resin (approximately 4%) and a volatile oil.
History & Folklore Turpeth has been used for several thousand years as a purgative in Ayurvedic medicine.
Medicinal Actions & Uses Turpeth root is chiefly used in small doses to clear the bowels. It is sometimes known as "Indian jalap", and is used in much the same way as this plant (*Ipomoea purga*, p. 223), though its action is slower and less drastic. In Ayurvedic medicine, turpeth is prescribed with picrorrhiza (*Picrorrhiza kurroa*, p. 248) to treat jaundice.
Cautions Take only under professional supervision. Do not take during pregnancy.

Opuntia ficus-indica (Cactaceae)

Prickly Pear

Description Perennial cactus growing to 3 m (10 ft). Has large spatula-shaped stems covered in clusters of spines, brilliant yellow flowers and roundish purple fruit.
Habitat & Cultivation Prickly pear is native to Mexico and naturalized in semi-tropical regions around the world. The fruit is harvested when ripe, the stems when required.
Parts Used Flowers, fruit, stems.
Constituents The fruit contains mucilage, sugars, vitamin C and other fruit acids.
History & Folklore Prickly pear fruit is used to make conserves and an alcoholic drink in Mexico. The split stems have been bound around injured limbs as a first-aid measure.

Prickly pear fruit

Medicinal Actions & Uses Prickly pear flowers are astringent and reduce bleeding, and are used for problems of the gastro-intestinal tract – particularly diarrhoea, colitis and irritable bowel syndrome. The flowers are also taken to treat an enlarged prostate gland. The fruit is nutritious.

Origanum majorana syn. *Majorana hortensis* (Lamiaceae)

Sweet Marjoram

Description Woody perennial herb growing to 50 cm (20 in). Has aromatic oval leaves and pinkish-white flowers emerging from the upper leaf axils.
Habitat & Cultivation Sweet marjoram is native to countries bordering the Mediterranean. It is much cultivated as a culinary herb, and for its essential oil.
Parts Used Aerial parts, essential oil.
Constituents Sweet marjoram contains about 3% volatile oil (comprising sabinene hydrate, sabinene, linalool, carvacrol and other terpenes), flavonoids, caffeic and rosmarinic acid and triterpenoids.
History & Folklore In 1597, the herbalist John Gerard made this assessment: "Sweet marjoram is a remedy against cold diseases of the braine and head, being taken anyway to your best liking; put up into the nostrils it provokes sneesing, and draweth forth much baggage flegme; it easeth the toothache being chewed in the mouth."

Medicinal Actions & Uses Mainly used as a culinary herb, sweet marjoram is also medicinally valuable due to its stimulant and antispasmodic properties. Like wild marjoram (*O. vulgare*, *following entry*), it treats flatulence, colic and respiratory problems, but it appears to have a stronger effect on the nervous system than its wild cousin. Sweet marjoram is a good general tonic, helping to relieve anxiety, headaches and insomnia. The herb is also thought to lower the sexual drive.
Cautions Do not take as a medicine during pregnancy. Do not take sweet marjoram essential oil internally.

Origanum vulgare (Lamiaceae)

Oregano, Wild Marjoram

Description Upright perennial herb growing to about 80 cm (32 in). Has square red stems, elliptical leaves and clusters of deep pink flowers.
Habitat & Cultivation Oregano is native to Europe and naturalized in the Middle East. The plant thrives in chalky soils close to the sea. It is gathered when in flower in summer.

***Oregano's** essential oil, well diluted, is a traditional remedy for toothache.*

Parts Used Aerial parts, essential oil.
Constituents Oregano contains a volatile oil (comprising carvacrol, thymol, beta-bisabolene, caryophyllene, linalool and borneol), tannins, resin, sterols and flavonoids. Both carvacrol and thymol are antibacterial and antifungal.
History & Folklore Esteemed by the ancient Greeks, oregano was considered a cure-all in medieval times. It was one of the medicinal plants cultivated by early New England settlers.
Medicinal Actions & Uses Oregano and its oil are strongly antiseptic with potent activity against many bacteria and fungi, notably *E. coli* and *Candida* strains. It can aid many acute and chronic infections affecting the gastro-intestinal and respiratory tracts, especially gastroenteritis, dysentery, bronchitis, coughs and tonsillitis. Both herb and oil inhibit the gut flora (bacteria naturally occurring within the gut) and have an important role to play in gut dysbiosis, a condition where the presence of harmful gut bacteria leads to symptoms such as wind, bloating and abdominal discomfort. The diluted oil can be applied to toothache or painful joints.
Cautions Do not take as a medicine during pregnancy. External use may cause irritation of the skin. Do not take essential oil internally.

Orthosiphon aristata (Lamiaceae)
Java Tea

Description Shrub growing to about 1 m (3 ft). Has pointed leaves and lilac-coloured flowers with very long stamens.
Habitat & Cultivation Java tea is native to South-East Asia and Australia. Now cultivated as a medicinal plant, it is picked as required throughout the year.
Part Used Leaves.
Constituents Java tea contains flavones (including sinensetin), a glycoside (orthosiphonin), a volatile oil and large amounts of potassium.
History & Folklore The plant's Dutch Indonesian name, *koemis koetjing* (cat's whiskers), probably derives from its long whiskery stamens.
Medicinal Actions & Uses Java tea is listed in the French, Indonesian, Dutch and Swiss pharmacopoeias (official documents containing a list of drugs and their medicinal uses, preparations and dosages). It is thought to increase the kidneys' ability to eliminate nitrogen-containing compounds. The herb is much used as a diuretic and as a treatment for kidney infections, stones and poor renal function resulting from chronic nephritis. It is also used to treat cystitis and urethritis.
Research Java tea's diuretic activity has been confirmed in scientific experiments. Extracts significantly increase potassium levels in the urine.

Paeonia officinalis (Paeoniaceae)
Peony

Description Perennial growing to 60 cm (2 ft). Has a tuberous root, upright stems, oval to lance-shaped leaflets, and attractive large red, red-purple or white flowers.
Habitat & Cultivation A native of southern Europe, peony grows in mountain woodlands and is widely cultivated. The root is unearthed in autumn.
Part Used Root.
Constituents Peony is thought to contain alkaloids, tannins, saponins, flavonoids and triterpenoids and a volatile oil.
History & Folklore Since the time of Hippocrates (470–377 BCE), peony has been used to treat epilepsy. Ibn el Beitar, a medieval Arab physician, recommended a necklace of peony seeds to ward off epilepsy in children. Mrs Grieve, the author of *A Modern Herbal* (1931), recounted how "in ancient times, peony was thought to be of divine origin, an emanation from the moon, and to shine during the night protecting the shepherds and their flocks".

***Peony** is named after Paeon, the physician of the Greek gods.*

Medicinal Actions & Uses Though little used in contemporary European herbal medicine, Peony is greatly valued within Unani herbal medicine from the Middle East. It has anti-inflammatory, antispasmodic and sedative activity and is prescribed for conditions as varied as nervous debility, epilepsy, high blood pressure and as a heart tonic. The root has also been taken to treat whooping cough, and suppositories are made of the root to relive anal and intestinal spasms.
Related Species Chinese peony (*Paeonia lactiflora*, p. 117) is much used in Chinese herbal medicine.
Cautions Take peony only under professional supervision. Do not take during pregnancy.

Panax notoginseng (Araliaceae)
Notoginseng,
San Qi (Chinese)

Description Deciduous perennial with an erect stem growing to 1 m (3 ft), compound leaves, small greenish flowers and small, berry-like fruit.
Habitat & Cultivation Native to China, notoginseng is now rare in the wild. It is cultivated commercially in southern and central China. The root is unearthed before flowering or after the fruit has ripened.
Part Used Root.
Constituents Notoginseng contains steroidal saponins, polysaccharides and a flavonoid.
History & Folklore Despite its importance as a tonic, notoginseng was only recorded in Chinese herbal medicine in 1578, in the *Compendium of Materia Medica* by Li Shizen. He described the root as being "more valuable than gold".
Medicinal Actions & Uses Like ginseng (*P. ginseng*, p. 118), notoginseng is a tonic that supports the function of the adrenal glands, in particular the production of corticosteroids and male sex hormones. Notoginseng also helps to improve blood flow through the coronary arteries, thus finding use as a treatment for arteriosclerosis, high blood pressure and angina. Notoginseng treats internal bleeding of almost any kind. The herb may also be applied externally as a poultice as a means to help speed the healing of wounds and bruises.
Research Clinical studies have confirmed notoginseng's long-standing reputation as a means to arrest bleeding. A Chinese trial indicated that the herb hastens blood clotting. Another clinical trial and extensive scientific studies, again in China, associated the herb with positive improvements in the coronary circulation, in lessening the symptoms of angina, and in the reduction of blood pressure levels. In common with other ginseng-type herbs, notoginseng has been shown to enhance physical performance.
Caution Do not take during pregnancy.

Panax quinquefolium (Araliaceae)
American Ginseng

Description Deciduous perennial growing to about 30 cm (1 ft). Has a smooth stem, leaves with oblong to oval leaflets, small greenish flowers and kidney-shaped scarlet-red berries.
Habitat & Cultivation American ginseng is native to North America and the Himalayas. A woodland plant, it is rarely seen in the wild due to over-harvesting. It is cultivated in Wisconsin, US, China and France. The root is gathered in autumn.
Part Used Root.

Constituents American ginseng contains steroidal saponins, including panaquilon.
History & Folklore Native American peoples may have considered this herb a means to increase female fertility. From the mid-18th century, the collection of the herb for export to China became a virtual goldrush, with so many Native Americans out harvesting American ginseng that settlers reported finding villages almost deserted. The Ojibwa people always planted a seed to replace the herb, but this was not universal practice. American ginseng became rare towards the end of the 19th century.
Medicinal Actions & Uses The action of American ginseng is presumed to be similar to, but milder than, that of its Chinese cousin, ginseng (*P. ginseng*, p. 118). American ginseng increases the ability to tolerate stress of all kinds. In traditional Chinese medicine, American ginseng is employed as a *yin* tonic, treating weakness, fever, wheezing and coughs.
Related Species See ginseng, nototginseng (*P. notoginseng*, *preceding entry*), and Siberian ginseng (*Eleutherococcus senticosus*, p. 94).
Caution Do not take American ginseng during pregnancy.

Papaver rhoeas (Papaveraceae)

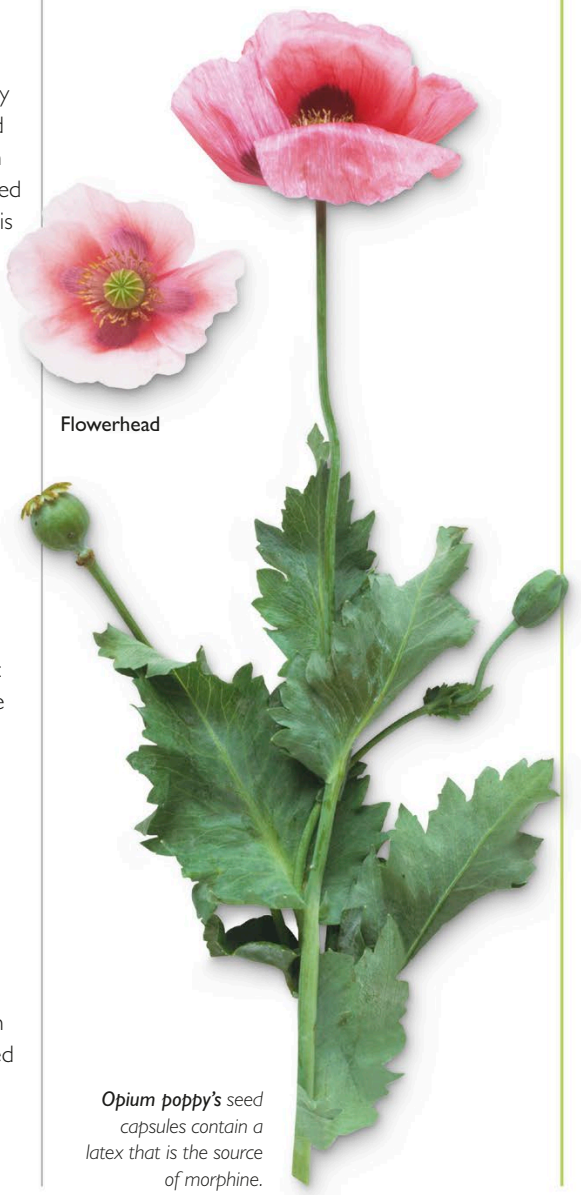
Red Poppy

Description Delicate hairy-stemmed annual growing to 90 cm (3 ft). Has basal rosette of lance-shaped leaves and deeply incised stem leaves, 4-petalled red flowers with black anthers and small rounded seed capsules.
Habitat & Cultivation Red poppy is native to Europe, North Africa and temperate regions of Asia, and is naturalized in North and South America. It thrives on cultivated land and on road verges. The flowers are picked in summer.
Parts Used Flowers.
Constituents Red poppy contains alkaloids (including papaverine, rhoeadine, isorhoeadine and many others), meconic acid, mekocyanin, mucilage and tannin. The alkaloids are similar to those in the opium poppy (*P. somniferum, see following entry*), but are much milder.
History & Folklore According to Agnus Castus, writing in the 14th century, "If a man hawe ony peyne aboutyn his eyne or if a man hawe a mygreyn tak this herb and stamp it and nedle it with oyle de olywe and anoynt ther-with the forhed and it schal amende the syth and slake the peyne and distroye the mygreyn."
Medicinal Actions & Uses Red poppy flowers are mildly analgesic and sedative, and have long been used in European herbal medicine, particularly for ailments in children and the elderly. Chiefly employed as a mild pain reliever and as a treatment for irritable coughs, red poppy also helps reduce nervous overactivity. The herb may be used in the treatment of insomnia, general irritability, coughs – especially paroxysmal coughs – and asthma, and is generally given as a syrup.
Related Species See also opium poppy (*P. somniferum, following entry*), Mexican poppy (*Argemone mexicana*, p. 171) and Californian poppy (*Eschscholzia californica*, p. 207).
Cautions Use only under professional supervision. All parts of red poppy except the seeds are potentially toxic if eaten.

Papaver somniferum (Papaveraceae)

Opium Poppy

Description Thick-stemmed annual growing to about 1 m (3 ft). Has many dull green leaves, solitary pink, purple or white flowers and globe-shaped seed capsules.
Habitat & Cultivation Native to western Asia, opium poppy is now cultivated commercially around the world as the source of morphine and codeine, and as an illegal crop for the production of opium and heroin. During the summer, the seed capsules are cut and the white latex that exudes is gathered the next day and dried.
Part Used Latex.
Constituents Opium poppy contains more than 40 opium alkaloids, including morphine (up to 20%), narcotine (about 5%), codeine (about 1%) and papaverine (about 1%). It also contains meconic acid, albumin, mucilage, sugars, resin and wax. Many of the opium poppy's alkaloids have a well-established therapeutic action. Morphine is one of the most powerful analgesics of all, used extensively in conventional medicine to relieve pain, especially in terminal illness. Codeine is a milder analgesic used for headaches and other pain, and in the symptomatic treatment of diarrhoea. Opium's strongly addictive nature is well established.
History & Folklore Cultivated for its medicinal properties for at least 4,000 years, the opium poppy was introduced to Greece about 3,000 years ago, and from there spread throughout Europe. It was unknown in China until the 7th century CE, and in Japan until the 15th century. It is mentioned in the Assyrian herbals (*c.* 1700 BCE), and the Greek physician Dioscorides (40–90 CE) wrote that "a decoction of the leaves and flowerheads if drunk and bathed on the head is unrivalled in inducing sleep. The mashed heads, mixed with flour, make a useful plaster in inflammations and St Anthony's fire [erysipelas, a bacterial infection of the skin]."
Medicinal Actions & Uses Opium (the dried latex) is a potent narcotic, analgesic and antispasmodic, and has been taken to relieve pain of various kinds. In all the main herbal traditions it is regarded as a powerfully "cold" remedy, reducing physical function and sedating or suppressing nervous activity, pain and coughs. In view of its addictive nature, opium is mainly used after other less powerful analgesics have failed to bring relief. It is also an effective remedy for acute diarrhoea and severe coughs. Pharmaceutical drugs produced from opium poppy include morphine and codeine.
Research Much research has been done, confirming most of the uses of opium poppy listed above.
Related Species See also red poppy (*P. rhoeas*, *preceding entry*), Mexican poppy (*Argemone mexicana*, p. 171) and Californian poppy (*Eschscholzia californica*, p. 207).
Cautions Use opium poppy only under professional supervision. It is subject to legal restrictions in most countries.



Opium poppy's seed capsules contain a latex that is the source of morphine.

Parietaria officinalis syn. *P. diffusa*
(Urticaceae)

Pellitory of the Wall

Description Annual growing to 70 cm (28 in). Has deep green leaves, greenish flowers and small dark seeds.
Habitat & Cultivation Native to Europe, this plant is commonplace in southern countries, where it is found on walls and in dry stony sites. It is gathered in summer when in flower.
Parts Used Aerial parts.
Constituents Pellitory of the wall contains flavonoids and tannins.
History & Folklore For more than 2,000 years, pellitory of the wall has been valued as a diuretic, as a soother of chronic coughs, and as a balm for wounds and burns.
Medicinal Actions & Uses Pellitory of the wall is chiefly employed as a diuretic, demulcent and stone-preventing herb. In European herbal medicine, it is regarded as having a restorative action on the kidneys, supporting and strengthening their function. It has been prescribed for conditions such as nephritis, pyelitis (inflammation of the kidney), kidney stones, renal colic (pain caused by kidney stones), cystitis and oedema (fluid retention). It is also occasionally taken as a laxative.
Caution Do not take if suffering from hay fever or other allergies.

Paullinia cupana syn. *P. sorbilis*
(Sapindaceae)

Guarana

Description Woody vine growing to a height of 10 m (33 ft). Has divided compound leaves, clusters of inconspicuous yellow flowers and pear-shaped fruit that contains small shiny brown seeds.
Habitat & Cultivation Guarana is native to tropical forests of the Brazilian Amazon, and is also cultivated in Brazil. The seeds are gathered when ripe.
Parts Used Seeds.
Constituents Guarana contains xanthine derivatives (including up to 7% caffeine, together with theobromine and theophylline), tannins and saponins. The xanthines are stimulant, diuretic and reduce fatigue over the short term.
History & Folklore In Brazil, guarana is traditionally prepared by roasting, crushing and drying the seeds. The resulting "cakes" are made into a tea, which is taken to counter fatigue or to treat diarrhoea. Guarana has recently become a popular alternative to coffee.

Seeds

Medicinal Actions & Uses Guarana's medicinal uses are similar to those of coffee (*Coffea arabica*, p. 192) – it is taken for headache and migraine, for mild depression and to boost energy levels. The problems that apply to long-term or excessive consumption of coffee also apply to guarana – both stimulate over the short term but tend to inhibit the body's restorative processes over the longer term. In view of guarana's high tannin content, long-term use is even less advisable, because tannins impair the intestines' ability to absorb nutrients. Nevertheless, guarana is a useful short-term remedy for boosting energy, or for treating a tension headache that cannot be treated with rest. Guarana's astringency also treats chronic diarrhoea.
Related Species *P. yoco*, native to the Colombian Amazon, is used by indigenous peoples to reduce fevers, as a stimulant and as a post-malarial treatment.
Caution Do not take guarana if suffering from cardiovascular disease or from high blood pressure. Do not take during pregnancy or while breast-feeding.

Pausinystalia yohimbe
syn. *Corynanthe yohimbe*
(Rubiaceae)

Yohimbe

Description Evergreen tree growing to 30 m (100 ft). Has reddish-brown bark, oblong or elliptical leaves and clusters of small yellow flowers.
Habitat & Cultivation Yohimbe is native to the forests of western Africa, especially Cameroon, Zaïre and Gabon. The bark is gathered at any time of year.
Part Used Bark.
Constituents Yohimbe contains approximately 6% indole alkaloids (including yohimbine), pigments and tannins. The alkaloids have a cerebral stimulant action at moderate doses, but are highly toxic in large doses.
History & Folklore Yohimbe has an ancient reputation in western Africa, especially among the Bantu people, as a male aphrodisiac and mild hallucinogen.
Medicinal Actions & Uses Yohimbe is little used in herbal medicine owing to its potential toxicity. In western Africa, it is often employed as a stimulant and as a means to counter erectile dysfunction. Yohimbine has been used in conventional medicine in the treatment of erectile dysfunction.
Cautions Take yohimbe only under professional supervision. The herb is subject to legal restrictions in many countries.

Peganum harmala
(Zygophyllaceae)

Harmala,
African Rue

Description Multi-branched shrubby perennial growing to 50 cm (20 in). Has deeply cleft linear leaves, white 5-petalled flowers and rounded 3-celled seed capsules.
Habitat & Cultivation Native to the Middle East, North Africa and southern Europe, harmala is naturalized in other sub-tropical regions, including Australia. It thrives in saline soil in semi-desert areas. The seeds are gathered in summer.
Parts Used Seeds, root.
Constituents Harmala contains up to 4% indole alkaloids (including harmine, harmaline and harmalol). Harmine has been used to help alleviate the tremors of Parkinsonism.

Harmala, *which thrives in dry conditions, has been used as an intoxicant in the Middle East.*

History & Folklore Since the earliest times, harmala has been used in the Middle East as a means to induce intoxication. Known to the Greek physicians Dioscorides (40–90 CE) and Galen (131–200 CE), as well as to their Arabic counterpart Avicenna (980–1037 CE), harmala was also used to expel intestinal worms and to promote the onset of menstrual flow.
Medicinal Actions & Uses Despite its long history as a euphoric and purportedly aphrodisiac herb, harmala is little used in contemporary Western herbal medicine because of its potential toxicity. The seeds have been taken, especially in the Middle East, to treat a very wide range of conditions, including high blood pressure, eye problems, psychiatric disorders, depression, Parkinson's disease and cancer. In central Asia, the root is a popular medicinal remedy that is used to treat rheumatism and nervous conditions.
Caution This plant is toxic and should not be used under any circumstances.

Pergularia extensa (Asclepiadaceae)

Pergularia

Description Perennial climber with broad oval leaves and small greenish-white flowers.
Habitat & Cultivation Pergularia is native to India. Its aerial parts are gathered throughout the year.
Parts Used Aerial parts.
Constituents Pergularia contains a resin, bitter principles and plant sterols.
Medicinal Actions & Uses Pergularia is thought to have bitter, expectorant, diuretic and laxative properties, and is employed in several ways in Indian herbal medicine. It is prescribed as a treatment for bronchitis and asthma. Pergularia is also used as a means to curtail heavy menstrual or non-menstrual uterine bleeding. Juice from the leaves may be applied to relieve the pain and swelling of cysts and rheumatic joints.

Petroselinum crispum (Apiaceae)

Parsley

Description Annual herb growing to 30 cm (1 ft). Has an erect stem, bright green compound smooth or crinkled leaves, small white flowers growing in clusters and small ribbed seeds.
Habitat & Cultivation Parsley is native to Europe and the eastern Mediterranean. Today it is rarely found in the wild, but is cultivated throughout the world as a nutritious salad herb. The leaves may be picked from spring to autumn, and the seeds are gathered when just ripe.
Parts Used Leaves, root, seeds.
Constituents Parsley contains a volatile oil (including about 20% myristicin, about 18% apiole, and many other terpenes), flavonoids, phthalides, coumarins (including bergapten), vitamins A, C and E and high levels of iron. The flavonoids are anti-inflammatory and antioxidant. Myristicin and apiole have diuretic properties. The volatile oil relieves griping pain and flatulence and is a strong uterine stimulant.
History & Folklore Parsley was known in ancient Greece and Rome – but more as a diuretic, digestive tonic and stimulant of menstrual flow than as a salad herb. In Rome, parsley was associated with the goddess Persephone, queen of the underworld, and was used in funeral ceremonies. Parsley was introduced into Britain in 1548.
Medicinal Actions & Uses The fresh leaves are highly nutritious and can be considered a natural vitamin and mineral supplement in their own right. The seeds have a much stronger diuretic action than the leaves, and may be substituted for celery seeds (*Apium graveolens*, p. 64) in the treatment of gout, rheumatism and arthritis. Both plants act by encouraging the flushing out of waste products from the inflamed joints, and the waste's subsequent elimination via the kidneys. Parsley root is taken as a treatment for flatulence, cystitis and rheumatic conditions. Parsley is also valued as a promoter of menstruation, being helpful both in stimulating a delayed period and in relieving menstrual pain.
Cautions Parsley is a safe herb at normal dosage and consumption levels, but excessive quantities of the seeds are toxic. Do not take the seeds during pregnancy or if suffering from kidney disease.

Peumus boldus (Apiaceae)

Boldo

Description Strongly aromatic multi-branched evergreen shrub or tree growing to 6 m (20 ft). Has egg-shaped leathery leaves with a lemony scent, clusters of white or yellow bell-shaped flowers and small yellow berries.
Habitat & Cultivation Boldo is native to Chile and Peru, and has become naturalized in the Mediterranean region and the west coast of North America. It grows on dry sunny slopes and in mountain pastures in the Andes, where it is widely cultivated. The leaves are gathered throughout the year.

Dried leaves

Parts Used Leaves.
Constituents Boldo contains 0.7% isoquinoline alkaloids (including boldine), as well as a volatile oil and flavonoids.
History & Folklore Boldo is a valued remedy in Latin American herbal medicine and is used by the Araucanian people in Chile as a tonic.
Medicinal Actions & Uses Boldo stimulates liver activity and bile flow and is chiefly valued as a remedy for gallstones and liver or gallbladder pain. It is normally taken for a few weeks at a time, either as a tincture or infusion. Boldo is also a mild urinary antiseptic and demulcent and may be taken for infections such as cystitis.
Cautions Do not take during pregnancy. This herb is subject to legal restrictions in some countries.

Pfaffia paniculata (Amaranthaceae)

Suma,

Brazilian Ginseng

Description Climbing perennial with a thick rootstock, growing up through rainforest trees into the forest canopy.
Habitat & Cultivation Suma is native to rainforests of South America, from Venezuela to southern Brazil.
Parts Used Root.
Constituents Suma contains triterpene saponins (pfaffosides), sterols (including beta-ecdysone) and minerals (including significant levels of germanium).
History & Folklore Suma has been used by the people of the Amazon rainforest from the earliest times for conditions as varied as wound healing, diabetes and cancer. Also taken for its aphrodisiac qualities, suma has become a popular herbal medicine in Brazil, where it is known as *para todo* ("for all") or Brazilian ginseng.
Medicinal Actions & Uses Suma has many medicinal applications, most centred around three areas of activity: as a hormonal and glandular tonic, as an immune stimulant and detoxifying agent, and in cancer prevention and treatment. suma is perhaps best known as a male sexual tonic, but it is equally effective for women and has value in treating menstrual and menopausal problems. Suma root enhances non-specific immunity and has a role to play in treating chronic infection and lowered immune resistance.
Research Research into suma suggests that it can be useful in cancer prevention and treatment – several of the pfaffosides have been shown to prevent tumour growth in laboratory conditions. The pfaffosides are chemically similar to the ginsenosides found in ginseng (*Panax ginseng*, p. 118) and, like ginseng, suma's acclaimed value as an aphrodisiac appears to have a scientific basis. Male rats with depressed sexual function were observed to become more sexually active on being given a suma extract.
Cautions Avoid in pregnancy and while breast-feeding.

Phaseolus vulgaris (Fabaceae)

French Bean,

Haricot Bean

Description Slender-stemmed, annual climber growing to 4 m (13 ft). Has pointed oval leaflets, curly tendrils, clusters of white or lilac flowers and a beanpod containing kidney-shaped seeds.
Habitat & Cultivation French beans are thought to have originated from South America. Today, varieties are cultivated all over the world. The ripe beans are gathered in summer.
Parts Used Beanpods, beans.
Constituents French beans contain lectins, saponins, flavonoids, allantoin, amino acids and sugars.
History & Folklore French beans have been used since antiquity to treat diabetes. In *A Modern Herbal* (1931), Mrs Grieve records that "because

of the seed's close resemblance to a male testicle… [ancient Egyptians] made it an object of sacred worship and forbade its use as a food".
Medicinal Actions & Uses In addition to being an important food in many parts of the world, French beans, and beans in general, offer several health benefits. As part of balanced nutritious diet, they help to lower high blood pressure and raised cholesterol levels. They are hypoglycaemic and promote more stable blood sugar levels. Like soya (*Glycine max*, p. 217), they are oestrogenic and will help reduce menopausal symptoms. The pods act as a medium-strength diuretic, stimulating urine flow and the clearance of toxins from the body. Powdered beans may be dusted on to eczema to ease itching and dry skin.

***French beans** are intensively cultivated all over the world.*

Phellodendron amurense
(Rutaceae)

Huang Bai

Description Deciduous tree growing to 12 m (39 ft). Has compound leaves with 7 lance-shaped leaflets, clusters of green flowers and round berries.
Habitat & Cultivation *Huang bai* is native to China, Japan and Korea, and is cultivated in north-eastern China. The bark of 10-year-old trees is collected in spring.
Part Used Bark.
Constituents *Huang bai* contains isoquinoline alkaloids (including berberine), sesquiterpene lactones and plant sterols. Due to its alkaloid content, *huang bai* is antimicrobial and antibiotic.
History & Folklore Listed in the *Divine Husbandman's Classic* (*Shen'nong Bencaojing*), of the 1st century CE, *huang bai* was regarded as a herb to be used with care.
Medicinal Actions & Uses Strongly bitter, *huang bai* is used within Chinese herbal medicine to "drain damp heat". It is prescribed for conditions such as acute diarrhoea, jaundice, vaginal infection (including trichomonas), and certain skin conditions. It is also given for urinary system disorders such as frequent urination, pain and infection.
Research Clinical trials in China indicate that the bark is useful in the treatment of meningitis and conjunctivitis.
Cautions Take *huang bai* only under professional supervision. Do not take *huang bai* during pregnancy.

Phyllanthus amarus
(Euphorbiaceae)

Phyllanthus

Description Slender annual herb, to 60 cm (2 ft) in height, with oval leaves and small yellowish-green flowers.
Habitat & Cultivation Phyllanthus is native to the Indian sub-continent and found commonly in central and southern India. The plant is harvested when required.
Parts Used Leaves, aerial parts.
Constituents Phyllanthus leaves contain lignans (including phyllanthin and hypophyllanthin), flavonoids and alkaloids.
Medicinal Actions & Uses Phyllanthus is a traditional Ayurvedic remedy used to treat liver and cardiovascular problems. It combines well with picrorrhiza (*Picrorrhiza kurroa*, p. 248) in treating hepatitis B and other liver disorders.
Research A growing body of research shows that phyllanthus has antiviral activity, specifically against the hepatitis B virus. Research also indicates that the leaves are diuretic, and lower blood pressure and blood sugar levels. Not all the studies have shown that phyllanthus works effectively in treating hepatitis B, but on balance the evidence is positive, with some trials showing significant improvement in measures of infection. In laboratory experiments, phyllanthus inhibits RNA replication of the hepatitis B virus.
Caution Use on professional advice only.

Physalis alkekengi syn. *P. franchetti*
(Solanaceae)

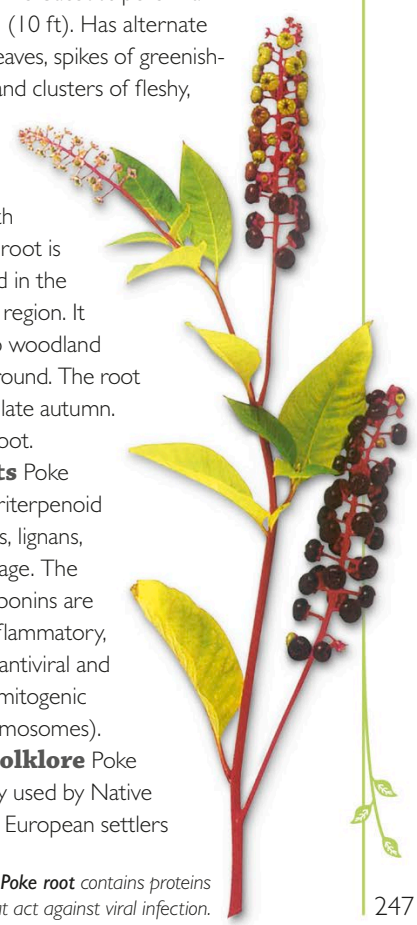
Winter Cherry,
Cape Gooseberry

Description Perennial herb growing to 80 cm (32 in). Has oval- to diamond-shaped leaves, long-stemmed white flowers and a translucent papery sheath surrounding an orange-red fruit.
Habitat & Cultivation Winter cherry is native to central and southern Europe and China. It grows wild in hedgerows and on damp verges. It is widely cultivated in warm temperate and sub-tropical regions, including North and South America and South Africa. The fruit is gathered once it has ripened in summer.
Parts Used Fruit.
Constituents Winter cherry contains flavonoids, plant sterols and vitamins A (carotene) and C. The roots contain tropane-type alkaloids, physalin A and B. Water extracts of the plant may have an anti-oestrogenic effect.
History & Folklore The Greek physician Dioscorides (1st century CE) considered winter cherry to be medicinally beneficial as a diuretic and a treatment for jaundice. In Spain, a therapeutic wine made with the fruit was taken to treat excess fluid retention and problems of the urinary tract.
Medicinal Actions & Uses Though commonly eaten as a fruit, winter cherry is also a useful diuretic. The fruit is traditionally used within European herbal medicine to treat kidney and bladder stones, fluid retention and gout. It has also been taken to reduce fever.
Caution The foliage and unripe fruit are harmful if eaten.

Phytolacca americana
syn. *P. decandra* (Phytolaccaceae)

Poke Root

Description Herbaceous perennial growing to 3 m (10 ft). Has alternate lance-shaped leaves, spikes of greenish-white flowers and clusters of fleshy, purple berries.
Habitat & Cultivation Native to North America, poke root is now naturalized in the Mediterranean region. It thrives in damp woodland and on wasteground. The root is unearthed in late autumn.
Part Used Root.
Constituents Poke root contains triterpenoid saponins, lectins, lignans, resin and mucilage. The triterpenoid saponins are strongly anti-inflammatory, the lignans are antiviral and the lectins are mitogenic (break up chromosomes).
History & Folklore Poke root was widely used by Native Americans and European settlers



***Poke root** contains proteins that act against viral infection.*

as a poultice for skin diseases, sores, ulcers and tumours. It was also given internally to relieve pain and to induce vomiting.

Medicinal Actions & Uses Poke root is taken internally as a tincture in small amounts to treat rheumatic and arthritic conditions. The root has also been used to treat respiratory tract infections, such as sore throats and tonsillitis, as well as swollen glands and chronic infections. The herb is sometimes prescribed for pain and infection of the ovaries or testes, and as a lymphatic "decongestant", stimulating the clearance of waste products. As a poultice or ointment, it is applied to sore and infected nipples and breasts, acne, folliculitis, fungal infections and scabies.

Cautions The plant is highly toxic in overdose. Use only under professional supervision. Do not take during pregnancy.

Picrasma excelsa syn. *Picraenia excelsa* (Simaroubaceae)

Quassia

Description Deciduous tree growing to 30 m (100 ft). Has smooth grey bark, compound leaves, small yellow flowers and pea-sized black fruit.

Habitat & Cultivation Native to tropical America and the Caribbean, quassia grows in forests and near water. It is cultivated mainly for medicinal use. The bark is harvested throughout the year.

Part Used Bark.

Constituents Quassia contains quassinoid bitter principles (including quassin), alkaloids, a coumarin (scopoletin) and vitamin B_1. Some of the quassinoids have been shown to have cytotoxic (cell-killing) and anti-leukaemic actions.

History & Folklore Quassia bark was first introduced into Europe from Surinam, then a Dutch colony, in 1756. The herb is named after Quassi, a native healer, who told Europeans of its therapeutic value.

Medicinal Actions & Uses The strongly bitter quassia supports and strengthens weak digestive systems. It increases bile flow, the secretion of salivary juices and stomach acid, and improves the digestive process as a whole. Quassia is commonly used to stimulate the appetite, especially in the treatment of anorexia. Its bitterness has led to it being used for malaria and other fevers, and it is given in the Caribbean for dysentery. The bark has been used in the form of an enema to expel threadworms and other parasites. A decoction of the bark may be used as an insect repellent and to treat headlice.

Cautions Excessive doses may, in some cases, cause digestive irritation and vomiting. Do not take during pregnancy.

Picrorrhiza kurroa (Scrophulariaceae)

Picrorrhiza

Description Hairy perennial with serrated elliptical leaves and white or lilac flowers growing in spikes.

Habitat & Cultivation Picrorrhiza is native to the mountains of India, Nepal and Tibet. The rhizome is gathered in autumn.

Part Used Rhizome.

Constituents Picrorrhiza contains the bitter glycoside kutkin (composed of picrosides I to III and kutkoside), iridoids, cucurbitacins and apocynin. Apocynin is powerfully anti-inflammatory and reduces platelet aggregation.

History & Folklore Picrorrhiza has been used in Ayurvedic medicine as a laxative and bitter tonic since the earliest times.

Medicinal Actions & Uses In India, picrorrhiza is used as a bitter tonic, equivalent in many respects to gentian (*Gentiana lutea*, p. 99), and given for a wide range of digestive and liver troubles, such as indigestion, constipation, jaundice and hepatitis. In China, it is chiefly employed to treat chronic diarrhoea and dysentery. Picrorrhiza also helps treat asthma, acute and chronic infections, conditions where the immune system is compromised, and auto-immune diseases, including psoriasis and vitiligo. The herb's traditional use for liver disorders is well founded and picrorrhiza may play an important role in treating liver disease.

Research In 1992 Indian trials, extracts of picrorrhiza were shown to boost immunity, and to have a specific action against *Leishmania donovani*, which causes the tropical parasitic disease known as leishmaniasis. Indian research also indicates that picrorrhiza is of therapeutic value in the treatment of auto-immune disease.

Caution Take picrorrhiza only under professional supervision.

Pimenta officinalis (Myrtaceae)

Allspice

Description Aromatic evergreen tree growing to 12 m (39 ft). Has leathery oblong leaves, clusters of small white flowers and tiny green berries that turn brown as they become ripe.

Habitat & Cultivation Allspice is native to the Caribbean and to Central and South America. The berries are gathered before they are fully ripe because the volatile oil content reduces as they mature.

Parts Used Berries, leaves, essential oil.

Constituents Allspice contains volatile oil (about 4%, mostly eugenol – up to 80%), lignins and terpenoids.

History & Folklore Used as a spice in the Caribbean before the arrival of Europeans, allspice is now an ingredient in many well-known sauces, chutneys and condiments.

Medicinal Actions & Uses A digestive stimulant, allspice is taken to relieve flatulence and indigestion. It may also be used to treat diarrhoea. Allspice is often combined with herbs that have a tonic or laxative effect. The herb has an action that is similar to that of cloves (*Eugenia caryophyllata*, p. 97); both are stimulant, stomach-settling and antiseptic. Allspice essential oil is markedly antiseptic and analgesic.

Research Taking a lead from allspice's use in Costa Rica as a menopause remedy, scientists found that the berries have a strong oestrogenic activity. A 2009 paper suggested that allspice may well help with menopausal symptoms. Studies also indicate that allspice lowers high blood pressure.

Cautions Do not take essential oil internally without professional guidance. Do not take allspice as a medicine during pregnancy.

Pimpinella anisum (Apiaceae)

Anise

Description Erect annual growing to 60 cm (2 ft), with feathery leaves, umbels of yellow flowers and ridged, grey-green seeds.

Habitat & Cultivation Anise is native to the eastern Mediterranean, western Asia and North Africa. It is widely cultivated for its seeds, which are used for medicinal purposes and as a flavouring in cookery.

Parts Used Seeds, essential oil.

Constituents Anise contains a volatile oil (comprising 70–90% anethole, together with methylchavicol and other terpenes), furanocoumarins, flavonoids, fatty acids, phenylpropanoids, sterols and proteins. Anethole has an observed oestrogenic effect, and the seeds as a whole are mildly oestrogenic. This effect may substantiate the herb's use as a stimulant of sexual drive and of breast-milk production.

History & Folklore After examining the records of Cyprus hospital monastery, historians discovered that anise was used to treat plague and cholera during the Ottoman Period (1571–1878 CE).

Medicinal Actions & Uses Anise seeds are known for their ability to reduce wind and bloating, and to settle the digestion. They are commonly given to infants and children to relieve colic, and to people of all ages to ease nausea and indigestion.

Anise seeds' antispasmodic properties make them helpful in countering period pain, asthma, whooping cough and bronchitis. The seeds' expectorant action justifies their use for these respiratory ailments. Anise seeds are thought to increase breast-milk production and may be beneficial in treating impotence and frigidity. Anise essential oil is used for similar complaints, and is also used externally to treat lice and scabies.
Research Anise essential oil has been shown to have significant antifungal activity, including against *Candida albicans*.
Cautions Do not take anise essential oil internally except under professional supervision. Do not take anise during pregnancy, except in amounts normally used in cooking.
Self-help Uses Acidity & indigestion, p. 307; Digestive upsets, wind & colic, p. 318; Stomach spasm, p. 305; Wind & bloating, p. 306.

Anise seeds, which benefit the digestion, are harvested when ripe in autumn.

Pinguicula vulgaris (Lentibulariaceae)

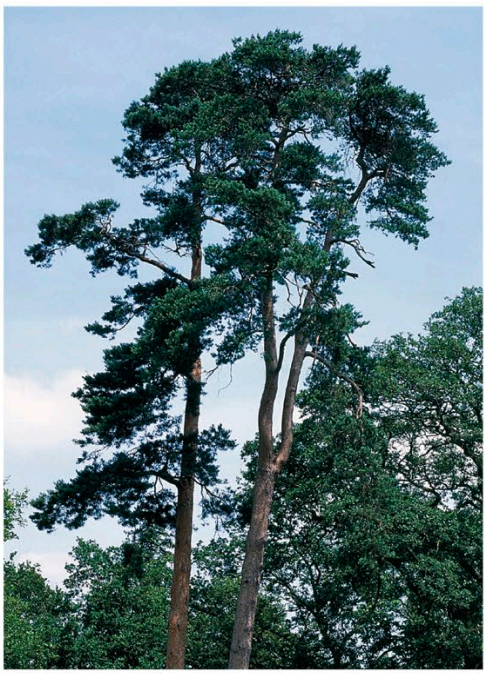
Butterwort

Description Insectivorous perennial growing to 10 cm (4 in). Has fleshy leaves in a basal rosette and double-lipped, purple-blue flowers.
Habitat & Cultivation Native to northern and western Europe, butterwort grows in moorland and on mountains. The leaves are gathered in midsummer.
Parts Used Leaves.
Constituents Butterwort contains mucilage, tannins, benzoic acid, cinnamic acid and valeric acid. Cinnamic acid has antispasmodic properties.
History & Folklore Butterwort was much used in Welsh herbal medicine as a purgative. In Norway, the plant has been used to curdle reindeer milk, and medicinally, to treat wounds and ringworm.
Medicinal Actions & Uses Butterwort is little employed in European herbal medicine today. Its main use is as a cough remedy, with properties similar to those of sundew (*Drosera rotundifolia*, p. 203), another insect-eating plant. Butterwort may be used to treat chronic and convulsive coughs.
Related Species The similar *P. grandiflora*, native to the Pyrenees, has been used to treat spasmodic coughs.
Caution Take butterwort only under professional supervision.

Pinus sylvestris (Pinaceae)

Scots Pine

Description Coniferous tree growing to 30 m (100 ft). Has reddish-brown bark, pairs of fine, needle-like leaves, yellowish buds in winter and oval to conical cones.
Habitat & Cultivation Native to mountainous regions of Europe and north and west Asia, Scots pine is now found throughout the northern hemisphere. The leaves are gathered in summer. The stems are usually harvested when the tree is felled.
Parts Used Leaves, branches, stems, seeds, essential oil.
Constituents The leaves of Scots pine contain a volatile oil (consisting mainly of alpha-pinene), resin and bitter principles.
History & Folklore Pine oil is added to disinfectants and other preparations. The distilled resin produces turpentine.
Medicinal Actions & Uses Scots pine leaves, taken internally, have a mildly antiseptic effect within the chest, and may also be used for arthritic and rheumatic problems. Essential oil from the leaves may be taken for asthma, bronchitis and other respiratory infections, and for digestive disorders such as wind. Scots pine branches and stems yield a thick resin, which is also antiseptic within the respiratory tract. The seeds yield an essential oil with diuretic and respiratory-stimulant properties.
Cautions Do not use Scots pine if prone to allergic skin reactions. Do not take the essential oil internally except under professional supervision.



Scots pine leaves, seeds and oil have a mildly antiseptic effect within the respiratory and urinary tracts.

Piper angustifolia (Piperaceae)

Matico

Description Perennial shrub reaching 7 m (23 ft). Has deeply veined aromatic lance-shaped leaves, spikes of tiny yellow flowers and small black fruit.
Habitat & Cultivation Matico is native to mountainous regions of Bolivia, Peru and Ecuador. It is found in the wild and is widely cultivated in these and other countries in tropical South America. The leaves are gathered throughout the year.
Parts Used Leaves.
Constituents Matico contains a volatile oil (including camphor, borneol and azulene), alkaloids, tannins, mucilage and resins.
History & Folklore Matico was and is used by Andean and Amazonian people as a wound-healing remedy and urinary antiseptic. European settlers learned of it in the19th century and it became an official drug in some South American pharmacopoeias.
Medicinal Actions & Uses Matico is an aromatic stimulant, diuretic and astringent used extensively for gastric and intestinal problems, including peptic ulcers, diarrhoea and dysentery.

It is commonly used in South American herbal medicine for internal bleeding, particularly within the digestive tract – for example, rectal bleeding and haemorrhoids. It is also taken for bleeding in the urinary tract. Applied externally, a decoction of matico makes a valuable remedy for minor wounds, sore and inflamed skin, and insect bites and stings. The decoction may also be used as either a mouthwash or a douche.

Piper betle (Piperaceae)
Betel

Description Slender climbing vine growing to 5 m (16 ft). Has heart-shaped leaves, tiny yellow-green flowers and small spherical fruit.
Habitat & Cultivation Betel is native to Malaysia and southern India. It is widely cultivated in much of southern Asia, East Africa and Madagascar, and the Caribbean. The leaves are gathered throughout the year and dried for extracts or to use whole.

***Betel** leaves, traditionally chewed with areca nut and lime, give a mild sensation of well-being.*

Parts Used Leaves, root, fruit.
Constituents Betel leaves contain up to 1% volatile oil (including cadinene, chavicol, chavibetol and cineole). As with many volatile oils, the percentages are variable. Malaysian samples have been shown to contain up to 69% chavibetol.
History & Folklore Betel leaves, wrapped around areca nut (*Areca catechu*) and lime (*Citrus aurantiifolia*), are known to have been chewed in India and South-East Asia for several thousand years. Betel leaves are described in the *Mahavasama*, the most ancient Sri Lankan text. Chewing quickly produces a red-stained saliva and does not, despite what is commonly thought, lead to blackened teeth. However, long-term use of betel leaves and areca nut is considered to increase the incidence of cancer of the mouth and tongue. Ironically, the habit of chewing betel leaves is now giving way in many regions to cigarette smoking.
Medicinal Actions & Uses Betel leaves are chiefly used as a gentle stimulant, since they apparently induce a mild sensation of well-being. They also affect the digestive system, stimulating salivary secretions, relieving flatulence, and preventing worm infestation. In many Asian traditions, including Ayurvedic medicine, betel leaves are thought to have aphrodisiac and nerve tonic properties. In Chinese herbal medicine, betel root, leaves and fruit are sometimes used as a mild tonic and stomach-settling herb. The root has been used with black pepper (*P. nigrum*, p. 250) or jequirity (*Abrus precatorius*, p. 158) to produce sterility in women.
Caution The observed increase in the occurrence of oral cancers in regular users makes it unwise to chew betel.

Piper cubeba (Piperaceae)
Cubeb

Description Climbing evergreen perennial growing to 6 m (20 ft). Has oval to oblong leaves, small flowers forming spikes, and round brown fruit.
Habitat & Cultivation Native to Indonesia, cubeb is cultivated in much of tropical Asia, especially in the shade of coffee bushes (*Coffea arabica*, p. 192). The fruit is gathered when immature.
Part Used Fruit.
Constituents Cubeb contains a volatile oil (up to 20%), a bitter principle (cubebin), an alkaloid (piperidine), resin and fixed oil.
Medicinal Actions & Uses Like other members of the pepper family, cubeb has a significant antiflatulent and antiseptic action. The fruit is used medicinally as a means to counter infections of the urinary tract, and has been taken in the past as a treatment for gonorrhoea. In addition, the fruit is helpful in relieving digestive problems such as flatulence and bloating. Cubeb is occasionally employed as an expectorant in the treatment of chronic bronchitis.
Cautions Cubeb should not be taken by people suffering from kidney disease or inflammatory conditions of the digestive tract.

Piper nigrum (Piperaceae)
Pepper

Description Perennial woody climber growing to about 5 m (16 ft). Has large oval leaves, spikes of small white flowers and clusters of small round fruits, which ripen from green to red.
Habitat & Cultivation Native to south-western India, pepper is now cultivated in tropical areas around the world. The fruit is harvested from plants that are at least 3 years old. Green peppercorns are picked unripe and pickled, black peppercorns are picked unripe and dried, red peppercorns are picked ripe and dried, and white peppercorns are picked ripe and soaked in water for 8 days before drying.

***Pepper,** here drying after the harvest, is still highly valued both medicinally and in cookery.*

Parts Used Fruit, essential oil.
Constituents Pepper contains a volatile oil (including beta-bisabolene, camphene, beta-caryophyllene and many other terpenes and sesquiterpenes), up to 9% alkaloids (especially piperine, which is largely responsible for the herb's acrid taste), about 11% proteins, and small quantities of minerals.
History & Folklore Cultivated as a spice and a medicine since ancient times, pepper was a vital commodity in world trade for thousands of years. Attila the Hun is reputed to have demanded 1,360 kg (3,000 lb) of pepper as ransom during his siege of the city of Rome (408 CE).
Medicinal Actions & Uses The familiar sharp taste of pepper reflects the stimulant and antiseptic effect it has on the digestive tract and the circulatory system. Pepper is commonly taken to warm the body, or to improve digestive function in cases of nausea, stomach ache, flatulence, bloating, constipation or lack of appetite. The essential oil eases rheumatic pain and toothache. It is antiseptic and antibacterial, and reduces fever.
Research Piperine, the main active constituent within black pepper, has significant therapeutic benefits, with a 2012 research paper listing "immunomodulatory, antioxidant, anti-asthmatic, anti-carcinogenic, anti-inflammatory, anti-ulcer and anti-amoebic properties". Piperine appears to aid the absorption of herbal and chemical medicines, e.g. curcumin (from turmeric, *Curcuma longa*, p. 90), and in some cases, to slow their clearance by the liver.
Caution Do not take the essential oil internally without professional supervision.
Self-help Use Back pain, p. 313.

Piscidia erythrina (Fabaceae)

Jamaica Dogwood

Description Deciduous tree or shrub growing to 15 m (49 ft). Has compound leaves, blue to white flowers with red stripes, and winged seed pods.
Habitat & Cultivation Jamaica dogwood is native to the southern US, Central America, northern South America and the Caribbean. It is grown mainly for its wood, which is used in boat-building. The root bark is stripped when the tree is felled.
Part Used Root bark.
Constituents Jamaica dogwood contains isoflavones, phytosterols, tannins and organic acids. The isoflavones are antispasmodic.
History & Folklore The pounded bark and twigs have been used by Native Caribs and Afro-Caribbeans to stupefy fish.
Medicinal Actions & Uses Jamaica dogwood is a useful and undervalued remedy that acts both as a sedative and as a painkiller. It is chiefly employed in the treatment of insomnia and overexcitability, as it calms mental activity. It is also prescribed for nerve pain, toothache and period pain. As an antispasmodic, it is useful for treating muscle spasms, especially in the back, and spasmodic respiratory ailments such as asthma and whooping cough.
Cautions Do not take Jamaica dogwood during pregnancy or if you are suffering from heart problems.

Pistacia lentiscus (Anacardiaceae)

Mastic Tree

Description Multi-branched perennial growing to 3 m (10 ft). Has small elliptical leathery leaves, clusters of reddish flowers and round scarlet fruit that ripens to black.
Habitat & Cultivation Mastic tree is native to the Mediterranean region. It grows wild in scrub and on wasteground and is cultivated for its resin, which is collected from incisions made in the bark in summer and autumn.
Part Used Resin.
Constituents The resin contains alpha- and beta-masticoresins, a volatile oil (comprising mainly alpha-pinene), tannins, masticin and mastic acid. Pinenes are strongly antiseptic.
History & Folklore Mastic resin was used by the ancient Egyptians for embalming the dead.
Medicinal Actions & Uses In the recent past, mastic resin was little used, but contemporary research indicates that this should be reconsidered. Traditionally mastic extracts have been taken for coughs and bronchitis, and applied to the skin for boils, sores and ulcers. Recent studies point to the gum resin being useful in treating and preventing atheroma (fatty deposits in the arteries), to have antifungal and liver-protective activity and to aid in conditions such as arthritis and gout.
Related Species The pistachio nut is produced by *P. vera*, also native to the Mediterranean region.

Plantago major (Plantaginaceae)

Common Plantain

Description Perennial plant growing to 25 cm (10 in). Has a basal rosette of broad, deeply veined leaves and dense clusters of tiny green flowers on spikes.
Habitat & Cultivation Common plantain is native to Europe and temperate regions of Asia. Rarely cultivated, it is normally picked from the wild. The leaves are gathered throughout the summer.
Parts Used Leaves.
Constituents Common plantain contains iridoids (such as aucubin), flavonoids (including apigenin), tannins, plant acids and mucilage. Aucubin increases uric acid excretion by the kidneys, apigenin is anti-inflammatory.
History & Folklore In Gaelic, this herb is known as "the healing plant" because it was used in Ireland to treat wounds and bruises. It is a plant that has accompanied European colonization around the world – some Native Americans called it Englishman's foot", because it seemed to spring up in the footsteps of white settlers.
Medicinal Actions & Uses Common plantain quickly staunches blood flow and encourages the repair of damaged tissue. It is possible to use it as a substitute for comfrey (*Symphytum officinale*, p. 138) in treating bruises and broken bones. An ointment or lotion may be used to treat haemorrhoids, fistulae (abnormal passages in the skin) and ulcers. Taken internally, common plaintain is diuretic, expectorant and anticatarrhal. It is commonly prescribed for conditions including gastritis, peptic ulcers, diarrhoea, dysentery, irritable bowel syndrome, respiratory catarrh, loss of voice and urinary tract bleeding.
Related Species Ribwort plantain (*P. lanceolata*) is used in the same way as common plantain. *Che qian cao* (*P. asiatica*) is used in Chinese medicine as a diuretic and to counter catarrh.
Self-help Uses Allergic rhinitis with catarrh, p. 300; Diarrhoea, p. 318.

Common plantain is a perennial herb that grows wild in temperate regions.

Plumbago zeylanica (Plumbaginaceae)

Ceylon Leadwort

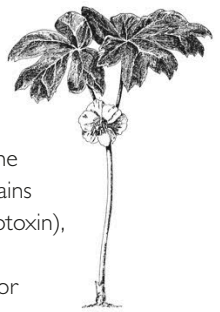
Description Evergreen shrub, often a climber, growing to 5 m (16 ft). Has oval pointed leaves, spikes of 5-petalled white flowers and angled seed capsules.
Habitat & Cultivation Ceylon leadwort is native to southern India and Malaysia, and is now naturalized in much of South-East Asia and in Africa. The leaves and root are gathered throughout the year.
Parts Used Leaves, root.
Constituents Ceylon leadwort contains apthaquinones, including plumbagin, and phytosterols.
History & Folklore In Africa, the juice of Ceylon leadwort is used as a tattoo dye.
Medicinal Actions & Uses Ceylon leadwort root is acrid and stimulates sweating, and is commonly used as a paste for skin infections such as ringworm and scabies. The paste is also applied as a counter-irritant to relieve rheumatic aches and pains. In India, extracts of the leaves and root are taken for digestive infections such as dysentery. In Nepal, a decoction of the root is used to treat baldness.
Related Species The root of European leadwort (*P. europaea*) has been used to treat toothache and, in the form of a poultice or plaster, back pain and sciatica.
Cautions Use only under professional supervision. Taken internally, the root may be toxic, and may induce abortion. Do not use Ceylon leadwort during pregnancy.

Podophyllum peltatum (Berberidaceae)

American Mandrake

Description Perennial plant growing to 40 cm (16 in). Has a forked stem, two deeply lobed umbrella-like leaves, white flowers and small yellow fruit.

Habitat & Cultivation American mandrake is native to north-eastern North America. It is commonly found in damp woodland and pastureland. The rhizome is unearthed in autumn.



American mandrake

Part Used Rhizome.

Constituents The rhizome of American mandrake contains lignans (especially podophyllotoxin), flavonoids, resin and gums. The lignans are responsible for the rhizome's purgative action.

History & Folklore American mandrake was much used as a purgative, emetic and worm-expelling herb by Native Americans. In the US in the 19th century, both herbal and conventional medical practitioners regarded the plant as the safest and most readily available purge.

Medicinal Actions & Uses Despite 19th-century beliefs in its safety, American mandrake is no longer taken internally on account of its cytotoxic (cell-killing) action. However, applied externally as a poultice, lotion or ointment, the root can be an effective treatment for all kinds of warts.

Research The lignans in American mandrake – podophyllotoxin in particular – act against tumours and have been extensively researched for their anti-cancer potential. Semi-synthetic derivatives of podophyllotoxin appear to be the most promising, having minimal toxicity.

Related Species The Himalayan *P. hexandrum* may have similar actions.

Cautions Do not take internally. The plant is subject to legal restrictions in most countries.

Pogostemon cablin syn. *P. patchouli* (Lamiaceae)

Patchouli

Description Hairy, aromatic perennial growing to 1 m (3 ft). Has square stems, oval leaves, and spikes bearing whorls of white to light-purple flowers.

Habitat & Cultivation Native to Malaysia and the Philippines, patchouli is now cultivated in tropical and sub-tropical regions around the world. The shoots and leaves are picked 2 or 3 times a year.

Parts Used Young leaves and shoots, essential oil.

Constituents Patchouli contains a volatile oil comprising mainly the sesquiterpenes patchoulol (35%) and bulnesene.

History & Folklore Patchouli has been used extensively in Asian medicine, featuring in the Chinese, Indian and Arabic traditions. Its most common use has been as an aphrodisiac. The essential oil is widely employed in India as a fragrance and as an insect repellent.

Medicinal Actions & Uses Patchouli is used in herbal medicine in Asia as an aphrodisiac, antidepressant and antiseptic. It is also employed for headaches and fever. Patchouli essential oil is used in aromatherapy to treat skin complaints. It is thought to have a regenerative effect on skin tone and to help clear conditions such as eczema and acne. The oil may also be used for varicose veins and haemorrhoids.

Caution Do not take essential oil internally.

Patchouli *is the source of an essential oil.*

Polygala senega (Polygalaceae)

Seneca Snakeroot

Description Perennial growing to about 40 cm (16 in). Has narrow lance-shaped leaves with toothed edges, and spikes of whitish-pink flowers.

Habitat & Cultivation Seneca snakeroot is native to North America, and found in dry stony open ground and woodland. It is cultivated in western Canada. The root is unearthed in autumn.

Part Used Root.

Constituents Seneca snakeroot contains phenolic acids, methyl salicylate, triterpenoid saponins (including sengins), polygalitol, and plant sterols. The triterpenoid saponins promote the clearing of phlegm from the bronchial tubes.

History & Folklore This plant's name refers to the Seneca tribe of North America, who employed the root as a remedy for snake bite. Seneca snakeroot was highly valued as a medicine by both Native Americans and European settlers. In 1768, Dr Alexander Garden of Charleston wrote that "The Seneka is the most powerful and efficacious antiphlogistic [fever- and inflammation-reducing substance] attenuant among the Galenical medicines."

Medicinal Actions & Uses In North American and European herbal medicine, Seneca snakeroot is used as an expectorant to treat bronchial asthma, chronic bronchitis and whooping cough. The root has a stimulant action on the bronchial mucous membranes, promoting the coughing up of phlegm from the chest. Seneca snakeroot is also thought to encourage sweating and to stimulate the secretion of saliva.

Related Species *Yuan zhi* (*P. tenuifolia*), native to China and Japan, has similar constituents. *Yuan zhi* is taken to treat catarrh in the chest and to "calm the spirit and quieten the heart". See also milkwort (*P. vulgaris*, *following entry*).

Cautions Do not take if pregnant. Causes diarrhoea and vomiting in excessive doses.

Polygala vulgaris (Polygalaceae)

Milkwort

Description Short perennial with pointed lance-shaped leaves and spikes of small blue, mauve or white flowers.

Habitat & Cultivation Milkwort is common in grassy and moorland areas in much of western and northern Europe. It is gathered from the wild when the plant is in flower in summer.

Parts Used Aerial parts, root.

Constituents Milkwort contains triterpenoid saponins, a volatile oil, gaultherin and mucilage.

History & Folklore Milkwort has been most often used to treat chest problems such as pleurisy and dry coughs. In larger doses, the plant acts as an emetic. In his *Irish Herbal* (1735), K'Eogh states that "it has a hot dry nature, and it encourages the production of milk in nursing mothers".

Medicinal Actions & Uses While milkwort is infrequently used in European herbal medicine today, it – like Seneca snakeroot (*P. senega*, *see preceding entry*) – is a valuable herb for the treatment of respiratory troubles such as chronic bronchitis, bronchial asthma and convulsive coughs, including whooping cough. Milkwort is also thought to have sweat-inducing and diuretic properties.

Polygonatum multiflorum (Liliaceae)

Solomon's Seal

Description Perennial growing to about 50 cm (20 in). Has arching stems, alternate elliptical leaves, delicate, greenish-white, bell-shaped flowers and blue-black fruit.

***Solomon's seal** is mostly used for throat and chest problems.*

Habitat & Cultivation Native to Europe and to temperate regions of Asia and North America, Solomon's seal is quite rare in the wild. However, it is a common ornamental garden plant. The rhizome is unearthed in autumn.

Part Used Rhizome.

Constituents Solomon's seal contains steroidal saponins (similar to diosgenin), flavonoids and vitamin A.

History & Folklore Solomon's seal has been used in Western herbal medicine since classical times. In China, the herb's first recorded use stretches back to the *Divine Husbandman's Classic* (*Shen'nong Bencaojing*) of the 1st century CE. In North America, the species *P. biflorum* was known to various native tribes. The Penobscot used Solomon's seal as part of a formula for treating gonorrhoea.

Medicinal Actions & Uses Like arnica (*Arnica montana,* p. 172), Solomon's seal is believed to prevent excessive bruising and to stimulate tissue repair. The rhizome, which is mainly used in the form of a poultice, has astringent and demulcent actions that undoubtedly contribute to its ability to accelerate healing. Solomon's seal has also been recommended for tuberculosis, as a remedy for menstrual problems, and as a tonic. In Chinese herbal medicine, it is considered a *yin* tonic, and is thought to be particularly applicable to respiratory system problems – sore throats, dry and irritable coughs, bronchial catarrh and chest pain.

Related Species Angular or scented Solomon's seal (*P. odoratum*) is used in much the same way as *P. multiflorum.*

Caution Do not take internally except under professional advice. The aerial parts, especially the berries, are harmful if eaten.

Polygonum aviculare
(Polygonaceae)

Knotgrass,

Bian Xu (Chinese)

Description Annual creeper growing to 50 cm (20 in). Has lance-shaped leaves and clusters of small pink or white flowers.

Habitat & Cultivation Knotgrass is found in temperate regions throughout the world. It thrives on wasteground and along shorelines. The plant is gathered throughout the summer.

Parts Used Aerial parts.

Constituents Knotgrass contains tannins, flavonoids, polyphenols, silicic acid (about 1%) and mucilage.

History & Folklore Knotgrass has been used as a diuretic in Chinese herbal medicine for over 2,000 years. In the Western tradition, the 1st-century CE physician Dioscorides likewise considered knotgrass to be a diuretic, as well as a remedy for heavy menstrual bleeding and snake bite.

Medicinal Actions & Uses A herb with astringent and diuretic properties, knotgrass is used in European herbal medicine to treat many conditions – diarrhoea and haemorrhoids, to expel worms, to staunch bleeding wounds, to reduce heavy menstrual flow and to stop nosebleeds. Knotgrass is also taken for pulmonary complaints, since its silicic acid content strengthens connective tissue within the lungs. In Chinese medicine, it is given to expel tapeworm and hookworm, to treat diarrhoea and dysentery, and as a diuretic, particularly when urination is painful.

Research Chinese research indicates that the plant is a useful medicine for bacillary dysentery. Of 108 people with this disease treated with a paste of knotgrass (taken internally), 104 recovered within 5 days. Results from Iranian laboratory studies indicate that knotgrass stimulates apoptosis (programmed cell death) and might be of use in treating breast cancer.

Related Species See also bistort (*P. bistorta, following entry*), and *he shou wu* (*P. multiflorum*, p. 124).

Polygonum bistorta
(Polygonaceae)

Bistort

Description Perennial growing to 30 cm (12 in). Has long basal leaves, dense spikes of small pink flowers and dark nutlets.

Habitat & Cultivation Native to Europe, Asia and North America, bistort prefers damp conditions. The leaves are gathered in spring, the rhizome in autumn.

Parts Used Leaves, rhizome.

Constituents Bistort contains polyphenols (including ellagic acid), tannins (15–20%), phlobaphenes, flavonoids and a trace of the anthraquinone emodin.

History & Folklore Bistort rhizomes have long been employed for their astringency. As the rhizomes also contain large amounts of starch, they have also been steeped in water, roasted and eaten as a vegetable in Russia and North America. In addition, the young, tender leaves of bistort may be used in salads or, alternatively, cooked in the same way as spinach (*Spinacia oleracea*).

Medicinal Actions & Uses One of the most strongly astringent of all herbs, bistort is used to contract tissues and staunch blood flow. It makes a valuable mouthwash and gargle for treating spongy gums, mouth ulcers and sore throats, and is also useful as a wash for small burns and wounds, a douche for excessive

Rhizome

***Bistort** is one of the most astringent of all medicinal plants.*

vaginal discharge, and an ointment for haemorrhoids and anal fissures. Internally, bistort may be taken to treat peptic ulcers, ulcerative colitis and conditions such as dysentery and irritable bowel that give rise to diarrhoea.
Related Species *P. hydropiper,* which is native to Europe, may be used to relieve heavy menstrual bleeding. See also knotgrass (*P. aviculare, preceding entry*).
Caution Use bistort internally for no more than 3–4 weeks at a time.
Self-help Use Diarrhoea, p. 307.

Polymnia uvedalia (Asteraceae)

Bearsfoot

Description Perennial herb growing to 2 m (6½ ft) with large 3-lobed leaves and yellow flowers.
Habitat & Cultivation Bearsfoot is native to the eastern US. It grows from New York southwards, preferring rich soil. The root is unearthed in autumn.
Part Used Root.
History & Folklore Bearsfoot root was used by Native Americans as a stimulant and laxative remedy. In the 19th century, it became a widely popular healing herb in North America, having a specific use as a treatment for mastitis (inflammation of the breast tissue).
Medicinal Actions & Uses Bearsfoot is perhaps best known for its use as a hair tonic, having traditionally been a popular ingredient in hair lotions. It is still used in this way, but today the root is more often taken internally as a treatment for non-malignant swollen glands and especially for mastitis. The root is thought to have a beneficial effect on the stomach, liver and spleen, and may be taken to relieve indigestion and counteract liver malfunction.

Polypodium vulgare (Polypodiaceae)

Polypody

Description Delicate perennial fern growing to a height of 30 cm (1 ft). Has slender knotty rhizomes and curving fronds that are dotted with brown spores (sori) on their lower surface.
Habitat & Cultivation Native to Europe and northern Asia, polypody is commonly found growing in damp woodland and hedgerows, and on walls. The rhizome is unearthed in autumn.
Part Used Rhizome.
Constituents Polypody rhizome contains saponins (based on polypodosapogenin), ecdysteroids, phloroglucins, volatile oil, fixed oil and tannins.
History & Folklore Polypody has been used medicinally in Europe since ancient times. Like mistletoe (*Viscum album*, p. 283), polypody often grows on host trees, for example oak (*Quercus robur*, p. 260). This was thought to impart great medicinal value to the plant. The Greek physician Dioscorides, writing in the 1st century CE, noted that polypody was used to purge phlegm and was an ingredient of a plaster applied to dislocated fingers and to sores that occur between the fingers.
Medicinal Actions & Uses Polypody stimulates bile secretion and has been used to treat such conditions as hepatitis, jaundice and indigestion. A gentle laxative, polypody makes a safe treatment for constipation in children. The rhizome is also expectorant, having a supportive and mildly stimulating effect on the respiratory system. It may be taken for the relief of catarrh, bronchitis, pleurisy and dry irritable coughs.
Caution Polypody may cause a skin rash when applied externally.

Polypody *is often seen growing in damp woodland in Europe and northern Asia.*

Pomaderris elliptica (Rhamnaceae)

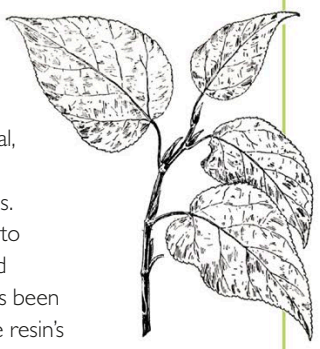
Kumarhou

Description Branching tree growing to about 3 m (10 ft). Has shiny leaves and clusters of yellow-white flowers.
Habitat & Cultivation Kumarhou is native to New Zealand.
Parts Used Aerial parts.
Medicinal Actions & Uses Kumarhou is a traditional Maori remedy that has been used to treat a wide range of illnesses. Its most common use is as a remedy for problems of the respiratory tract, such as asthma and bronchitis. However, it has also been used in the treatment of indigestion and heartburn, diabetes and kidney problems. Kumarhou is considered to be a detoxifier and "blood cleansing" plant, and is used to treat skin rashes and sores, including lesions produced by skin cancer.

Populus x *candicans* syn. *P.* x *gileadensis* (Salicaceae)

Balm of Gilead

Description Deciduous tree growing to 25 m (80 ft). Has heart-shaped leaves, buds producing a sticky resin and female catkins.
Habitat & Cultivation Naturalized in northern temperate regions, balm of Gilead is also cultivated as an ornamental tree. The buds and bark from young branches are collected in spring.
Parts Used Buds, stem bark.
Constituents Balm of Gilead buds contain flavonoids, phenolic glycosides (including salicin) and fatty acids. Salicin's analgesic, anti-inflammatory and fever-reducing actions resemble those of aspirin. Many poplars have a similar chemical profile and are often used interchangeably as medicines.
History & Folklore Balm of Gilead has been used for several thousand years to soothe inflamed or irritated skin. The 17th-century herbalist Nicholas Culpeper recorded that "The oyntment called populeon, which is much of this poplar, is singular for all heat and inflammation in any part of the body and tempereth the heat of wounds: It is much used to dry up the milk in women's breasts."
Medicinal Actions & Uses Balm of Gilead is a common ingredient of cough mixtures. Its expectorant, antiseptic and analgesic properties make it an excellent remedy for sore throats, dry irritable coughs, bronchitis and other respiratory ailments. In France and Germany, balm of Gilead is applied as a salve to grazes, small wounds, chapped and itchy skin, sunburn, chilblains and haemorrhoids. A preparation of balm of Gilead, applied externally, may also help relieve the pain of rheumatic joints and strained muscles. As Culpeper noted, the plant is also thought to reduce breast-milk production.
Research Studies have demonstrated that balm of Gilead buds have significant expectorant, antibacterial, antifungal and anti-inflammatory properties. Research undertaken into the bud resin of this and other poplar species has been prompted largely by the resin's chemical similarity to propolis, a natural antibiotic resin that is gathered by bees.



Balm of Gilead

Cautions Best avoided while breast-feeding. Do not take if allergic to aspirin.
Self-help Use Coughs, p. 310.

Populus tremuloides (Salicaceae)

Quaking Aspen

Description Deciduous, spreading tree growing to 20 m (65 ft). Has oval, slightly sticky buds and round, finely toothed leaves that quiver in the wind.
Habitat & Cultivation Native to North America, quaking aspen prefers damp and moist areas, and grows alongside rivers and in valleys, hedgerows and copses. It is also widely cultivated in temperate regions. The bark is collected in early spring.
Part Used Bark.
Constituents The bark contains phenolic glycosides (including salicin and populin) and tannins. Salicin and populin are salicylates, substances that have fever-reducing, pain-relieving and anti-inflammatory properties that are similar to those of aspirin.

Quaking aspen *bark contains salicin, a substance with aspirin-like effects.*

History & Folklore The Ojibwa people used an oily compound made from quaking aspen and bear fat to treat earache. Other Native Americans used the bark for a variety of purposes, including as an eyewash for sore eyes.
Medicinal Actions & Uses Like willow bark (*Salix alba*, p. 129), quaking aspen bark has widely recognized anti-inflammatory and pain-relieving properties. It is often taken to treat arthritic and rheumatic aches and pains. It is also used to lower fever, especially when this condition is associated with rheumatoid arthritis. Being stimulant, quaking aspen bark acts as a tonic remedy in the treatment of anorexia and other debilitated states. The bark's significant astringent and antiseptic qualities make it useful for treating diarrhoea and the symptoms of irritable bowel syndrome. It is also used to treat urinary tract infections.
Caution Do not take quaking aspen if allergic to aspirin.

Portulaca oleracea (Portulacaceae)

Purslane

Description Succulent annual plant growing to 15 cm (6 in). Has small, thick rounded leaves and small yellow flowers growing in clusters.
Habitat & Cultivation Native to Europe and Asia, purslane is now one of the most widely distributed plants, growing from Australia and China to the Americas. Often found growing near water, it is gathered throughout the summer. Wild purslane is the variety chiefly used as a medicine; the golden variety, *P. oleracea* var. *sativa*, is cultivated mostly as a kitchen potherb.
Parts Used Aerial parts.
Constituents Purslane contains flavonoids, alkaloids, fatty acids (significant omega-3 oil content), terpenoids, polysaccharides, vitamins A, B_1, and C, proteins and minerals (especially calcium).
History & Folklore Purslane's use as a medicinal herb in Europe, Iran and India dates back at least 2,000 years, and it was probably eaten as a vegetable well before then. In ancient Rome, purslane was used to treat headaches, stomach ache and dysentery, intestinal worms and lizard bite.
Medicinal Actions & Uses Purslane has long been considered valuable in the treatment of urinary and digestive problems. The diuretic effect of the juice makes it useful in the alleviation of bladder ailments, for example difficulty in passing urine. The plant's mucilaginous properties also make it a soothing remedy for gastro-intestinal problems such as dysentery and diarrhoea. In Chinese herbal medicine, purslane is employed for similar problems and, additionally, for appendicitis. The Chinese also use the plant as an antidote for wasp stings and snake bite. Used as an external wash, the juice or a decoction relieves skin ailments such as boils and carbuncles, and also helps to reduce fever.

Purslane *is a good source of vitamins and calcium. It also has antibiotic properties.*

Research Purslane is being intensively researched. Extracts of the herb show antioxidant, anti-inflammatory, analgesic and anti-diabetic activity, underlining that fact that purslane is valuable as food and as medicine. The alkaloids have neuroprotective activity and inhibit acetylcholinesterase, making the herb theoretically of use in Alzheimer's disease.
Caution Do not take purslane as a medicine during pregnancy.

Potentilla anserina (Rosaceae)

Silverweed

Description Perennial plant growing to 40 cm (16 in). Has toothed compound leaves that are silvery on the underside, and 5-petalled yellow flowers.
Habitat & Cultivation Silverweed is found in Europe, Asia and North America, where it flourishes in dry grassy places. The aerial parts are collected in late summer, the root at the same time or in autumn.
Parts Used Aerial parts, root.
Constituents Silverweed contains 2–10% ellagitannins, flavonoids, choline and bitters.
History & Folklore William Withering, the 18th-century doctor who discovered the cardiotonic effects of foxglove (*Digitalis purpurea*, p. 202), recommended a teaspoon of dried leaves to be taken at 3-hour intervals to assuage bouts of malarial fever.
Medicinal Actions & Uses Silverweed's main medicinal value lies in its astringent and anti-inflammatory activity. It makes an effective gargle

for sore throats, and is a helpful remedy for diarrhoea. Less astringent than its close relative tormentil (*P. erecta*, *see following entry*), it also has a gentler action within the gastro-intestinal tract. It is used externally as a lotion or ointment for bleeding haemorrhoids.

Caution Use internally for more no more than 3–4 weeks at a time.

Potentilla erecta syn. *P. tormentilla* (Rosaceae)

Tormentil

Description Downy creeping perennial growing to 10 cm (4 in). Has leaves bearing 5 leaflets, and many 4-petalled yellow flowers.

Habitat & Cultivation Native to temperate regions of Asia and Europe, tormentil thrives in grassy sites and on heaths and moorland. The aerial parts of tormentil are harvested in summer and the root is gathered in autumn.

Parts Used Aerial parts, root.

Constituents Tormentil contains 15–20% tannins, catechins, ellagitannins and a phlobaphene.

History & Folklore According to the 17th-century herbalist Nicholas Culpeper, the herb "is most excellent to stay all kinds of fluxes of blood or humours in man or woman, whether it be at nose, mouth, belly, or any wound in the veins or elsewhere".

Medicinal Actions & Uses Containing even more tannins than oak bark (*Quercus robur*, p. 260), all parts of tormentil are strongly astringent, finding use wherever this action is required. The plant makes a beneficial gargle for throat infections, and an effective mouthwash for treating mouth ulcers and infected gums. Tormentil may be taken for conditions that give rise to diarrhoea, such as irritable bowel syndrome, colitis, ulcerative colitis and dysentery, and for rectal bleeding. Applied externally as a lotion or ointment, tormentil helps relieve haemorrhoids (especially those that are bleeding). In the form of a lotion, tormentil is used to help staunch wounds and protect areas of damaged or burned skin.

Caution Use internally for more no more than 3–4 weeks at a time.

Primula veris (Primulaceae)

Cowslip,

Primula

Description Hairy perennial growing to 10 cm (4 in). Has a basal rosette of slightly rough oblong leaves. Stems bear clusters of bright yellow, bell-shaped flowers.

Habitat & Cultivation Cowslip grows in Europe and western Asia, preferring fields and pastures with chalky soils. The flowers and leaves are gathered in spring and summer, the root in autumn. This increasingly rare plant should not be picked from the wild.

Parts Used Flowers, leaves, root.

Constituents Cowslip contains triterpenoid saponins, flavonoids, phenols, tannins and a trace of volatile oil. The flavonoids, mainly in the flowers, are antioxidant, anti-inflammatory and antispasmodic. The triterpenoid saponins, which are concentrated in the root (5–10%), are strongly expectorant.

Cowslip has calming properties.

History & Folklore This plant is so closely associated with springtime that it is known as *primavera* (spring) in Spanish and Italian. Cowslip has long been reputed to preserve beauty. The 16th-century herbalist William Turner wrote: "Some weomen … sprinkle ye floures of cowslip with whyte wine and after … wash their faces with that water to… make them fayre in the eyes of the worlde rather than in the eyes of God, whom they are not afryd to offend."

Medicinal Actions & Uses Cowslip is an under-used but valuable plant. The root is strongly expectorant, stimulating a more liquid mucus and so easing the clearance of phlegm. It is given for chronic coughs, especially those associated with chronic bronchitis and catarrhal congestion. The root is also thought to be mildly diuretic and antirheumatic and to slow blood clotting. The leaves have similar properties to the root, but are weaker in action. The flowers are believed to be sedative and are recommended for overactivity and sleeplessness, particularly in children. Cowslip flowers' antispasmodic and anti-inflammatory properties make them potentially useful in the treatment of asthma and other allergic conditions.

Cautions Do not take cowslip during pregnancy, if allergic to aspirin or if taking anticoagulant medication. Excessive doses can cause vomiting and diarrhoea.

Prunella vulgaris (Lamiaceae)

Self-Heal

Description Creeping perennial, growing to 50 cm (20 in) tall, with pointed oval leaves and violet-blue or pink flowers.

Habitat & Cultivation Native to Europe and Asia, self-heal can be found in temperate regions worldwide. It is a wayside plant, growing in meadows and by roadsides, and thrives in sunny areas. Rarely cultivated, self-heal can easily be grown from seed or by root division. The aerial parts are picked in summer when in flower.

Parts Used Aerial parts.

Constituents Self-heal contains entacyclic triterpenes, tannins, caffeic and rosmarinic acids, and vitamins B_1, C and K.

History & Folklore As its name indicates, self-heal has been used for centuries to staunch bleeding and heal wounds. The 17th-century herbalist John Gerard wrote: "there is not a better wounde herbe in the world than that of selfe-heale."

Medicinal Actions & Uses Self-heal is an undervalued astringent and wound-healer with tonic activity. In common with other members of the mint family, such as rosemary (*Rosmarinus officinalis*, p. 128) and sage (*Salvia* spp., p. 131), it has powerful antioxidant and tissue protective activity – making it potentially of value in many chronic illnesses. Its antioxidant and astringent activity makes it beneficial in conditions such as sore throat, inflammatory bowel disease and diarrhoea, and to heal internal bleeding. Externally, a lotion can be applied to treat leucorrhoea (vaginal discharge). In Chinese medicine, self-heal is taken with *ju hua* (*Chrysanthemum x morifolium*, p. 78) for fevers, headaches, dizziness and vertigo, and is thought to cool "liver fire".

Prunus armeniaca (Rosaceae)

Apricot

Description Sturdy deciduous tree growing to 10 m (33 ft). Has finely serrated oval leaves, clusters of white (or, rarely, pink) 5-petalled flowers, and lightly freckled pale yellow to deep purple fruits.
Habitat & Cultivation Native to China and Japan, apricot is now cultivated in Asia, North Africa and California. The fruit is collected when ripe in late summer.

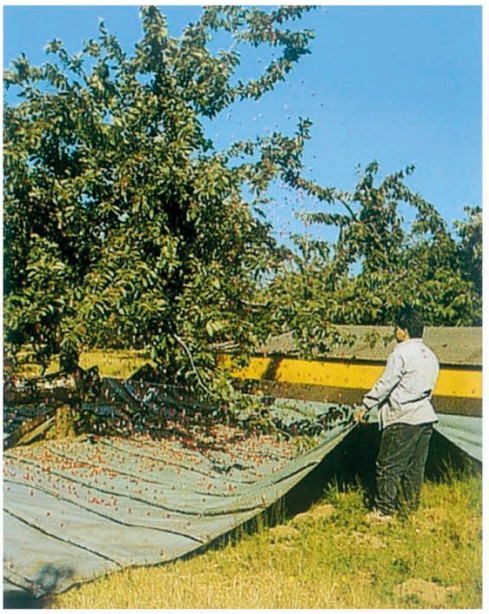
Apricot seeds yield laetril, which has been used as a controversial treatment for cancer.

Parts Used Fruit, seeds, bark.
Constituents Apricot fruit contains fruit sugars, vitamins and iron. The seeds contain up to 8% amygdalin, the cyanogenic glycoside that yields laetril and hydrocyanic (prussic) acid. The bark contains tannins.
History & Folklore In India and China, the apricot has been appreciated for well over 2,000 years. Dong Feng, a physician who practised at the end of the 2nd century CE, is said to have asked for his payment in apricot trees.
Medicinal Actions & Uses Apricot fruit is nutritious, cleansing and mildly laxative. A decoction of the astringent bark soothes inflamed and irritated skin conditions. Though the seeds contain highly toxic prussic acid, they are prescribed in small amounts in the Chinese tradition as a treatment for coughs, asthma and wheezing, and for excessive mucus production and constipation. An extract from the seeds, laetril, has been used in Western medicine as a controversial treatment for cancer. The seeds also yield a fixed oil, similar to almond oil (from *P. amygdalus*), that is often used in the formulation of cosmetics.
Research Chinese trials show that apricot seed paste helps combat vaginal infection.
Caution Apricot seeds are highly toxic in all but the smallest amounts and should not be consumed.

Prunus avium & P. cerasus (Rosaceae)

Sweet Cherry,
& Tart Cherry

Description Deciduous shrub or tree growing to 8 m (26 ft). It has reddish-brown bark, oval to elliptical leaves, clusters of 2–6 white flowers and almost spherical red fruit.
Habitat & Cultivation Native to south-western Asia, cherry is naturalized in Europe and cultivated in temperate regions around the world. The stems and ripe fruit are collected in summer.
Parts Used Stems, fruit.
Constituents Cherry stems contain phenols, including salicylic acid, and tannins. Cherry fruit contains anthocyanins and flavonoids, including quercetin, carotenoids, sugars, fruit acids, vitamin C and melatonin.
History & Folklore The 16th-century herbalist John Gerard recorded the French custom of hanging cherries in houses to ward off fever.
Medicinal Actions & Uses In European herbal medicine, cherries and cherry stems have long been used for their diuretic and astringent properties. They have been prescribed for cystitis, nephritis, urinary retention and for arthritic problems, notably gout. Cherries and cherry juice can be useful in treating gout and arthritic problems. Their fruit sugar content makes them mildly laxative.



Sweet cherry fruit and stems have been harvested for medicinal use since classical times.

Research In a 2012 American-Australian clinical study involving 633 people with gout, the risk of an acute gout attack was reduced by 35% for those taking cherry extract. One laboratory study concluded that the anti-inflammatory activities of anthocyanins within cherry fruit are comparable to those of ibuprofen.
Caution The seeds are toxic and should not be consumed.

Prunus mume (Rosaceae)

Asian Plum,
Wu Mei (Chinese)

Description Deciduous tree growing to 10 m (33 ft). Has pointed oval to elliptical leaves, white flowers and yellow fruit.
Habitat & Cultivation Native to China, Asian plum grows wild and is planted in the southern and eastern provinces. The fruit is picked in late spring.
Part Used Fruit.
Constituents Asian plum contains fruit acids and sugars, vitamin C and plant sterols.
Medicinal Actions & Uses The sour-tasting astringent Asian plum is used in Chinese medicine to counter diarrhoea and dysentery, to stop bleeding and to ease coughs. It may also be effective in expelling hookworms. Externally, a plaster of the fruit is applied to the sites of removed corns and warts to hasten healing.
Research Laboratory research undertaken in China indicates that the fruit of Asian plum has antibiotic properties.

Prunus serotina (Rosaceae)

Wild Cherry

Description Deciduous tree growing to 30 m (100 ft). Has elliptical to oblong leaves, white flowers and purple-black fruit.
Habitat & Cultivation Native to North America, wild cherry grows throughout much of the US. It is cultivated in central Europe for its timber. The bark is collected in late summer and early autumn.
Part Used Inner bark.
Constituents Wild cherry contains prunasin (a cyanogenic glycoside that yields hydrocyanic acid), benzaldehyde, eudesmic acid, coumarins and tannins. Prunasin reduces the cough reflex.
History & Folklore Cherokee women traditionally took wild cherry bark to ease labour pain. Other Native Americans used it in the treatment of coughs and colds, haemorrhoids and diarrhoea. European settlers learned of the bark's medicinal properties, and in the 19th century it became a widely used remedy.
Medicinal Actions & Uses Figuring in official pharmacopoeias and much used in the Anglo-American tradition, wild cherry bark is an

effective remedy for chronic dry and irritable coughs. It combines well with coltsfoot (*Tussilago farfara,* p. 278) as a treatment for asthma and whooping cough. The astringent bark also helps treat indigestion and the symptoms of irritable bowel syndrome, especially when these conditions are of nervous origin.
Caution Wild cherry bark is highly toxic in excessive doses.

Wild cherry *bears long spikes of white flowers, followed by fleshy, blue-black fruit.*

Psoralea corylifolia (Fabaceae)

Bu Gu Zhi

Description Perennial growing to 90 cm (3 ft). Has oval leaves, yellow clover-like flowers and black seed pods containing yellow-black seeds.
Habitat & Cultivation *Bu gu zhi* is native to southern and south-eastern Asia and cultivated in China. The fruit is gathered when ripe in autumn.
Parts Used Seeds.
Constituents The seeds contain a volatile oil, flavonoids, a flavone and furanocoumarins.
History & Folklore In the Chinese tradition, *bu gu zhi* has long been considered a tonic remedy. It was first documented in *Grandfather Lei's Discussion of Herb Preparations*, which was written in about 490 CE.
Medicinal Actions & Uses Valued as a *yang* tonic, *bu gu zhi* is taken in China to treat impotence and premature ejaculation and to improve vitality. The seeds are also used to counter debility and other problems reflecting "kidney *yang* deficiency", such as lower back pain, frequent urination, incontinence and bed-wetting. *Bu gu zhi* is used externally to treat skin conditions such as psoriasis, alopecia (loss of hair) and vitiligo (loss of skin pigmentation). In Vietnam, a tincture of the seeds is used in the treatment of rheumatism.
Research Studies in China indicate that this herb is of value in the treatment of skin disorders, including vitiligo.
Caution Applied externally, this herb may sensitize the skin, resulting in an allergic reaction to sunlight.

Pterocarpus marsupium (Fabaceae)

Kino

Description Handsome deciduous tree growing to 16 m (52 ft). Has leaves with 5–7 oval leathery leaflets, and numerous small yellow or white flowers.
Habitat & Cultivation Native to Sri Lanka, India, Malaysia and the Philippines, kino grows in tropical rainforests. The tree is cultivated for its timber and for the sap ("kino") that exudes from cuts made in the trunk. The sap is collected year round.
Part Used Sap.
Constituents Kino contains tannins, flavonoids and marsupsin.
Medicinal Actions & Uses Kino is a strongly astringent herb that tightens the mucous membranes of the gastro-intestinal tract. Kino relieves chronic diarrhoea and the irritation caused by intestinal infection and colitis. Though its taste is unpleasant, this herb makes a good mouthwash and gargle. It is widely used in Asia as a douche for excessive vaginal discharge.
Research Clinical trials have found that the herb is therapeutically useful in treating the early stages of non-insulin-dependent diabetes.

Ptychopetalum olacoides
syn. *P. uncinatum* (Oleaceae)

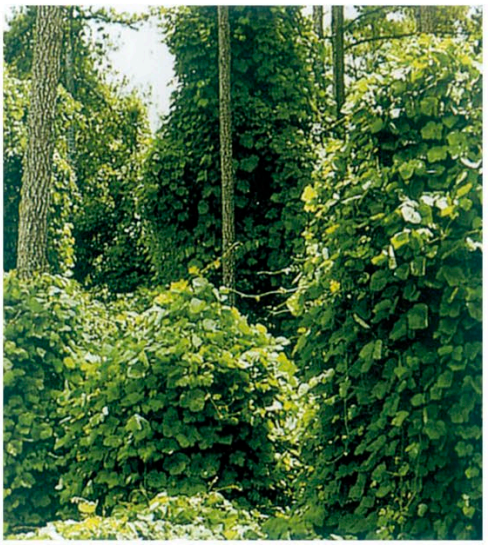
Muira Puama

Description Tree growing to 15 m (49 ft) with a grey trunk, dark brown leaves, white flowers and orange-yellow fruits.
Habitat & Cultivation Muira puama is native to Brazilian rainforests, especially the Rio Negro and Amazonas regions.
Part Used Root, bark, wood.
Constituents Muira puama contains esters and plant sterols.
Medicinal Actions & Uses Muira puama has long been used in Amazonian medicine as a tonic and aphrodisiac. Considered useful as an aid for impotence, it is thought to help with both physical and psychological aspects of the problem. It is also used to treat or prevent baldness. The bark is strongly astringent and is employed as a gargle for sore throats and taken in the form of an infusion in order to treat diarrhoea and dysentery.
Related Species *Lirisoma ovata*, another Brazilian tree, is also known as muira puama but has quite distinct chemical constituents.

Pueraria lobata
syn. *P. thunbergiana* (Fabaceae)

Kudzu,
Ge Gen (Chinese)

Description Deciduous climber growing to 30 m (100 ft). Has leaves with 3 broadly oval leaflets, curling tendrils and spikes of pea-type purple flowers.
Habitat & Cultivation Native to China, Japan and eastern Asia, kudzu is naturalized in the US. It is cultivated in the central and eastern provinces of China. The root is unearthed in spring or autumn.



Kudzu *is used in China to treat alcoholism and is an ingredient in a remedy for hangovers.*

Parts Used Root, flower.
Constituents Kudzu contains triterpenoid saponins, isoflavones and phytosterols. The isoflavones are oestrogenic.
History & Folklore From the 6th century BCE onwards, Chinese herbalists have considered kudzu to be a remedy for muscular pain and a treatment for measles. Zhang Zhongjing (150 – *c.* 219 CE) recommended kudzu if the patient "has a stiff back and muscles, does not breathe easily, and is susceptible to wind".
Medicinal Actions & Uses In China, kudzu is frequently used as a remedy for measles, often in combination with *sheng ma* (*Cimicifuga foetida*).

Kudzu is also given for muscle aches and pains, especially when they are linked with fever or are affecting the neck and upper back. The root may be taken to treat symptoms of headache, dizziness or numbness caused by high blood pressure. Kudzu also treats diarrhoea and dysentery. Kudzu flowers are traditionally taken to treat alcohol intoxication and hangovers, and are thought to increase the rate of clearance of alcohol from the body, aiding recovery from intoxication. Kudzu root, however, is thought to act in a more or less opposite way – it slows the liver's ability to break down (and clear) alcohol from the system. Kudzu root may therefore increase the risks associated with alcohol consumption, and should not be taken as a "hangover cure".

Research Chinese studies indicate that kudzu increases cerebral blood flow in patients with arteriosclerosis, and eases neck pain and stiffness. US research indicates that kudzu may suppress the desire for alcohol.

Related Species The closely related *P. mirifica* and *P. tuberosa* have been investigated for their contraceptive effect.

Pulmonaria officinalis (Boraginaceae)

Lungwort

Description Perennial growing to 30 cm (1 ft). Has broad oval basal leaves, smaller upper leaves mottled with white spots, and clusters of pink-purple flowers.

Habitat & Cultivation Lungwort is native to Europe and the Caucasus. It flourishes in mountain pastures and in damp sites. The leaves are gathered in late spring.

Parts Used Leaves.

Constituents Lungwort contains allantoin, flavonoids, tannins, mucilage and saponins. Pyrrolizidine alkaloids occur in the roots, but in negligible quantities in the leaves.

***Lungwort's** speckled leaves were once considered a sign of its ability to cure lung problems.*

History & Folklore According to the medieval Doctrine of Signatures, which held that a plant's appearance pointed to the ailment it treated, lungwort was effective for chest ailments because its leaves were said to resemble lung tissue.

Medicinal Actions & Uses Given its high mucilage content, lungwort is indeed a useful remedy for chest conditions, and it is particularly beneficial in cases of chronic bronchitis. It combines well with herbs such as coltsfoot (*Tussilago farfara*, p. 278) as a treatment for chronic coughs (including whooping cough), and it can be taken for asthma. Lungwort can also be used as a treatment for sore throats and catarrh. In the past, lungwort was given for the coughing up of blood arising from tubercular infection. Lungwort leaves are astringent, and have been applied externally to stop bleeding.

Caution Lungwort is subject to legal restrictions in some countries.

Pulsatilla chinensis (Ranunculaceae)

Chinese Anemone,

Bai Tou Weng (Chinese)

Description Perennial herb growing to 25 cm (10 in). Has erect downy stems, compound leaves, bell-shaped flowers and feathery seedheads.

Habitat & Cultivation Chinese anemone is native to eastern Asia, and is found in Mongolia, China and Japan. The root is unearthed either before the plant comes into flower in spring, or in autumn.

Part Used Root.

Constituents Chinese anemone contains lactones (including protoanemonin and anemonin), pulsatoside and anemonol.

History & Folklore Chinese anemone root was first documented in Chinese medicine in the *Divine Husbandman's Classic* (*Shen'nong Bencaojing*), a herbal written in the 1st century CE.

Medicinal Actions & Uses Chinese anemone is thought to clear toxicity and to lower fever. It is most commonly taken as a decoction to counter infection within the gastro-intestinal tract. The root is also used to treat malarial fever and vaginal infections.

Research Chinese studies have shown the root to be potentially valuable as a treatment for amoebic dysentery.

Related Species See pasque flower (*Anemone pulsatilla*, p. 168).

Caution Take Chinese anemone only under professional supervision.

Punica granatum (Lythraceae)

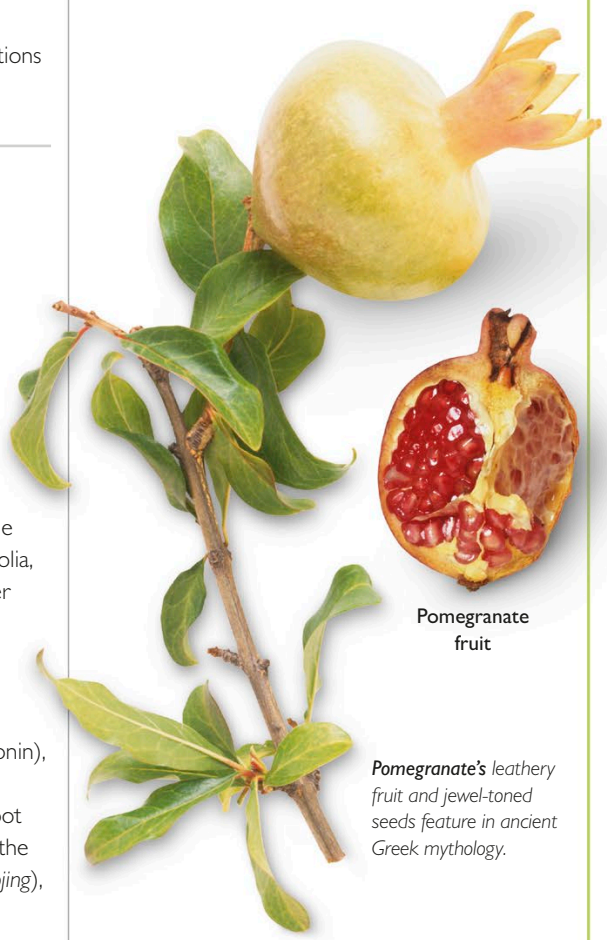
Pomegranate

Description Deciduous shrub or tree growing to 6 m (20 ft). Has branches tipped with spines, whorls of lance-shaped leaves, scarlet flowers, and leathery-rinded round fruit containing many pulp-covered seeds.

Habitat & Cultivation Native to south-western Asia, pomegranate has become naturalized in Europe. The tree is widely cultivated for its fruit, which is gathered in autumn when it is ripe. The bark is also gathered in autumn.

Parts Used Juice, fruit pulp, rind, bark.

Constituents The fruit and juice contain pelletierene alkaloids, elligatannins (up to 25%) and triterpenoids. The alkaloids are highly toxic.



***Pomegranate's** leathery fruit and jewel-toned seeds feature in ancient Greek mythology.*

History & Folklore In 1500 BCE, the pharaoh Tuthmosis reputedly brought back pomegranate to Egypt from Asia. Prized as a fruit, it was also sought after as a remedy for worms. The Greek physician Dioscorides, in the 1st century CE, knew of the herb's ability to expel worms, but this attribute was subsequently forgotten in Europe for nearly 1,800 years. In the early 19th century, after an Indian herbalist used pomegranate to cure an Englishman of tapeworms, English doctors in India became interested in pomegranate and its medicinal properties were investigated.

Medicinal Actions & Uses Until recently, the chief medicinal value of pomegranate was as a de-worming agent, with the rind and bark being considered specific remedies for tapeworm infestation. Nowadays, pomegranate juice is widely available and known for its positive effects on the heart and circulation. Like other medicinal plants with a high anthocyanidin content, pomegranate fruit and juice have potent protective activity on all aspects of the circulation, supporting healthy circulation and countering local inflammatory activity, which damages the inner lining of the blood vessels. The juice is commonly taken to help with cardio-vascular problems, including high blood pressure, capillary fragility, angina and congestive heart failure. It also appears to help prevent dental plaque.

Research In recent years, there has been significant interest in the medicinal properties of pomegranate fruit and juice. As above, pomegranate has a strongly beneficial activity on the cardio-vascular system but it also appears to have an unusually wide range of potential therapeutic properties, including antibacterial, antiseptic, anti-inflammatory and oestrogenic activity. James A. Duke, an American herb scientist, has described it as an "anti-menopausal fruit". Pomegranate shows signs of having anti-cancer activity and has been recommended as a preventative and treatment for prostate cancer. New potential uses are likely to emerge over time.

Cautions Do not use the rind or bark unless under professional supervision. This plant, and especially its bark extracts, is subject to legal restrictions in some countries.

Pygeum africanum (Boraginaceae)
Pygeum

Description Evergreen tree growing to 35 m (115 ft). Has oblong leaves, white flowers and red berries.

Habitat & Cultivation Pygeum is native to Africa. It is still harvested from the wild, but severe shortages have led to the establishment of plantations.

Part Used Bark.

Constituents Pygeum contains phytosterols (beta-sitosterol), triterpenes (ursolic and oleanolic acids), long chain alcohols (n-tetracosanol) and tannins.

Medicinal Actions & Uses In conventional medicine in France, the fat-soluble extract of pygeum bark has become the primary treatment for an enlarged prostate gland. A decoction of the bark may reduce the severity of chronic prostate inflammation, and it may also help reverse male sterility when this is due to insufficient prostate secretions. In combination with other plants, pygeum may be valuable in the treatment of prostate cancer.

Research Trials carried out since the 1960s, many of them in France, have established that pygeum extract has positive effects on the prostate gland. Specifically, the extract increases glandular secretions and reduces levels of cholesterol within the organ. In some Western countries, surgery is the main option for enlarged prostates, but in France pygeum is prescribed in 81% of cases.

Related Species The fruit kernels of the Asian *P. gardneri* are used to poison fish.

Caution Only take pygeum under professional supervision.

Quercus robur (Fagaceae)
Common Oak

Description Slow-growing, long-lived deciduous tree reaching 45 m (150 ft). Has deeply lobed leaves, long catkins and green to brown fruit (acorns).

Habitat & Cultivation Common oak grows throughout the northern hemisphere, in woods, forests and along hedgerows. The bark is collected in spring and the fruit is harvested in autumn.

Parts Used Bark, galls (growths produced by insects or fungi).

Constituents Common oak bark contains 15–20% tannins (including phlobatannin, ellagitannins and gallic acid). Oak galls contain about 50% tannins.

History & Folklore Sacred to the Druids, the oak tree has been esteemed in European herbal medicine for its astringent bark, leaves and acorns.

Medicinal Actions & Uses Common oak bark, prepared as a decoction, is often used as a gargle to treat sore throats and tonsillitis. It may also be applied as a wash, lotion or ointment to treat conditions such as haemorrhoids, anal fissures, small burns or other skin problems. Less commonly, a decoction of the bark is taken in small doses to treat diarrhoea, dysentery and rectal bleeding. Powdered oak bark may be sniffed to treat nasal polyps, or sprinkled on eczema to dry the affected area.

Oak bark

Caution Do not take oak bark internally for more than 4 weeks at a time.

Self-help Use Haemorrhoids, p. 302.

Quillaja saponaria (Rosaceae)
Soap Bark

Description Evergreen tree growing to 20 m (65 ft). Has glossy oval leaves, white flowers and star-shaped fruit.

Habitat & Cultivation Soap bark is native to Chile and Peru, and is cultivated in California and India. The bark is gathered throughout the year.

Part Used Inner bark.

Constituents Soap bark contains up to 10% triterpenoid saponins, calcium oxalate and tannins. The saponins are strongly expectorant and can cause inflammation of the digestive tract.

History & Folklore In Peru and Chile, soap bark has traditionally been used by Andean peoples as an alternative to soap. The bark has been used medicinally as an expectorant remedy.

Medicinal Actions & Uses Soap bark has a long tradition of use as a treatment for chest problems. Its strong expectorant effect is beneficial in the treatment of bronchitis, especially in the early stages of the illness. Like other medicinal plants that contain saponins, soap bark stimulates the production of a more fluid mucus in the airways, facilitating the clearing of phlegm through coughing. Soap bark is useful for treating any condition featuring congested catarrh within the chest, but it should not be used for dry irritable coughs. Soap bark is also used externally, appearing in the formulations of dandruff shampoos.

Cautions Use only under professional supervision. As soap bark is irritant to the digestive tract, internal use must be carefully monitored.

Ranunculus ficaria (Ranunculaceae)
Lesser Celandine, Pilewort

Description Mat-forming perennial growing to 15 cm (6 in). Has small tubers, fleshy heart-shaped leaves and shiny-petalled, brilliant yellow flowers.

Habitat & Cultivation Lesser celandine is native to western Asia, North Africa and Europe. Commonly found in woods, hedgerows and bare open spaces, it is collected when in flower in spring.

Parts Used Aerial parts.

Constituents Lesser celandine contains saponins, protoanemonin and anemonin, tannins and vitamin C.

History & Folklore Lesser celandine has been used from the earliest times as a medicine for the relief of haemorrhoids and ulcers. In medieval times it was believed that simply carrying lesser celandine on one's person was sufficient to cure haemorrhoids.

Lesser celandine is used fresh in ointments and suppositories to treat haemorrhoids.

Medicinal Actions & Uses Lesser celandine makes a useful ointment or suppository for treating haemorrhoids.

Related Species Various other *Ranunculus* species have been used in herbal medicine, even though all are toxic and irritant to a greater or lesser degree. In North America, the Meskawi people used the flowers and stigma of the yellow water crowfoot (*R. delphinifolius*) as a snuff to provoke sneezing, and mixed it with other herbs to treat respiratory conditions such as catarrh and nasal congestion.

Caution Do not take lesser celandine orally.

Self-help Use Haemorrhoids, p. 302.

Raphanus sativus (Brassicaceae)

Radish

Description Bristly annual growing to about 1 m (3 ft). Has a swollen tap root, deeply cut compound leaves, pale violet to lilac flowers and cylindrical seed pods.

Radish has been used since the 7th century to aid the digestion.

Habitat & Cultivation Radish is believed to be native to southern Asia. Cultivated varieties are grown around the world both as vegetables and for medicinal use. The root is unearthed in autumn.

Part Used Root.

Constituents Radish contains glucosilinates, which yield a volatile oil, raphanin, phenolic compounds and vitamin C. Raphanin is antibiotic; the phenolic compounds are antioxidant. The leaves are a highly nutritious and under-used food.

History & Folklore Herodotus (*c.* 485 – *c.* 425 BCE) wrote that the builders of the pyramids in ancient Egypt were paid in radishes, onions and garlic. In Egypt, the plant was used as a vegetable and a medicine. In ancient Rome, radish oil was applied to treat skin diseases. In China, radish was listed in the *Tang Materia Medica* (659 CE) as a digestive stimulant.

Medicinal Actions & Uses Radish stimulates the appetite and the digestion. The common red radish is eaten as a salad vegetable and an appetizer. The juice of the black radish is drunk to counter gassy indigestion and constipation. Black radish juice has a tonic and laxative action on the intestines, and indirectly stimulates the flow of bile. Consuming radish generally results in improved digestion, but some people are sensitive to its acridity and robust action. In China, radish is eaten to relieve abdominal distension. The root is also prepared "dry-fried" to treat chest problems.

Caution Avoid if gall stones are present.

Rauvolfia serpentina (Apocynaceae)

Indian Snakeroot,

Sarpagandha (Hindi)

Description Evergreen shrub growing to 1 m (3 ft). Has whorls of elliptical leaves, tiny pink and white tubular flowers and glossy red berries.

Habitat & Cultivation Indian snakeroot is native to much of southern and south-eastern Asia, including India, Malaysia and Indonesia. It is widely cultivated for medicinal use, notably in India and the Philippines. The root of plants at least 18 months old is unearthed in late winter.

Part Used Root.

Constituents Indian snakeroot contains a complex mixture of indole alkaloids, including reserpine, rescinnamine, ajmaline and yohimbine. Ajmaline has been used to regulate heart beat.

History & Folklore Indian snakeroot is listed in the *Charaka Samhita*, the earliest Ayurvedic medical text (*c.* 400 BCE). The plant has been used since at least that time to treat mental illness and insomnia. Indian snakeroot's status as a healing plant was first recorded in Europe in 1785, but it was not until 1946 that conventional Western medicine recognized the herb's efficacy. After that date, the whole plant, and its reserpine extract in particular, were widely used in conventional medicine to lower high blood pressure and lessen the symptoms of mental illness.

Medicinal Actions & Uses Indian snakeroot is useful in the treatment of high blood pressure and anxiety. The root has a pronounced sedative and depressant effect on the sympathetic nervous system. By reducing the system's activity, the herb brings about the lowering of blood pressure. It may also be used to treat anxiety and insomnia, as well as more serious mental health problems such as psychosis. Indian snakeroot is a slow-acting remedy and it takes some time for its effect to become fully established.

Research As indicated above, Indian snakeroot and its alkaloids have been extensively researched since the 1930s. Despite concerns raised in the medical journal *The Lancet* in 1974, there is little evidence to show that the root has serious side-effects at normal dosage.

Related Species The West African species *R. vomitoria* is used as a sedative, aphrodisiac and anticonvulsant in traditional African medicine.

Cautions Take only under professional supervision. Indian snakeroot is subject to legal restrictions in some countries.

Rhamnus frangula

syn. *Frangula* alnus (Rhamnaceae)

Alder Buckthorn

Description Deciduous shrub or small tree growing to 5 m (16 ft). Has smooth brown bark, oval to elliptical leaves, white flowers in late spring, and small round berries ripening from yellow to black.

Habitat & Cultivation Alder buckthorn grows in Europe (except for the Mediterranean region and the extreme north), and in north-eastern parts of the US. It prefers marshy woodland. The bark of trees at least 3–4 years old is collected in late spring and early summer, and is dried and stored for at least 1 year before use.

Part Used Bark.

Constituents Alder buckthorn contains 3–7% anthraquinones (including frangulin and emodin), anthrones, anthranols, an alkaloid (armepavine), tannins and flavonoids. The anthrones and anthranols induce vomiting, but the severity of their effect lessens after long-term storage. The anthraquinones found in alder buckthorn and closely related species act on the wall of the colon, stimulating a bowel movement approximately 8–12 hours after ingestion.

Medicinal Actions & Uses Alder buckthorn is a laxative and a cathartic, and is most commonly taken as a treatment for chronic constipation.

Once dried and stored, it is significantly milder than senna (*Cassia senna*, p. 75) or common buckthorn (*R. catharticus*) and may be safely used over the long-term to treat constipation and to encourage the return of regular bowel movements. Alder buckthorn is a particularly beneficial remedy if the muscles of the colon are weak, and if there is poor bile flow. The plant should not be used for constipation caused by excessive tension in the colon wall.

Alder buckthorn *bark is toxic when fresh but is safe to use once dried and stored for a year.*

Related Species Cascara sagrada (*R. purshiana*), native to woodlands along the Pacific coast of North America, is used medicinally in much the same way as alder buckthorn. Common buckthorn (*R. cartharticus*), a European native, is today used mainly in veterinary medicine.
Cautions Use only dried bark that has been stored for at least a year, as the fresh bark is violently purgative. The berries may also be harmful if eaten.

Rhus glabra (Anacardiaceae)
Smooth Sumach

Description Deciduous shrub growing to a height of about 2 m (6½ ft). Has straggling branches, compound leaves in pairs, large clusters of greenish-red flowers and downy deep red berries.
Habitat & Cultivation Native to North America, smooth sumach is found on the borders of woods, along fences and hedgerows and in neglected sites. The root bark is collected in autumn, the berries when ripe in late summer.
Parts Used Root bark, berries.
Constituents Smooth sumach contains tannins. Its other constituents are unknown.
History & Folklore Indigenous peoples across North America used smooth sumach and closely related species to treat haemorrhoids, rectal bleeding, dysentery, venereal disease, and bleeding after childbirth. John Josselyn, a 17th-century New England naturalist, observed: "the English use to boyl [the plant] in beer, and drink it for colds; and so do the Indians, from whom the English had the medicine."
Medicinal Actions & Uses The astringent root bark of smooth sumach is often used as a decoction. It is taken to alleviate diarrhoea and dysentery, applied externally to treat excessive vaginal discharge and skin eruptions, and used as a gargle for sore throats. The berries are diuretic, help reduce fever, and may be of use in late-onset diabetes. The berries are also astringent and can be used as a gargle for both mouth and throat complaints.
Related Species Sweet sumach (*R. aromatica*) has a similar range of uses. Poison ivy (*R. toxicodendron*) was formerly used in herbal medicine as a treatment for rheumatism, paralysis and certain skin disorders. It is itself highly irritant to the skin, and causes severe dermatitis.

Ribes nigrum (Grossulariaceae)
Blackcurrant

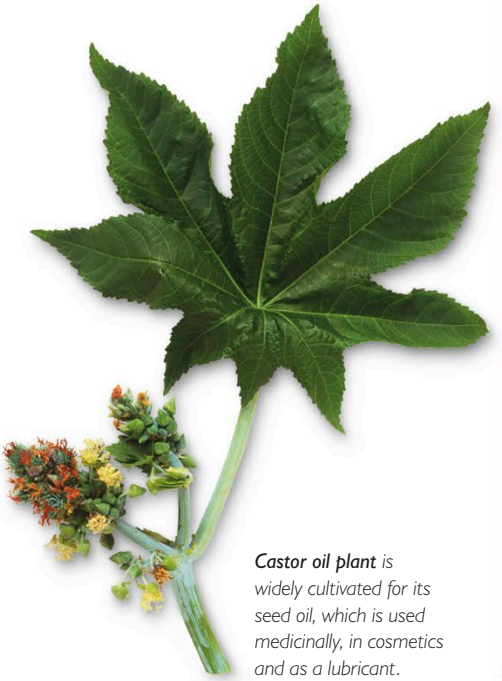
Description Erect deciduous shrub growing to 1.5 m (5 ft). Has serrated, palm-shaped lobed leaves, small greenish-white flowers and clusters of black berries.

Blackcurrant *fruit is harvested in summer. The juice is extremely rich in vitamin C.*

Habitat & Cultivation Blackcurrant is native to the temperate regions of Europe, western and central Asia and the Himalayas. It is grown mainly in eastern Europe for its sour-sweet fruit. The leaves are gathered in early summer, the berries when ripe in mid to late summer.
Parts Used Leaves, berries.
Constituents Blackcurrant leaves contain flavonoids, tannins, proanthocyanidins, prodelphinidins and a volatile oil. The berries contain flavonoids, flavonols, proanthocyanidins and sugars (10–15%). The seeds contain the essential fatty acids linoleic and alpha-linolenic acids, and up to 18% gamma-linolenic acid and 9% stearidonic acid. (However, most blackcurrant oil available on the market has been refined and will not contain these oils.) The proanthocyanidins, especially in the fruit, are strongly antioxidant and anti-inflammatory, and like bilberry (*Vaccinium myrtilis*, p. 147) exert a protective activity on the capillaries. The prodelphinidins are anti-inflammatory.
Medicinal Actions & Uses In Europe, blackcurrant leaves are used for their diuretic effect. By encouraging the elimination of fluid, the leaves help to reduce blood volume and thereby to lower blood pressure. The leaves are also used as a gargle for sore throats and mouth ulcers. According to French investigators, blackcurrant leaves increase the secretion of cortisol by the adrenal glands, and thus stimulate the activity of the sympathetic nervous system. This action may prove useful in the treatment of stress-related conditions. Blackcurrant berries and their juice are high in vitamin C. They help improve resistance to infection and make a valuable remedy for treating colds and flu. According to the herbal authority R. F. Weiss, the juice is "as good as, if not better than, lemon juice (*Citrus limon*) for patients with pneumonia, influenza, etc." The juice also helps to stem diarrhoea and calms indigestion. Juice that is fresh or vacuum-sealed is more effective than concentrate.

Ricinus communis (Euphorbiaceae)
Castor Oil Plant

Description Evergreen shrub growing to about 10 m (33 ft) in its natural state, but a much smaller annual when cultivated. Has large, palm-shaped leaves, green female flowers and prickly red seed capsules.

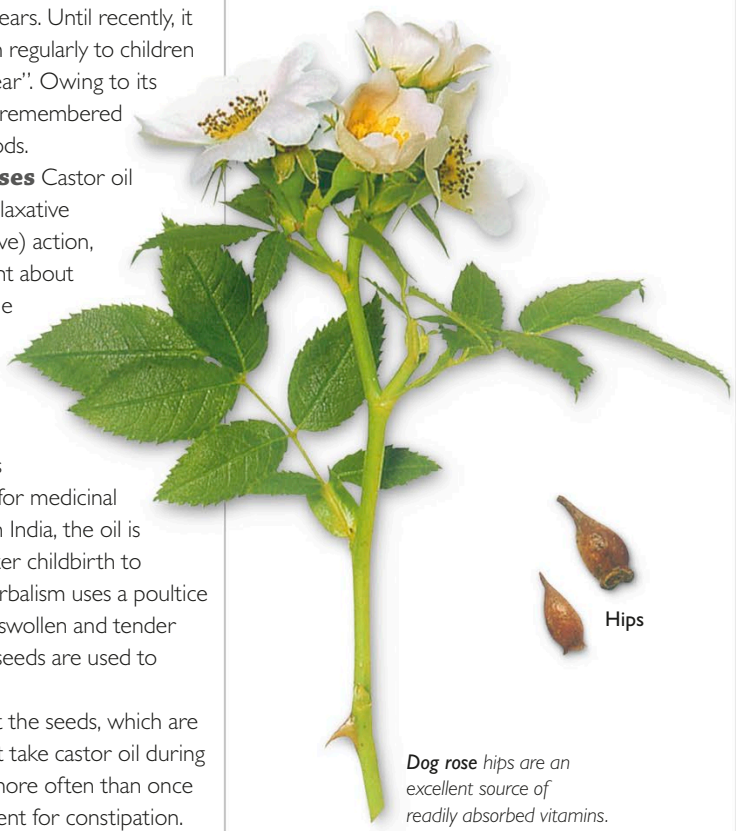


Castor oil plant *is widely cultivated for its seed oil, which is used medicinally, in cosmetics and as a lubricant.*

Habitat & Cultivation Castor oil plant is probably native to eastern Africa. It is cultivated in hot climates around the world. The seed capsules are gathered throughout the year when nearly ripe and are then put out in the sun to mature.
Parts Used Seed oil, seeds.
Constituents The seeds contain 45–55% fixed oil, which consists mainly of glycerides of ricinoleic acid, ricin (a highly toxic protein), ricinine (an alkaloid) and lectins. The seeds are highly poisonous – 2 are sufficient to kill an adult – but the toxins do not pass into the expressed oil.
History & Folklore Castor oil has been used medicinally for about 4,000 years. Until recently, it was a common remedy given regularly to children "to help keep the system clear". Owing to its unpleasant taste, castor oil is remembered as the bane of many childhoods.
Medicinal Actions & Uses Castor oil is well known for its strongly laxative (and, in higher doses, purgative) action, prompting a bowel movement about 3–5 hours after ingestion. The oil is so effective that it is regularly used to clear the digestive tract in cases of poisoning. Castor oil is well tolerated by the skin, and it is sometimes used as a vehicle for medicinal and cosmetic preparations. In India, the oil is massaged into the breasts after childbirth to stimulate milk flow. Indian herbalism uses a poultice of castor oil seeds to relieve swollen and tender joints. In China, the crushed seeds are used to treat facial palsy.
Cautions Do not ingest the seeds, which are extremely poisonous. Do not take castor oil during pregnancy, and do not take more often than once every few weeks as a treatment for constipation.

Rosa canina (Rosaceae)
Dog Rose

Description Climbing perennial growing to a height of 3 m (10 ft). Has curved thorns, leaves with 2–3 pairs of toothed leaflets, pink or white flowers and scarlet fruit (called "hips").
Habitat & Cultivation Native to Europe, temperate areas of Asia and North Africa, dog rose grows in hedgerows and thickets and on wasteground. The fruit is picked in autumn.
Part Used Hips.
Constituents Dog rose hips contain vitamins C (up to 1.25%), A, B_1, B_2, B_3 and K, flavonoids, tannins (2–3%), invert sugar, pectin, plant acids, polyphenols, carotenoids, volatile oil and vanillin.
History & Folklore The hips of the dog rose were a popular sweetmeat in the Middle Ages. The plants were not esteemed to the same degree as were cultivated roses (*R. gallica, following entry*), but dog rose was valued as the source of a widely used folk remedy for chest problems.
Medicinal Actions & Uses Dog rose hips have extremely high levels of vitamins. When consumed fresh, they provide vitamins and other nutrients in a form that is readily absorbed by the body. This makes rose hip syrup a nourishing drink for young children. The tannin content of rose hips makes them a gentle remedy for diarrhoea. The hips are mildly diuretic.



***Dog rose** hips are an excellent source of readily absorbed vitamins.*

Research Clinical studies investigating the use of rose hip extracts for osteoarthritis, rheumatoid arthritis and lower back pain have produced mixed results. Some have shown positive benefits, others none. It is likely that some people will benefit more than others, and given that rose hip extracts are very safe, rose hips and rose hip extract are well worth trying for arthritic conditions.

Rosa gallica (Rosaceae)
Rose

Description Deciduous shrub growing to about 1.5 m (5 ft). Has a smooth stem, sharp thorns, serrated leaves wih 2–3 pairs of leaflets, semi-double deep pink or red flowers and scarlet hips.
Habitat & Cultivation Native to the Middle East, the rose is not now found in the wild except as a garden escape. It has been cultivated for at least 3,000 years. The flowers are gathered in summer.
Parts Used Flowers, essential oil.
Constituents Rose contains a volatile oil consisting of geraniol, nerol, citronellol, geranic acid and other terpenes, and many other substances.
History & Folklore The rose comes originally from Iran and has been cultivated there since antiquity. Sappho, the 6th-century BCE Greek poet, described the red rose as the "Queen of flowers". In Rome, it was much used in festivities and the petals were consumed as food. Rosewater was prepared by the Arab physician Avicenna (980–1037 CE). During the Middle Ages and the Renaissance, the rose was esteemed as a remedy for depression.
Medicinal Actions & Uses The rose is currently little used in herbal medicine, but it is probably time for a re-evaluation of its medicinal benefits. The essential oil, called "attar of rose", is used in aromatherapy as a mildly sedative, antidepressant and anti-inflammatory remedy. Rose petals and their preparations have a similar action. They also reduce high cholesterol levels. Rosewater is mildly astringent and makes a valuable lotion for inflamed and sore eyes.
Caution Do not take the essential oil internally without professional supervision.

Rubia tinctorum (Rubiaceae)
Madder

Description Evergreesn perennial growing to 1 m (3 ft). Has whorls of finely toothed lance-shaped leaves, greenish-white flowers and black berries containing 2 seeds.
Habitat & Cultivation Madder is native to southern Europe, western Asia and North Africa. It flourishes on wasteground, in hedgerows and amid rubble. The root is unearthed in autumn.
Part Used Root.
Constituents Madder contains anthraquinone derivatives (including ruberythric acid, alizarin and purpurin), an iridoid (asperuloside), resin and calcium.
History & Folklore Throughout history, madder has been used principally as a red dye for a variety of fabrics. In the ancient world, madder root was taken medicinally to treat jaundice, sciatica and paralysis, and it was also used as a diuretic. When ingested, madder imparts its distinctive colour to bones, milk and urine, and it probably owed much of its reputation as a diuretic to this property.
Medicinal Actions & Uses Madder fell largely out of use in the 19th century, and is now only rarely employed to treat kidney and bladder stones.

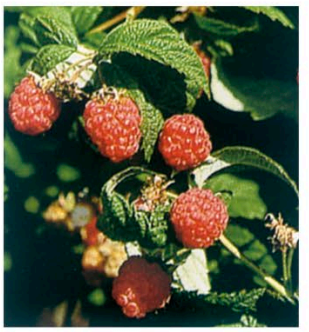
Rubus fruticosus (Rosaceae)
Blackberry

Fruit

Description Sprawling prickly shrub growing to 4 m (13 ft). Has palm-shaped leaves with 3–5 lobes, white to pale pink flowers and clusters of black berries.
Habitat & Cultivation Native to temperate areas of Europe, blackberry is naturalized in the Americas and in Australia. It is commonly found on wasteground, in hedgerows and woodland. The leaves are gathered in summer, the berries in summer and autumn.
Parts Used Leaves, berries.
Constituents Blackberry leaves contain tannins, flavonoids, and gallic acid. The fruit contains anthocyanins, pectin, fruit acids and vitamin C.
History & Folklore As early as the 1st century CE, the physician Dioscorides recommended ripe blackberries in a gargle for sore throats. In European folk medicine, blackberry leaves have long been used for washing and staunching wounds. Arching blackberry runners that had rooted at both ends were credited with magical properties. In England, for example, children with hernias were pushed under arched runners for a magical cure.
Medicinal Actions & Uses Blackberry leaves are strongly astringent and may be used as a mouthwash to strengthen spongy gums and ease mouth ulcers, as a gargle for sore throats and as a decoction to relieve diarrhoea and haemorrhoids. Like many red or purple fruits, such as bilberry (*Vaccinium myrtillus*, p. 147), blackberry fruit and juice has significant antioxidant and anti-inflammatory activity, helping to maintain a healthy circulation.
Related Species See raspberry (*R. idaeus, following entry*).

Rubus idaeus (Rosaceae)
Raspberry

Description Deciduous shrub growing to 2 m (6½ ft). Has woody stems with prickles, pale green leaves with 3–7 leaflets, white flowers and red berries.
Habitat & Cultivation Native to Europe and Asia, raspberry now grows wild and is cultivated in many temperate regions. The leaves are collected in early summer, the fruit when ripe in summer.
Parts Used Leaves, fruit.
Constituents The fruit contains polyphenols, especially anthocyanins, which have antioxidant and anti-inflammatory activity, pectin, fruit sugars and acids. Raspberry seed oil is rich in vitamin E, carotenes and essential fatty acids, and is increasingly used in cosmetic skin products.
History & Folklore In 1735, the Irish herbalist K'Eogh described uses for raspberry: "an application of the flowers bruised with honey is beneficial for inflammations of the eyes, burning fever and boils … The fruit is good for the heart and diseases of the mouth."
Medicinal Actions & Uses Raspberry leaves are mainly used to encourage easy labour. While the specific mode of action is unknown, the leaves are thought to strengthen the longitudinal muscles of the uterus, increasing the force of contractions and thereby hastening childbirth. A decoction of raspberry leaves may be used to relieve diarrhoea. The leaves also find use as an astringent external remedy – as an eyewash for conjunctivitis, a mouthwash for mouth problems, or a lotion for ulcers, wounds or excessive vaginal discharge.


***Raspberry** leaves and fruit have been used since classical times as an astringent remedy.*

Research A laboratory study in 2012 found that a raspberry fruit extract reduced joint inflammation, cartilage damage and bone resorption.
Caution Do not take medicinally during the early stages of pregnancy.
Self-help Use Preparing for childbirth, p. 317.

Rumex acetosella (Polygonaceae)
Sheep's Sorrel

Description Slender low-growing perennial. Has arrow-shaped leaves and terminal spikes bearing small green flowers that turn red as their seeds ripen.
Habitat & Cultivation Sheep's sorrel is found in most temperate regions of the world. It grows on wasteground and in meadows, and is gathered in early summer.
Parts Used Aerial parts.
Constituents Sheep's sorrel contains oxalates and anthraquinones (including chrysophanol, emodin and physcion).
History & Folklore Apart from its role as a salad vegetable, sheep's sorrel is an ingredient of an anti-cancer remedy known as essiac. A Native American formula, essiac also includes burdock (*Arctium lappa*, p. 65) and slippery elm (*Ulmus rubra*, p. 145). Western herbalists learned of it early in the 20th century, after a Canadian nurse observed the recovery from breast cancer of a patient who had taken the formula. Essiac has since had a chequered history. Despite attempts to initiate proper clinical trials, none has yet been undertaken.
Medicinal Actions & Uses Sheep's sorrel is a detoxifying herb, the fresh juice having a pronounced diuretic effect. Like other members of the dock family, sheep's sorrel is mildly laxative, and holds out potential as a long-term treatment for chronic disease, in particular that of the gastro-intestinal tract.
Related Species Sorrel (*R. acetosa*) is a European relative that is also taken for its detoxifying effect. *See also* yellow dock (*R. crispus, following entry*) and Chinese rhubarb (*Rheum palmatum*, p. 126).
Caution Sheep's sorrel should not be taken by anyone with a tendency to develop kidney stones.

Rumex crispus (Polygonaceae)
Yellow Dock,
Curled Dock

Description Perennial, growing to 1 m (3 ft), with lance-shaped leaves and many small green flowers arranged in whorls on the upper part of the stem.
Habitat & Cultivation A common wayside plant in many regions of the world, yellow dock thrives in ditches, on verges and on wasteland, and barely needs cultivation. The roots are dug up in autumn, chopped and dried.
Parts Used Root.
Constituents Yellow dock contains anthraquinones (about 2.5%), tannins (3–6%), flavonoids and oxalates.
Medicinal Actions & Uses Though a valuable herb, yellow dock is not often used on its own, being combined with other depurative herbs such as burdock root (*Arctium lappa*, p. 65) and dandelion root (*Taraxacum officinale*, p. 141) for long-term toxic conditions. Its gentle laxative action makes it a valuable remedy for constipation, particularly when combined with changes to the diet such as increased bulk and fibre. By stimulating large bowel function, the faeces are eliminated more efficiently, with reduced reabsorption of waste products, a form of toxicity which tends to occur in a poorly functioning colon. Yellow dock is also thought to improve the flow of bile, which further contributes to its detoxifying activity. It is also typically taken for skin conditions such as acne, eczema and fungal infections, and for arthritic problems.
Research The anthraquinones are purgative and laxative (see *Cassia senna*, p. 75), but this activity is tempered by the tannins, which counter the

irritant effect of the anthraquinones within the gut. The presence of oxalates suggests that yellow dock is best avoided in gout and kidney stones. The leaf has high levels of oxalates, and poisoning and death have resulted from eating the leaves as a salad vegetable.
Caution Avoid during pregnancy and while breast-feeding.

Ruscus aculeatus (Liliaceae)

Butcher's Broom

Description Bushy evergreen perennial growing to 1 m (3 ft). Has leaf-like leathery branches with a terminal spine, greenish-white flowers and shiny red berries.
Habitat & Cultivation Butcher's broom is found throughout much of Europe, western Asia and North Africa. It is a protected species, growing wild in woodland and on uncultivated ground. Cultivated plants are gathered in autumn when in fruit.
Parts Used Aerial parts, rhizome.
Constituents Butcher's broom contains saponin glycosides, including ruscogenin and neoruscogenin. These constituents have a structure similar to that of diosgenin, found in wild yam (*Dioscorea villosa*, p. 91). They are anti-inflammatory and cause the contraction of blood vessels, especially veins.
History & Folklore Much used in antiquity, butcher's broom was described by the 1st century CE Greek physician Dioscorides as having the ability to promote urine flow and menstrual bleeding. The plant's name comes from its use as a broom in butchers' shops in Europe up until the 20th century.
Medicinal Actions & Uses Though little used in Anglo-American herbal medicine, butcher's broom is now a common remedy in Germany for venous problems. It has been shown to have a directly positive effect on varicose veins and haemorrhoids, preventing increased tensing of the veins and helping the return of excess fluid into the veins. Extracts can be taken orally or applied to affected legs.
Research A growing body of research is demonstrating that butcher's broom is a valuable medicine for venous disorders. In a clinical trial, patients with varicose veins who applied a butcher's broom extract to their legs showed a contraction of 1.25 mm in their femoral artery within 2½ hours. A paper published in the *Journal of Complementary and Alternative Medicine* in 2000 identifies butcher's broom as have great potential as a medicine for orthostatic hypotension (a specific form of low blood pressure).
Caution Do not take butcher's broom if suffering from high blood pressure.

Ruta graveolens (Rutaceae)

Rue

Description Strongly aromatic evergreen perennial growing to 1 m (3 ft). Has fleshy 3-lobed leaves, yellow-green 5-petalled flowers and round seed capsules.

Rue powerfully induces menstruation.

Habitat & Cultivation Rue grows in the Mediterranean region, preferring open sunny sites. It is also cultivated in many parts of the world as both a garden ornamental and a medicinal plant. The aerial parts are gathered in summer.
Parts Used Aerial parts.
Constituents Rue contains about 0.5% volatile oil (including 50–90% 2-undecanone), flavonoids (including rutin), furanocoumarins (including bergapten), about 1.4% furoquinoline alkaloids (including fagarine, arborinine, skimmianine, and others). Rutin has the effect of supporting and strengthening the inner lining of blood vessels and reducing blood pressure.
History & Folklore In ancient Greece and Egypt, rue was employed to stimulate menstrual bleeding, to induce abortion and to strengthen the eyesight.
Medicinal Actions & Uses Rue is chiefly used to encourage the onset of menstruation. It stimulates the muscles of the uterus and promotes menstrual blood flow. In European herbal medicine, rue has also been taken to treat conditions as varied as hysteria, epilepsy, vertigo, colic, intestinal worms, poisoning and eye problems. The latter use is well founded, as an infusion used as an eyewash brings quick relief to strained and tired eyes, and reputedly improves the eyesight. Rue has been used to treat many other conditions, including multiple sclerosis and Bell's palsy.
Research Rue is currently being investigated for its potential use as an anti-cancer treatment.
Related Species The related species, *R. chalepensis*, which is also native to the Mediterranean region, is used to expel worms, to promote menstrual flow and to soothe sore eyes.
Cautions Rue is toxic in excess. Never take during pregnancy. The fresh plant frequently causes dermatitis, so wear gloves while handling it. Taken internally, rue may cause an allergic skin reaction to sunlight.

Salvia sclarea (Lamiaceae)

Clary Sage

Description Square-stemmed biennial growing to 1 m (3 ft). Has hairy wrinkled leaves and whorls of pale blue flowers.
Habitat & Cultivation Native to southern Europe and the Middle East, clary sage is now cultivated in France and Russia for its essential oil. It prefers sunny conditions and dry soil. It is gathered in summer, usually in its second year.
Parts Used Aerial parts, seeds, and the essential oil.
Constituents Clary sage contains 0.1% volatile oil (consisting mainly of linalyl acetate and linalool), diterpenes and tannins.
History & Folklore Clary sage has been perceived both as a weaker version of its close relative, sage (*S. officinalis*, p. 131), and as a significant herb in its own right. Since the seeds were once commonly used to treat eye problems, clary sage was also known as "clear eye".
Medicinal Actions & Uses An antispasmodic and aromatic plant, clary sage is used today mainly to treat digestive problems such as wind and indigestion. It is also regarded as a tonic, calming herb that helps relieve period pain and premenstrual problems. Owing to its oestrogen-stimulating action, it is most effective when levels of this hormone are low. The plant can therefore be a valuable remedy for complaints that are associated with the menopause, particularly hot flushing.
Cautions Do not take clary sage essential oil internally. Do not use clary sage during pregnancy.

Sanguinaria canadensis (Papaveraceae)

Blood Root

Description Perennial plant growing to 15 cm (6 in). Has palm-shaped leaves and solitary flower stems bearing attractive white flowers with 8–12 petals.

Habitat & Cultivation Native to north-eastern North America, blood root grows in shady woods. It is cultivated as a garden plant. The rhizome is unearthed in summer or autumn.

Part Used Rhizome.

Constituents Blood root contains isoquinoline alkaloids, notably sanguinarine (1%), and many others, including berberine. Sanguinarine is a strongly expectorant substance that also has antiseptic and local anaesthetic properties.

History & Folklore Blood root was a traditional remedy of Native Americans, who used it to treat fevers and rheumatism, to induce vomiting, and as an element in divination. The rhizome's bright red juice has been used as a rouge. From 1820 to 1926, blood root was listed as an expectorant in the *Pharmacopoeia of the United States*.

Medicinal Actions & Uses

In contemporary herbal medicine, blood root is chiefly employed as an expectorant, promoting coughing and the clearing of mucus from the respiratory tract. The plant is prescribed for chronic bronchitis and – as it also has an antispasmodic effect – for asthma and whooping cough. Blood root may also be used as a gargle for sore throats, and as a wash or ointment for fungal and viral skin conditions such as athlete's foot and warts.

Blood root

Cautions Take only under professional supervision and do not exceed the dose. Blood root induces vomiting in all but very small doses, and at excessive doses it is toxic. Do not take during pregnancy, while breast-feeding or if suffering from glaucoma.

Sanguisorba officinalis syn. *Poterium officinalis* (Rosaceae)

Greater Burnet

Description Perennial herb growing to 60 cm (2 ft). Has long-stalked compound leaves with 13 leaflets, and purple flowers.

Habitat & Cultivation Native to Europe, North Africa and temperate regions of Asia, greater burnet flourishes in damp pastures, especially in mountainous regions. It is cultivated as a fodder crop and as a salad vegetable, and is gathered in summer.

Parts Used Aerial parts, root.

Constituents Greater burnet contains tannins, including sanguisorbic acid, dilactone (a phenolic acid) and gum.

History & Folklore In Europe, greater burnet has long been used as a fodder for animals and as an ingredient in beer-making. As its Latin name implies, it has also been employed as a wound healer: *sanguis* means "blood"; *sorbeo* means "I staunch".

Medicinal Actions & Uses Greater burnet is still used to slow or arrest blood flow. In both the Chinese and European traditions, it is taken internally to treat heavy periods and uterine haemorrhage. Externally, a lotion or ointment may be used for haemorrhoids, burns, wounds and eczema. Greater burnet is also a valuable astringent and is employed for a variety of gastro-intestinal problems, including diarrhoea, dysentery and ulcerative colitis, particularly if accompanied by bleeding.

Research Chinese research indicates that the whole herb heals burns more effectively than the extracted tannins. Patients suffering from eczema showed marked improvement when treated with an ointment made from greater burnet root and petroleum jelly.

Sanicula europaea (Apiaceae)

Sanicle

Description Perennial growing to 40 cm (16 in). Has long-stalked, palm-shaped, shiny leaves, with clusters of pale pink to greenish-white flowers.

Habitat & Cultivation Found throughout most of Europe and western and central Asia, sanicle is common in woodland areas, particularly in damp shady sites. It is collected in summer.

Parts Used Aerial parts.

Constituents Sanicle contains up to 13% saponins, allantoin, a volatile oil, tannins, chlorogenic and rosmarinic acid, mucilage and vitamin C. Allantoin increases the healing rate of damaged tissue. Rosmarinic acid is anti-inflammatory.

History & Folklore Sanicle derives from *sanus*, meaning "whole" or "sound" in Latin. St Hildegard of Bingen (1098–1179), who wrote the earliest extant description of sanicle's use in healing wounds, states of the herb that it "is hot, and there is much purity in it, and its juice is sweet and healthful, that is wholesome". During the 15th and 16th centuries sanicle became a popular herbal medicine. The 17th-century English herbalist Nicholas Culpeper praised sanicle's ability "to heal all green wounds speedily, or any ulcer, imposthumes, or bleedings inwardly", and compared its benefits to those of comfrey (*Symphytum officinale*, p. 138) and self-heal (*Prunella vulgaris*, p. 256).

Medicinal Actions & Uses With its long-standing reputation for healing wounds and treating internal bleeding, sanicle is a potentially valuable plant, but it is little used in contemporary herbal medicine. Sanicle may be used to treat bleeding within the stomach or intestines, the coughing up of blood and nosebleeds. It may also be of use in treating diarrhoea and dysentery, bronchial and catarrhal problems and sore throats. This herb is traditionally thought to be detoxifying and has also been taken internally for skin problems. Externally, sanicle may be applied in the form of a poultice or ointment for the treatment of wounds, burns, chilblains, haemorrhoids and inflamed skin.

Santalum album (Santalaceae)

Sandalwood,

Chandan

Description Semi-parasitic evergreen tree growing to 10 m (33 ft). Has lance-shaped leaves, clusters of pale yellow to purple flowers, and small, nearly black fruit.

Habitat & Cultivation Native to eastern India, sandalwood is cultivated in South-East Asia for its wood and essential oil. The trees are felled throughout the year.

Parts Used Wood, essential oil.

Constituents Sandalwood contains 3–6% volatile oil (which consists predominantly of the sesquiterpenols alpha- and beta-santalol), resin and tannins.

Sandalwood

History & Folklore Sandalwood's aroma has been highly esteemed in China and India for thousands of years. The wood is often burned as incense and plays a part in Hindu ritual. The heartwood is most often used in perfumery, but it has also been taken as a remedy in China since around 500 CE.

Medicinal Actions & Uses Sandalwood and its essential oil are used for their antiseptic properties in treating genito-urinary conditions such as cystitis and gonorrhoea. In Ayurvedic medicine, a paste of the wood is used to soothe rashes and itchy skin. In China, sandalwood is held to be useful for chest and abdominal pain.

Caution Do not take sandalwood essential oil internally.

Saponaria officinalis
(Caryophyllaceae)

Soapwort

Description Perennial growing to a height of 1 m (3 ft). Soapwort has lance-shaped leaves and clusters of delicate pink 5-petalled tubular flowers.
Habitat & Cultivation Native to temperate regions of Europe, Asia and North America, soapwort thrives in open woodland and on embankments and wasteground. It has been widely cultivated as a garden plant. The herb is gathered while in flower in summer; the root is unearthed in autumn.
Parts Used Root, aerial parts.
Constituents All parts of soapwort contain saponins (around 5%), resin and a small quantity of volatile oil.

***Soapwort** is an expectorant plant used to relieve bronchitis and coughs.*

History & Folklore Soapwort has mostly been used as a substitute for soap, especially in washing clothes. Boerhaave (1668–1738), a Dutch physician, recommended soapwort as a treatment for jaundice.
Medicinal Actions & Uses Soapwort's main internal use is as an expectorant. Its strongly irritant action within the gut is thought to stimulate the cough reflex and increase the production of a more fluid mucus within the respiratory passages. Consequently, the plant is prescribed for bronchitis, coughs and some cases of asthma. Soapwort may be taken for other problems, including rheumatic and arthritic pain. A decoction of the root, and, to a lesser extent, an infusion of the aerial parts of the herb, make soothing washes for eczema and other itchy skin conditions.
Cautions Soapwort is a potentially toxic herb. Take internally only under professional supervision.

Sargassum fusiforme
(Sargassaceae)

Hai Zao

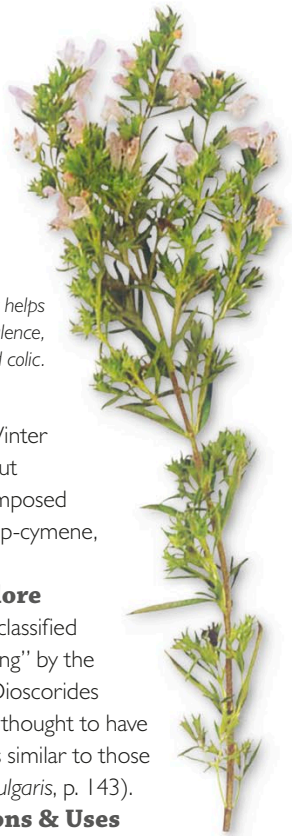
Hijiki

Description Brown seaweed (alga) with long thin fronds.
Habitat & Cultivation *Hai zao* is found along the coastlines of China and Japan, where it is often seen floating in large masses. It is gathered throughout the year.
Part Used Whole plant.
Constituents *Hai zao* contains polysaccharides, alginic acid and significant levels of potassium and iodine.
History & Folklore Wang Tao, an 8th-century Chinese physician, recommended *hai zao* for goitre (an enlargement of the thyroid gland due to iodine deficiency). *Hai zao* is eaten as a vegetable in Chinese and Japanese cuisine.
Medicinal Actions & Uses *Hai zao* is used in a similar way to its European counterpart, the seaweed bladderwrack, or kelp, (*Fucus vesiculosus*, p. 213). In Chinese medicine, it is given principally to treat thyroid problems caused by low iodine levels within the body. The herb also helps to combat other thyroid conditions that produce enlargement of the gland, for example Hashimoto's thyroiditis. *Hai zao* is prescribed to treat cases of scrofula (enlargement of the lymph glands in the neck due to tubercular infection) and oedema (fluid retention).
Research Chinese research indicates that *hai zao* has antifungal and immunomodulating activity.
Related Species In Chinese medicine, *S. fusiforme* is used interchangeably with *S. pallidum*.
Caution Do not take *hai zao* for thyroid problems without professional supervision.

Satureja montana (Lamiaceae)

Winter Savory

Description Semi-evergreen aromatic herb growing to 40 cm (16 in). Has lance-shaped leaves and white-pink flowers appearing in clusters.
Habitat & Cultivation Native to southern Europe, winter savory thrives in sunny, well-drained sites. It is commonly cultivated as a garden herb. The flowering tops are collected in summer.
Parts Used Flowering tops, essential oil.



***Winter savory** helps to alleviate flatulence, indigestion and colic.*

Constituents Winter savory contains about 1.6% volatile oil, composed mainly of carvacrol, p-cymene, linalool and thymol.
History & Folklore Winter savory was classified as "heating and drying" by the classical physicians Dioscorides and Galen, and was thought to have therapeutic benefits similar to those of thyme (*Thymus vulgaris*, p. 143).
Medicinal Actions & Uses Winter savory is most often used in cookery, but it also has marked medicinal benefits. It settles wind and stimulates the digestion, helping to alleviate flatulence and colic. It is warming and has been taken for chest infections and bronchitis. The essential oil is strongly antibacterial and may be used to treat candidiasis and other fungal conditions.
Related Species Summer savory (*S. hortensis*) is a similar herb that has a milder essential oil. Calamint (*Calamintha ascendens*, p. 181) is another close relative.
Cautions Do not take the essential oil internally without professional supervision. Do not take winter savory during pregnancy.

Saussurea lappa
syn. *S. costus* (Asteraceae)

Kuth

Description Upright perennial herb growing to 3 m (10 ft). Has heart-shaped leaves and blue-black flowerheads.
Habitat & Cultivation Native to the Indian sub-continent, kuth is most commonly found in mountainous areas of Kashmir. The root is gathered in autumn.
Parts Used Root, essential oil.
Constituents Kuth contains a volatile oil (consisting of terpenes, sesquiterpenes and aplotaxene), an alkaloid (saussarine) and a resin. Saussarine depresses the parasympathetic nervous system.

History & Folklore Kuth root has been used in Indian medicine for at least 2,500 years. It has also been exported to China and the Middle East. The fragrant root is often used in perfumery. In India, it is valued as an aphrodisiac and for its reputed ability to prevent grey hair.
Medicinal Actions & Uses Kuth is used in the Ayurvedic and Unani Tibb traditions in India for its tonic, stimulant and antiseptic properties. The root is commonly taken, in combination with other herbs, for respiratory system problems such as bronchitis, asthma and coughs. It is also used to treat cholera.
Related species *S. amara* is used in Mongolian herbal medicine to treat bacterial infections and gall bladder disease.
Caution Do not take kuth essential oil internally.

Schizonepeta tenuifolia
(Lamiaceae)

Jing Jie

Description Perennial plant growing to 8 m (26 ft) with upright square stems, lance-shaped leaves, and whorls of small flowers.
Habitat & Cultivation Native to the Far East, *jing jie* is widely cultivated in eastern China. The aerial parts of the plant are gathered in autumn.
Parts Used Aerial parts.
Constituents *Jing jie* contains a volatile oil, the main constituents of which are menthone and limonene.
Medicinal Actions & Uses In the Chinese tradition, *jing jie* is valued as an aromatic and warming herb. It is taken to alleviate skin conditions such as boils and itchiness. *Jing jie* also induces sweating and is used to treat fever and chills, and as a remedy for measles. It is often combined with *bo he* (*Mentha haplocalyx*, p. 234).
Research Chinese studies have confirmed *jing jie's* ability to increase blood flow in the vessels just beneath the skin.

Scolopendrium vulgare
(Polypodiaceae)

Hartstongue

Description Evergreen fern growing to 60 cm (2 ft). Has long, tongue-shaped fronds with twin rows of spores on the underside.
Habitat & Cultivation Hartstongue is found throughout much of Europe, North Africa, East Asia and North America. It prefers shaded sites in woodland and on banks and walls. The fronds are gathered throughout the summer.
Parts Used Fronds.

Hartstongue *is found growing in shady woodland sites across the northern hemisphere.*

Constituents Hartstongue contains tannins, mucilage and flavonoids (including leucodelphidin).
History & Folklore Hartstongue has been prescribed as a treatment for diarrhoea and dysentery for at least 2,000 years. In Wales and the Scottish Highlands, it was traditionally used as a poultice for wounds, scalds and burns, and as an ointment for haemorrhoids. In Japan, the fronds were smoked by the Ainu people.
Medicinal Actions & Uses Hartstongue was valued in the past for its ability to heal wounds, but today it is employed chiefly as a mild astringent. It is sometimes used in the treatment of diarrhoea and mucous colitis, and it may be of benefit to the liver and spleen. Hartstongue appears to have expectorant properties, and it is also mildly diuretic.

Scrophularia nodosa
(Scrophulariaceae)

Figwort

Description Upright perennial herb growing to 1 m (3 ft). Has a square stem, oval leaves, small round brown flowers in clusters and green seed capsules.
Habitat & Cultivation Native to Europe, Central Asia and North America, figwort thrives in wet or damp places, in open woodland, on riverbanks and alongside ditches. The herb is gathered in the summer while in flower.
Parts Used Aerial parts.
Constituents Figwort contains iridoids (including aucubin, harpagoside, and acetyl harpagide), flavonoids, cardioactive glycosides and phenolic acids. Harpagoside and harpagide are thought to account for its anti-arthritic activity.
History & Folklore Figwort's genus name, *Scrophularia*, alludes to the plant's age-old use as a treatment for scrofula. In this condition, the lymph nodes of the neck, infected with tuberculosis, swell to form hard protruding lumps beneath the skin. Figwort root resembles these swollen glands and therefore, according to the Doctrine of Signatures (which holds that a plant's appearance indicates the ailments it treats), the herb was considered to be an appropriate remedy for treating scrofula. Indeed, in the 16th and 17th centuries, figwort was esteemed as the best medicinal plant to help relieve all manner of swellings and tumours.
Medicinal Actions & Uses Figwort is a herb that supports detoxification of the body and may be used as a treatment for various types of skin conditions. Taken internally as an infusion or applied externally, figwort is of value in treating chronic skin diseases such as eczema and psoriasis. Applied externally, it will also help speed the healing of burns, wounds, haemorrhoids and ulcers. The traditional use of figwort as a treatment for swellings and tumours continues in Europe to this day. The herb is also mildly diuretic, and it is reputed to be effective when used to expel worms.
Related Species Water figwort (*S. aquatica*), another plant that is native to Europe, has similar properties, as does the American *S. marylandica*. In China, *S. ningopoensis* is used to treat infections and to clear toxicity.
Caution Do not take figwort if suffering from a heart condition.

Selenicereus grandiflorus
(Cactaceae)

Night-blooming Cereus

Description Climbing multibranched perennial cactus with upright cylindrical stems and aerial roots. Produces large flowerbuds opening into night-blooming white flowers that grow to 20 cm (8 in) across, and red oval fruit.
Habitat & Cultivation Native to Mexico and Central America, night-blooming cereus is now rarely found in the wild. It is cultivated both as an ornamental and a medicinal plant. The flowers and young stems are gathered in summer.
Parts Used Flowers, young stems.
Constituents Night-blooming cereus contains alkaloids (including cactine), flavonoids (isorhamnetin) and a pigment. Cactine's cardiotonic effect is considered similar to that of cardiac glycosides (see foxglove, *Digitalis species*, p. 202).
Medicinal Actions & Uses As it is in short supply, night-blooming cereus is little used at present, but it is a valuable remedy for the heart. It stimulates the action of the heart, increasing the strength of contractions while slowing heart rate. It is prescribed as a treatment for various conditions,

including angina and low blood pressure, and is often given as a tonic during recovery from a heart attack. In the Caribbean, the juice of the whole plant is used to expel worms, and the stems and flowers are used in the treatment of rheumatism.
Cautions Take only under professional supervision. Excessive doses may cause stomach upset and hallucinations.

Night-blooming cereus *has spectacular flowers that open at dusk and close at dawn.*

Sempervivum tectorum (Crassulaceae)

Houseleek

Description Succulent perennial growing to 10 cm (4 in). Has round rosettes of leaves, and flowering stems bearing clusters of bell-shaped red flowers.

Houseleek's *succulent leaves contain tannins and mucilage, both soothing to the skin.*

Habitat & Cultivation The herb is native to central and southern Europe and now grows wild in northern Europe, North Africa and western Asia, preferring sandy dry soil. Houseleek is widely cultivated as a garden plant. The leaves are picked in summer.
Parts Used Leaves, leaf juice.
Constituents Houseleek contains polyphenols, including procyanidins and mucilage.
History & Folklore The Frankish King Charlemagne (742–814 CE) told his subjects to plant houseleek on their roofs, as the plant reputedly warded off lightning and fire.
Medicinal Actions & Uses Houseleek leaves and their juice are used for their cooling and astringent effect, being applied externally to soothe many skin conditions, including burns, wounds, boils and corns. As with many other remedies that are both astringent and soothing, houseleek simultaneously tightens and softens the skin. Traditionally, the leaves have been chewed to relieve toothache, and the juice has been sniffed to stop nosebleeds. Houseleek is still used externally, but internal use of this herb is not advised because in large doses it will induce vomiting.
Caution Do not take houseleek internally.

Senecio aureus *syn. Packera aureus* (Asteraceae)

Life Root,
Squaw Weed

Description Upright perennial growing to 1 m (3 ft). Has lance-shaped leaves and clusters of yellow daisy-type flowers.
Habitat & Cultivation Native to eastern North America, life root is found in marshes, on damp ground and riverbanks. The aerial parts are gathered in summer.
Parts Used Aerial parts.
Constituents Life root contains a volatile oil, pyrrolizidine alkaloids (including senecine, senecionine, and otosenine), tannins and resin. In isolation, the pyrrolizidine alkaloids are highly toxic to the liver.
History & Folklore The North American Catawba people used life root to treat gynaecological problems in general, and to relieve labour pains in particular.
Medicinal Actions & Uses Until recently, life root was employed in Anglo-American herbalism much as it was in earlier times – as a means to induce menstrual periods and to bring relief to menopausal complaints. Today, the plant is recommended only for external use, as a douche for excessive vaginal discharge.
Related Species Ragwort (*S. jacobaea*) has traditionally been used as a poultice or lotion to relieve rheumatic aches and pains.
Cautions Do not take life root internally. The plant is subject to legal restrictions in some countries.

Sesamum indicum (Pedaliaceae)

Sesame,
Hei Zhi Ma

Description Erect annual growing to 2 m (6½ ft). Has lance-shaped to oval leaves, white, pink or mauve flowers, and oblong seed capsules bearing many small grey seeds.
Habitat & Cultivation Native to Africa, sesame is cultivated in tropical and sub-tropical areas around the world. The root is unearthed in summer; the seeds are collected after the seed capsules have turned brown-black.

Sesame seeds *are a rich source of unsaturated fatty acids and calcium.*

Parts Used Seeds, seed oil, root.
Constituents The seeds are highly nutritious and contain about 55% oil (mainly polyunsaturated fats), about 20% protein, lignans (notably sesamin and sesamolin), vitamins B_3 and E and minerals. The lignans are thought to lower blood cholesterol levels and blood pressure.
History & Folklore Sesame was one of the plants found in the tomb of Tutankhamun

(1370–1352 BCE). In ancient Egypt, the nutritionally valuable seeds were eaten and also pressed to yield oil, which was burned in lamps and used to make ointments. Sesame has long been considered to have magical powers, and the phrase "Open sesame!", from the *Arabian Nights*, remains a well-known magical command. The Middle Eastern confection halvah is made from crushed and sweetened sesame seeds.

Medicinal Actions & Uses Sesame is principally used as a food and flavouring agent in China, but it is also taken to redress "states of deficiency", especially those affecting the liver and kidneys. The seeds are prescribed for problems such as dizziness, tinnitus (ringing in the ears), and blurred vision (when due to anaemia). Owing to their lubricating effect within the digestive tract, the seeds are also considered a remedy for "dry" constipation. The seeds have a marked ability to stimulate the production of breast milk. Sesame seed oil benefits the skin and is used as a base for cosmetics. It can be used to treat fungal skin problems such as athlete's foot.

Research Research suggests that sesame seeds have antibacterial and antifungal activity. They also lower cholesterol and support levels of "good cholesterol (HDL)."

Smilax spp. (Liliaceae)
Sarsaparilla

Description Perennial woody climber growing to 5 m (16 ft). Has broadly ovate leaves, tendrils and small greenish flowers.

Habitat & Cultivation Sarsaparilla species are found in tropical rainforests and in temperate regions in Asia and Australia. The root is gathered throughout the year.

Part Used Root.

Constituents Sarsaparilla contains 1–3% steroidal saponins, phytosterols (including beta- and e-sitosterol), about 50% starch, resin, sarsapic acid and minerals. Despite the herb's reputation for being testosterogenic, the steroidal saponins and sterols are oestrogenic and anti-inflammatory. The saponins also have antibiotic activity.

History & Folklore Brought from the New World to Spain in 1563, sarsaparilla was heralded as a cure for syphilis, reportedly having been used in the Caribbean with some success. The claims, however, were grossly inflated and the herb's popularity soon waned. In Mexico, sarsaparilla has traditionally been used to treat a variety of skin problems. Before it was replaced by artificial agents, sarsaparilla root was the original flavouring for root beer.

Medicinal Actions & Uses Sarsaparilla is anti-inflammatory and cleansing, and the herb can bring relief to skin problems such as eczema, psoriasis and general itchiness, and help treat rheumatism, rheumatoid arthritis and gout. Its oestrogenic action makes it beneficial in pre-menstrual problems, and menopausal conditions such as debility and depression. Native Amazonian peoples take sarsaparilla to improve virility and to treat menopausal problems. In Mexico, the root is still frequently consumed for its reputed tonic and aphrodisiac properties.

Research Some of the steroidal saponins have been shown to bind to toxins within the gut, reducing their absorption into the bloodstream. This may account for sarsaparilla's usefulness in auto-immune conditions such as psoriasis, rheumatoid arthritis and ulcerative colitis, which can be associated with this sort of toxicity. Clinical research in China suggests that sarsaparilla might hold potential in the treatment of leptospirosis, a rare disease transmitted to humans by rats, and the acute stage of syphilis.

Solanum dulcamara (Solanaceae)
Bittersweet

Description Slender-stemmed, woody climber growing to 4 m (13 ft). Has deeply lobed oval leaves, dark purple flowers with yellow anthers, and scarlet oval berries.

Bittersweet is used to treat skin problems and bronchitis.

Habitat & Cultivation Native to Europe, North Africa and northern Asia, bittersweet has been naturalized in North America. A common wayside plant, it flourishes on wasteground. The twigs are collected in spring or autumn, and the root bark in autumn.

Parts Used Twigs, root bark.

Constituents Bittersweet contains steroidal alkaloids (including solasodine and soldulcamaridine), steroidal saponins and about 10% tannins.

History & Folklore The Swedish botanist Carolus Linnaeus (1707–1778) considered bittersweet to be a valuable remedy for fever and inflammatory disorders. The herb's name perhaps refers to the initial bitter taste of the berries, which is followed by a sweet aftertaste.

Medicinal Actions & Uses Bittersweet has stimulant, expectorant, diuretic, detoxifying and antirheumatic properties. It appears to be most effective taken internally to treat skin problems such as eczema, itchiness, psoriasis and warts. A decoction of the twigs, applied as a wash, may also help to lessen the severity of these conditions. Bittersweet may also be taken to relieve asthma, chronic bronchitis and rheumatic conditions, including gout.

Caution Bittersweet is toxic in excess. Take only under professional supervision.

Solanum melongena (Solanaceae)
Aubergine,
Eggplant

Description An erect, herbaceous perennial growing to 70 cm (28 in). Has slightly woolly leaves, violet flowers and large purple fruit.

Habitat & Cultivation Native to India and South-East Asia, the aubergine is now cultivated in many tropical areas and also grown under glass in cooler climates. The fruit is gathered when ripe in summer or autumn.

Parts Used Fruit, fruit juice, leaves.

Constituents Aubergine contains proteins, carbohydrates and vitamins A, B_1, B_2 and C.

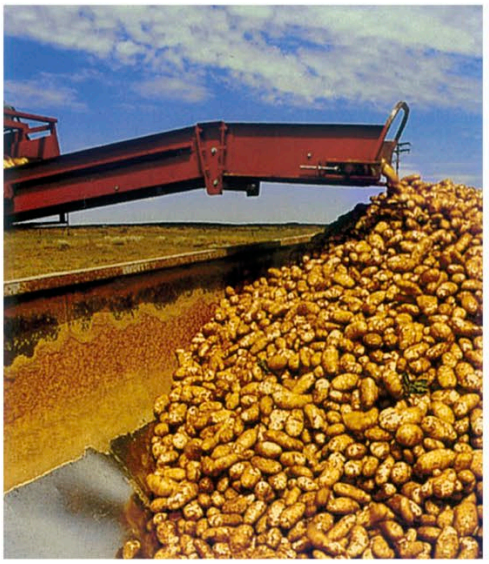
History & Folklore Aubergine has been cultivated as a food in southern and eastern Asia since ancient times.

Medicinal Actions & Uses Aubergine fruit helps to lower blood cholesterol levels and is suitable as part of a diet to help regulate high blood pressure. The fruit can be applied fresh as a poultice for haemorrhoids, but it is more commonly used in the form of an oil or ointment. The fruit and its juice are effective diuretics. A soothing, emollient poultice for the treatment of burns, abscesses, cold sores and similar conditions

can be made from aubergine leaves. The mashed fruit can also be applied to sunburn.
Research German research (published in 1975) indicates that aubergine helps to prevent the accumulation of fatty deposits within arteries.
Caution Aubergine leaves are toxic and should only be used externally.

Solanum tuberosum (Solanaceae)
Potato

Description Perennial growing to 1 m (3 ft). Has branching stems with compound leaves, white or purple flowers, green berries and swollen tubers (potatoes).



***Potato** can be helpful in relieving the painful symptoms of a gastric ulcer.*

Habitat & Cultivation Native to Chile, Bolivia, and Peru, the potato plant with its many varieties is cultivated around the world. The tuber is normally unearthed from autumn to early spring.
Part Used Tuber.
Constituents Potato contains starch, large amounts of vitamins A, B_1, B_2, C and K, minerals (especially potassium) and very small quantities of atropine alkaloids. One property of these alkaloids is the reduction of digestive secretions, including acids produced in the stomach.
History & Folklore Many different potato species and varieties were cultivated by the Quechua and Aymara peoples of the central Andes. In the early 16th century, the potato was introduced into Europe by Spanish voyagers returning from the New World. It was not until the 18th century that the potato became a staple ingredient in the European diet.
Medicinal Actions & Uses Taken in moderation, potato juice can be helpful in the treatment of peptic ulcers, bringing relief from pain and acidity. The juice or the mashed pulp may be used externally to soothe painful joints, headache, backache, skin rashes and haemorrhoids. Potato skins are used in India to treat swollen gums and to heal burns.
Related Species The root of the Brazilian *S. insidiosum* is used as a diuretic and stomach-supporting remedy.
Cautions All parts of the plant except the tuber are poisonous. Excessive doses of potato juice are toxic. Do not drink the juice of more than one large potato per day.

Solidago virgaurea (Asteraceae)
Goldenrod

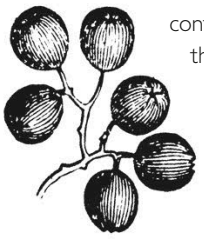
Description Perennial plant growing to 70 cm (28 in). Has toothed leaves and branched spikes of golden yellow flowers.
Habitat & Cultivation Native to Europe and Asia and naturalized in North America, goldenrod prefers open areas, wasteground and hillsides. It is gathered in summer while in flower.
Parts Used Aerial parts.

***Goldenrod** is a valuable remedy for urethritis, nephritis, cystitis, and other ailments of the urinary tract.*

Constituents Goldenrod contains saponins, diterpenes, phenolic glucosides, acetylenes, cinnamates, flavonoids, tannins, hydroxybenzoates, and inulin. The saponins are antifungal.
History & Folklore The herbalist John Gerard commented wryly in 1597 that "goldenrod has in times past been had in greater estimation and regard than in these days: for within my remembrance, I have known the dry herb which came from beyond the seas, sold … for half a crown an ounce. But since it was found in Hampstead wood [London] … no man will give half a crown for an hundredweight of it: which plainly setteth forth our inconstancy and sudden mutability, esteeming no longer of any thing (how precious soever it may be) than whilst it is strange and rare." Four hundred years on, one can only agree.
Medicinal Actions & Uses Antioxidant, diuretic and astringent, goldenrod is a valuable remedy for urinary tract disorders. It is used both for serious ailments such as nephritis, and for more common problems like cystitis. The herb also has a reputation for helping to flush out kidney and bladder stones. Goldenrod's saponins act specifically against the *Candida* fungus, the cause of vaginal and oral thrush. The herb can also be taken for conditions such as sore throats, chronic nasal catarrh and diarrhoea. Due to its mild action, goldenrod is used to treat gastroenteritis in children. Externally, it may be used as a mouthwash or douche for thrush.
Related Species Various *Solidago* species are used medicinally in North America. Several species, including Canadian goldenrod (*S. canadensis*), have been taken to relieve colds, fevers, and chest pain. Sweet-scented goldenrod (*S. odora*) was listed as a stimulant, carminative, and diaphoretic (sweat-inducer) in the US *Pharmacopoeia* from 1820 to 1882.
Self-help Uses Allergic rhinitis with catarrh, p. 300; Urinary infections, p. 314.

Sorbus aucuparia (Rosaceae)
Rowan

Description Deciduous tree growing to 12 m (39 ft). Has reddish bark, compound leaves, clusters of small white flowers and clusters of round red-orange fruit (berries).
Habitat & Cultivation Rowan grows in woodland throughout the Northern Hemisphere. It is also cultivated as an ornamental tree.
Part Used Fruit.
Constituents The fruit contains tannins, sorbitol, malic and sorbic acids, sugars and vitamin C. The seeds contain cyanogenic glycosides, which, in a reaction upon



Rowan berries

contact with water, produce the extremely poisonous prussic acid.

History & Folklore In the Scottish Highlands, rowan was believed to be a reliable antidote to witchcraft. Highlanders planted it near their houses, and cowherds believed that by using a rowan switch to drive their cattle they could protect them from evil influences. The fruit has long been used to make preserves and alcoholic drinks.

Medicinal Actions & Uses The astringent rowan is most often taken as a jam or an infusion to treat diarrhoea and haemorrhoids. In addition, infusions may be used as a gargle for sore throats and as a wash to treat haemorrhoids and excessive vaginal discharge.

Caution Remove the toxic seeds prior to using the fruit as a medicine or a food.

Spigelia marilandica (Loganiaceae)
Pink Root

Description Perennial plant with oval to lance-shaped leaves, spikes of brilliant red-pink flowers and a double seed capsule.

Habitat & Cultivation Native to the southern regions of the US, pink root flourishes in dry rich soil in clearings and along woodland borders. The root is unearthed in autumn.

Part Used Root.

Constituents Pink root contains alkaloids (mainly spigeleine), a volatile oil, tannin and resin. Spigeleine is emetic and irritant to the stomach.

History & Folklore Pink root was used extensively by Native Americans as a worm-expelling herb. It was gathered for trade with white settlers by the Creek and Cherokee peoples. From the late 18th century onwards, pink root became one of the chief deworming herbs used in North America and Europe.

Medicinal Actions & Uses Pink root is used today solely to expel intestinal worms – particularly tapeworms and roundworms. It is prescribed with other herbs such as senna (*Cassia senna*, p. 75) and fennel (*Foeniculum vulgare*, p. 212) to ensure the elimination of both the worms and the root itself, which is potentially toxic if it is absorbed through the gut.

Related Species Several *Spigelia* species act as worm-expelling herbs, for example *S. flemmingania*, native to Brazil, and *S. anthelmia*, native to the Caribbean, Venezuela and Colombia. *S. anthelmia* also contains isoquinoline alkaloids and is used in the treatment of heart disease.

Caution Only use pink root with the supervision of a professional practitioner.

Stachys officinalis syn. *S. betonica* (Lamiaceae)
Betony

Description Mat-forming perennial growing to a height of 60 cm (2 ft). Has toothed elliptical leaves and spikes of pink or white flowers.

Habitat & Cultivation Betony grows throughout most of Europe, and occurs in Asia as far east as the Caucasus, where it is found in meadows, heathland and hilly areas. The aerial parts are collected when the plant is in flower during early summer.

Betony is an age-old headache remedy. Its name may derive from the Celtic for "good head".

Parts Used Aerial parts.

Constituents Betony contains alkaloids (including stachydrine and betonicine), as well as phenolic compounds, betaine, choline and tannins.

History & Folklore Betony has been regarded as a panacea since classical times, even attributed with the ability to ward off evil spirits. Antonius Musa, physician to Emperor Augustus (63 BCE–14 CE), claimed that betony would cure 47 different illnesses. The herb has always been particularly valued as a remedy for headaches.

Medicinal Actions & Uses No longer regarded as a panacea, betony nevertheless has real value as a remedy for headaches and facial pain. The plant is also mildly sedative, relieving nervous stress and tension. In British herbal medicine, betony is thought to improve nervous function and to counter overactivity. It is taken to treat "frayed nerves", pre-menstrual complaints, poor memory and tension. The plant has astringent properties and in combination with other herbs, such as comfrey (*Symphytum officinale*, p. 138) and lime flowers (*Tilia* species, p. 277), it is effective against sinus headaches and congestion. Betony may be taken alone or with yarrow (*Achillea millefolium*, p. 56) to help staunch nosebleeds. Betony is also mildly bitter. It stimulates the digestive system and the liver, and has an overall tonic effect on the body.

Caution Do not take betony if you are pregnant.

Stellaria media (Caryophyllaceae)
Chickweed

Description Sprawling perennial growing to about 15 cm (6 in). Has hairy stems, oval leaves and star-like white flowers.

Habitat & Cultivation Native to Europe and Asia, chickweed is now found in most regions of the world. It grows easily in wasteground, and is generally regarded as a troublesome weed. The plant is harvested in summer.

Parts Used Aerial parts.

Constituents Chickweed contains triterpenoid saponins, coumarins, flavonoids, carboxylic acids and vitamin C. The saponins may account for the herb's ability to help reduce itchiness.

History & Folklore Dioscorides, a Greek physician writing in the 1st century CE, described chickweed's applications as follows: "it [chickweed] may usefully be applied with corn meal for inflammation of the eyes. The juice may also

Chickweed can help to soothe eczema and other skin conditions.

be introduced into the ear in earache." Apart from its medicinal uses, chickweed is a tasty and nutritious vegetable.

Medicinal Actions & Uses Chickweed is chiefly used to treat irritated skin, being applied as juice, poultice, ointment or cream. In certain cases, chickweed may soothe severe itchiness where all other remedies have failed. It is often used to relieve eczema, varicose ulcers and nettle rash (urticaria). An infusion of the fresh or dried plant may be added to a bath, where the herb's emollient properties will help to reduce inflammation – in rheumatic joints, for example – and encourage tissue repair. Chickweed may also be taken internally to treat chest ailments. There is some suggestion that chickweed has an anti-obesity action.

Cautions If taken in excessive doses, chickweed may cause diarrhoea and vomiting. Do not take during pregnancy.

Self-help Uses **Eczema**, p. 300; **Nappy rash & inflamed skin rashes**, p. 318; **Nettle rash**, p. 303.

Stillingia sylvatica (Euphorbiaceae)

Queen's Delight

Description Perennial growing to 4 ft (1.2 m). Has leathery leaves, yellow flowers without petals and 3-lobed fruit.

Habitat & Cultivation Queen's delight is native to the south-eastern US, where it prefers sandy soils. The root is unearthed in autumn.

Part Used Root.

Constituents Queen's delight contains diterpenes, fixed oil, volatile oil, resin and tannins. The fresh root is considered to be most active.

History & Folklore Queen's delight was used by Native Americans as a purgative, a treatment for skin eruptions, and a remedy for venereal disease. Creek women who had just given birth took a decoction of the root or were bathed with an infusion. Queen's delight was included in the *Pharmacopoeia of the United States* from 1831 to 1926.

Medicinal Actions & Uses Queen's delight appears to promote general detoxification. It is taken internally to help clear constipation, boils, weeping eczema and scrofula (tubercular infection of the lymph glands of the neck). The root is also taken to treat bronchitis and throat infection. Externally, it is applied as a lotion to haemorrhoids, eczema and psoriasis.

Cautions Use only under professional supervision. Queen's delight is emetic and purgative in large doses.

Strychnos nux-vomica (Loganiaceae)

Nux Vomica

Description Evergreen tree growing to 15 m (49 ft). Has glossy oval leaves, tubular white flowers and yellow fruit containing 5–8 disc-shaped seeds.

Habitat & Cultivation Nux vomica is native to South-East Asia. It grows wild and is cultivated commercially. The seeds are gathered when mature.

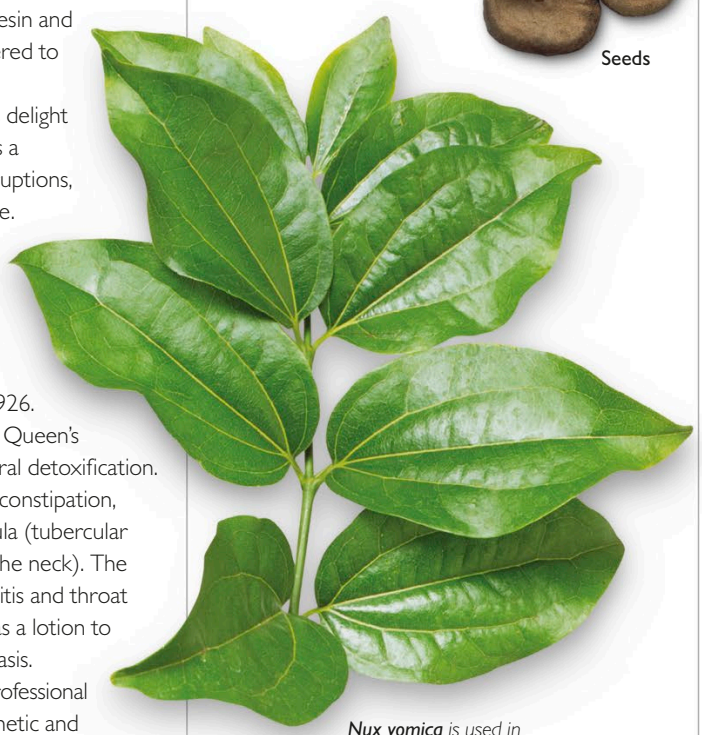
Parts Used Seeds.

Constituents Nux vomica contains 3% indole alkaloids (predominantly strychnine, with many others), loganin, chlorgenic acid and fixed oil. Strychnine is a lethal poison, producing intense muscle spasms.

History & Folklore Nux vomica seeds were first brought to Europe in the 15th century, probably as a poison for game and rodents. In 1640, the seeds were first used in European medicine, as a stimulant.

Medicinal Actions & Uses Though rarely used internally due to its toxicity, nux vomica can be an effective nervous system stimulant, particularly in the elderly. In Chinese herbal medicine the seeds are used externally to relieve pain, to treat various types of tumours and to relieve paralysis, including Bell's palsy (facial paralysis). Nux vomica is a common homeopathic remedy prescribed mainly for digestive problems, sensitivity to cold, irritability and melancholia.

Seeds



Nux vomica is used in homeopathic preparations.

Research In a Chinese clinical trial, a paste made from nux vomica seeds was applied to 15,000 patients with Bell's palsy. The treatment was reported to have been effective in more than 80% of the cases.

Related Species Many *Strychnos* species are equally potent and have been used as arrow poisons.

Cautions Take nux vomica only in homeopathic preparations. This herb and strychnine are subject to legal restrictions in most countries.

Styrax benzoin (Styraceae)

Benzoin Gum

Description Shrubby deciduous tree growing to 9 m (30 ft). Has pointed oval leaves and clusters of white, fragrant, bell-shaped flowers.

Habitat & Cultivation Native to South-East Asia, benzoin grows in tropical rainforests. It is also cultivated for its gum, which exudes from incisions made in the bark of trees that are at least 7 years old.

Part Used Gum.

Constituents Benzoin gum contains variable quantities of cinnamic, benzoic and sumaresinolic acid esters, free acids (such as benzoic acid), benzaldehyde and vanillin.

Medicinal Actions & Uses Benzoin gum is strongly antiseptic and astringent. It may be used externally on wounds and ulcers to tighten and disinfect the affected tissue. When taken internally, benzoin gum acts to settle griping pain, to stimulate coughing, and to disinfect the urinary tract. Benzoin gum is an ingredient of Friar's Balsam, an antiseptic and expectorant steam inhalation for sore throats, head and chest colds, asthma and bronchitis.

Swertia chirata (Gentianiaceae)

Chiretta,

Chirayata (Hindi)

Description Annual, growing to about 1m (3 ft), with a much-branched stem, smooth, pointed, lance-shaped leaves, and numerous purple-tinged, pale green flowers.

Habitat & Cultivation Chiretta grows at high altitudes in northern India and Nepal. The whole herb is harvested while in flower.

Parts Used Whole herb.

Constituents Chiretta contains xanthones, bitter iridoids (including amarogentin), alkaloids and flavones.

History & Folklore Chiretta was a common treatment for malaria, until Peruvian bark (*Cinchona* spp., p. 80) became readily available in Europe and Asia.

Medicinal Actions & Uses A strongly bitter herb, chiretta is powerful medicine for a weak stomach, especially when linked to nausea, indigestion and bloating. It is taken in small frequent doses to improve appetite and digestive function. For hiccups, small frequent doses are taken with honey. Like most bitters it reduces fever, cooling the body and increasing blood flow to the liver. In Ayurvedic medicine the herb is used for *pitta* (fire) conditions, and is best known as the major herb in *mahasudarshana churna* – a standard mixture of more than 50 herbs prescribed for fevers such as malaria, liver problems, gallstones and indigestion. Recently it has been used with other herbs to treat allergies.
Research The xanthones are thought to be anti-tuberculous and antimalarial. Amarogentin has a protective action on the liver.
Caution Avoid in digestive hyperacidity.

Symplocarpus foetidus (Araceae)
Skunk Cabbage

Description Unpleasant-smelling perennial plant growing to 75 cm (30 in). Has a thick tuberous rootstock, cabbage-like leaves and small purple flowers on a hooded spike.

Skunk cabbage *is a foul-smelling plant with a powerful expectorant action.*

Habitat & Cultivation Native to northern North America, skunk cabbage thrives in meadows, swamps and marshes. The root and rhizome are collected in autumn or early spring.
Parts Used Root, rhizome.
Constituents Skunk cabbage contains a volatile oil, serotonin (5HT) and resins.
History & Folklore The Winnebago and Dakota peoples used the expectorant and antispasmodic skunk cabbage root to treat asthma and bronchitis. The root was also employed as a poultice to draw splinters and thorns, to heal wounds and to relieve headaches. It was much used in America in the 19th century.
Medicinal Actions & Uses Skunk cabbage continues to be used primarily as an expectorant, treating cases of asthma, bronchitis and whooping cough. It is also taken for upper respiratory problems such as nasal catarrh and hay fever. Less commonly, skunk cabbage is used as a treatment for epilepsy, headaches, vertigo, and rheumatic problems, and as a means to stop bleeding.
Cautions Handling fresh skunk cabbage may cause the skin to blister. Excessive doses can bring on nausea and vomiting, headaches and dizziness.

Syzygium cumini (Myrtaceae)
Jambul

Description Evergreen tree growing to 10 m (33ft). Has lance-shaped leaves and green-yellow flowers.
Habitat & Cultivation A native of southern Asia and Australia, jambul is now also found in tropical regions of Africa. The tree is cultivated commercially for its fruit and is propagated from seed or semi-ripe cuttings in summer. It requires well-drained soil and plenty of sun. The fruit is harvested when ripe.
Parts Used Fresh and dried fruit, seeds.
Constituents Jambul contains triterpenes, anthocyanins, flavonoids, volatile oil.
History & Folklore Jambul is a typical example of a medicinal plant that is both food and medicine. The fruit when ripe has the scent and taste of a ripe apricot and is eaten as a preserve. While both fruit and seed have a tonic and astringent effect on the digestion, the seeds have long traditional use in Ayurveda as a preventative and treatment for diabetes.
Medicinal Actions & Uses Following traditional use, jambul continues to be employed for a wide variety of health problems. The powdered seed is commonly taken to treat diabetes and the frequent urination that accompanies it, as well as a remedy for mouth ulcers, stomach ache, diarrhoea, dysentery and worms. Case reports over the last 100 years and more recent pharmacological research supports the use of jambul for diabetes and poor blood glucose control. It is thought to lower blood sugar levels by about 30%.
Related Species Many other closely related species have notable therapeutic activity. Cloves (*Eugenia caryophyllata*, p. 97) are taken for digestive problems and to treat infection. *Syzygium gerrardii* from South Africa and *Luma chequen* from Chile are used to treat coughs and catarrhal problems.

Tamarindus indica (Fabaceae)
Tamarind

Description Evergreen tree growing to 25 m (80 ft). Has fine compound leaves, clusters of orange-yellow flowers, and brittle grey-brown seed pods (fruit) containing up to 12 round seeds.
Habitat & Cultivation While native to Madagascar, the tamarind is now cultivated in many of the world's tropical regions, including the Caribbean, India, South-East Asia and China.
Parts Used Fruit, leaves, seeds.
Constituents Tamarind contains 16–18% plant acids (including nicotinic acid – vitamin B_3), a volatile oil (with geranial, geraniol and limonene), sugars, pectin, 0.8% potassium and fats. Vitamin C was formerly believed to be among the constituents of tamarind, but this is now being disputed.

Fruit

History & Folklore Sailors ate tamarind fruit as a nourishing complement to their otherwise starchy diet, in the belief that eating the fruit would prevent scurvy. However, it appears that tamarind does not in fact contain vitamin C. Tamarind is a major ingredient in many chutneys and condiments, notably Worcestershire sauce.
Medicinal Actions & Uses Tamarind is a wholesome and cleansing fruit that improves digestion, relieves wind, soothes sore throats and acts as a mild laxative. However, mixed with cumin and sugar, tamarind is also prescribed as a treatment for dysentery. It is given for loss of appetite and nausea, as a stomach tonic and mild laxative. It may help with nausea and vomiting in pregnancy. In southern India, tamarind soup is taken to treat colds and other ailments that produce excessive catarrh. In Chinese medicine, it is considered a cooling herb, appropriate for treating "summer heat". The fruit is also given for loss of appetite, for nausea and vomiting in pregnancy, and for constipation. The seeds' traditional use as an anti-venom in snake bite has been partly confirmed in laboratory research.
Self-help Use Sore throats, p. 311

Tanacetum vulgare (Asteraceae)
Tansy

Description Strongly aromatic perennial growing to 1 m (3 ft). Has an erect stem, feathery compound leaves and clusters of yellow disc-shaped flowerheads.
Habitat & Cultivation Found throughout temperate zones in the northern hemisphere,

tansy grows on wasteground, alongside roads and close to water. The flowering tops are collected as the flowers open in summer.
Parts Used Flowering tops.
Constituents Tansy contains a volatile oil, which includes significant levels of thujone and camphor, sesquiterpene lactones, flavonoids and resin. The volatile oil strongly induces menstruation.
History & Folklore While it is not mentioned in surviving classical texts, tansy was described by medieval herbalists, notably St Hildegard of Bingen (12th century). Ever since that time, tansy has been used most commonly as a worm-expelling plant. In England, tansy puddings were consumed during Lent.
Medicinal Actions & Uses Tansy is little used today because of its potential toxicity. When the plant is taken, it is chiefly in order to expel intestinal worms, and, to a lesser degree, to help stimulate menstrual bleeding. Tansy may be used externally to kill scabies, fleas and lice, but even external application of tansy preparations carries the risk of toxicity.
Cautions Use only under professional supervision. Tansy is possibly unsafe for internal and external use, and should never be taken during pregnancy. The plant, and especially its essential oil, are subject to legal restrictions in some countries.

Tansy is a strong deworming remedy for use only under professional guidance.

Taxus baccata (Taxaceae)
Yew

Description Slow-growing evergreen tree reaching 25 m (80 ft) in height. Has rust-red bark and flattened, dark green needle-like leaves. The female trees produce fleshy red cup-like fruit.

Yew, no longer used in herbal medicine, is currently under research as a potential anti-cancer drug.

Habitat & Cultivation Yew grows throughout northern temperate zones. More often found in cultivation than in the wild, it prefers lime-rich soil. The leaves are gathered in spring.
Parts Used Leaves.
Constituents Yew contains a mixture of alkaloids known as taxine, and also diterpenes (including taxol in some varieties), lignans, tannin and resin.
History & Folklore The yew tree was sacred to the Druids, who are believed to have considered it an emblem of immortality. The Druids planted yews in holy sites, a practice that continued with the coming of Christianity. Many medieval churchyards contain ancient yews, some thought to be over 2,000 years old. In the Middle Ages, the best longbows were made from yew wood, as were magic wands.
Medicinal Actions & Uses Though yew has been used in small doses to treat rheumatic and urinary problems, its extreme toxicity makes it an unsafe medicinal plant.
Research Taxol inhibits cell division, and has thus been extensively researched for its use as an anti-cancer drug. Taxol is most commonly found in the Pacific yew (*T. brevifolia*), though some varieties of *T. baccata* also contain the substance. Studies have been conducted since the 1980s in search for potential cancer treatments.
Caution Yew is extremely toxic. Do not take under any circumstances.

Terminalia belerica (Combretaceae)
Beleric Myrobalan

Description Evergreen tree with clusters of oval leaves, spikes of small greenish unpleasant-smelling flowers and hairy brown fruit.
Habitat & Cultivation Beleric myrobalan is native to India, Malaysia and the Philippines. It is found in forests and is cultivated for its astringent fruit, which is gathered both immature and ripe.
Part Used Fruit.
Constituents The fruit contains tannins and anthraquinones.
Medicinal Actions & Uses Beleric myrobalan fruit is astringent, tonic and laxative. It is principally employed as a treatment for digestive and respiratory problems. In Indian herbal medicine, the ripe fruit is taken for diarrhoea and indigestion, and the unripe fruit is used as a laxative for chronic constipation. It forms part of the classic Ayurvedic Triphala formula, chiefly used as a bowel tonic. Beleric myrobalan is also often used to treat upper respiratory tract infections that cause symptoms of sore throats, hoarseness and coughs.
Related Species Many *Terminalia* species are used to make astringent remedies, and also for their timber. See chebulic myrobalan (*T. chebula*, *following entry*).
Caution Do not take during pregnancy.

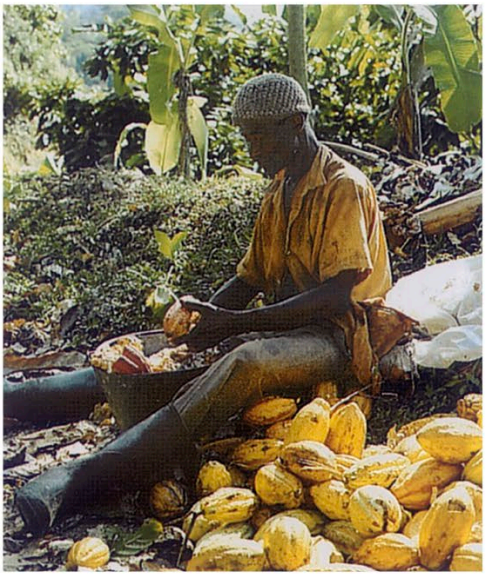
Terminalia chebula (Combretaceae)
Chebulic Myrobalan

Description Evergreen tree growing to 20 m (65 ft). Has egg-shaped leaves, white flowers in terminal spikes, and small, 5-ribbed fruit.
Habitat & Cultivation Native to Central Asia and India, chebulic myrobalan is found throughout Iran, Pakistan and India. The fruit is collected when ripe.
Part Used Fruit.
Constituents Chebulic myrobalan contains triterpenes, polyphenols, a coumarin (chebulic acid), resin and fixed oil.
History & Folklore Chebulic myrobalan has been used in Indian medicine for several thousand years, and the fruit has long been considered a prime remedy for all manner of digestive problems.

Medicinal Actions & Uses Laxative and astringent, the fruit gently improves bowel regularity without excessively irritating the colon. It forms part of the classic, Ayurvedic Triphala formula, used chiefly as a bowel tonic. Like Chinese rhubarb (*Rheum palmatum*, p. 126), chebulic myrobalan may be used as a treatment for diarrhoea and dysentery. The fruit's tannins protect the gut wall from irritation and infection, and tend to reduce intestinal secretions. Likewise, the fruit helps to counter acidic indigestion and heartburn. A decoction of chebulic myrobalan may be used as a gargle and mouthwash, as a lotion for sore and inflamed eyes, and as a douche for vaginitis and excessive vaginal discharge. The fruit has been also shown to have liver-protective and anti-diabetic properties.
Caution Do not take chebulic myrobalan during pregnancy.

Theobroma cacao (Sterculiaceae)
Cacao,
Cocoa

Description Evergreen tree growing to 8 m (26 ft). Has pale brown bark, glossy oval leaves, clusters of small yellow flowers, and large, pear-shaped, red-yellow seed pods.

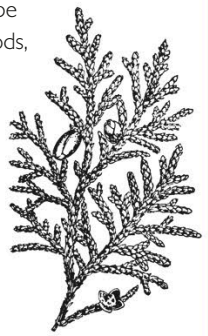


Cacao is cultivated in tropical regions around the world. The seed pulp is the source of cocoa.

Habitat & Cultivation Native to Mexico and Central America, cacao is now a major crop throughout the tropics. The seed pods are harvested several times a year and are cut directly from the trunk of the tree (where they grow). One pod contains up to 50 beans, with roughly 900 weighing 1 kg (2¼ lb). According to the World Cocoa Foundation, world production of cacoa in 2012 was more than 3.9 million ton(ne)s.
Parts Used Seeds.
Constituents The unprocessed seed pulp contains high levels of polyphenols (mostly proantocyanidins and catechins), xanthines (including caffeine), a fixed oil, and many constituents responsible for chocolate's flavour. Due to fermentation and the processing involved, chocolate has significantly reduced levels of polyphenols. Minute quantities of endorphins (powerful painkillers that occur naturally within the body) are also present in cacao.
History & Folklore The word "chocolate" derives from *chócolatl*, the name given to this tree by the Aztecs. In 1720, Cotton Mather, an American preacher and natural historian, praised cacao, writing that the plant "supplies the Indian with bread, water, wine, vinegar, brandy, milk, oil, honey, sugar, needles, thread, linen, clothes, caps, spoons, besoms, baskets, paper, and nails; timber, coverings for their houses; masts, sails, cordage for their vessels; and medicine for their diseases; and what can be desired more?"
Medicinal Actions & Uses Though cacao is most often used as a food, it also has therapeutic value as a nervous system stimulant. In Central America and the Caribbean, the seeds are taken as a heart and kidney tonic. The plant may be used to treat angina, and as a diuretic. Cacao butter (the fixed oil) makes a good lip salve and is often used as a base for suppositories and pessaries.
Research The potent mix of polyphenols in the unprocessed seed pulp has been the main focus of research into cacao. These have a protective activity on the heart and blood vessels, particularly supporting the capillaries or microcirculation. Cacao consumption is linked with lower blood pressure and cholesterol levels, as well as a reduced risk of coronary heart disease and stroke. It also appears to have an anti-diabetic activity, stimulating the pancreas to regulate blood sugar levels more effectively. Other potential uses of cacao that have been investigated include the prevention of tooth decay, as an aid to weight loss, as a cancer-preventative food within the diet, and as a treatment for chronic fatigue.

Thuja occidentalis (Cupressaceae)
Arbor-vitae

Description Evergreen tree growing to 10 m (33 ft). Has scale-like leaves, male and female flowers and small, egg-shaped cones.
Habitat & Cultivation Native to the north-eastern US, arbor-vitae flourishes in wet, marshy ground and along riverbanks. It has become a popular ornamental tree in Europe. The leaves are gathered in summer.
Parts Used Leaves.
Constituents Arbor-vitae contains a volatile oil (up to 60% thujone), coumarins, flavonoids (including procyanidin), tannins and polysaccharides.
History & Folklore Many Native American peoples prized arbor-vitae as a medicine for fever, headaches, coughs, swollen hands and rheumatic problems. The herb was burned as a smudge (smoky fire) for its scent and to ward off evil spirits. The 19th-century Eclectic herbalists used arbor-vitae as a remedy for bronchitis, rheumatism and uterine cancer. Arbor-vitae has also been used to treat the side-effects of the smallpox vaccination.
Medicinal Actions & Uses Arbor-vitae has an established anti-viral activity. It is most often used to treat warts and polyps, being prescribed both internally and externally for these conditions. It is also used as part of a regime for treating cancer – especially cancer of the uterus. Arbor-vitae makes an effective expectorant and anti-catarrhal remedy, and may be used to treat acute bronchitis and other respiratory infections. It induces menstruation and can be taken to bring on delayed periods, though this use is inadvisable if menstrual pain is severe. Arbor-vitae is diuretic and is used to treat acute cystitis and bed-wetting in children. Extracts of the herb may be painted on painful joints or muscles as a counter-irritant, improving local blood supply and easing pain and stiffness.



Arbor-vitae twig

Cautions Take only under professional supervision. Do not take arbor-vitae during pregnancy or while breast-feeding.
Self-help Use Warts, p. 304.

Thymus serpyllum (Lamiaceae)
Wild Thyme

Description Tuft-forming evergreen herb growing to a height of 7 cm (3 in). Has square stems, small aromatic oval leaves and spikes of bright mauve flowers.
Habitat & Cultivation Native to Europe, thyme prefers heaths, moorland and barren places. The herb is collected when in flower in summer.
Parts Used Flowering tops.
Constituents Wild thyme contains a volatile oil (with thymol, carvacrol and linalool), flavonoids, caffeic acid, tannins and resin. The volatile oil's properties are similar to, but less potent than, those of thyme oil (from *Thymus vulgaris*, p. 143).
History & Folklore The 17th-century herbalist Nicholas Culpeper advised taking wild thyme to treat internal bleeding, coughing and

vomiting. He noted that "it comforts and strengthens the head, stomach, reins [ureters] and womb, expels wind and breaks the stone". Carolus Linnaeus, the 18th-century Swedish naturalist, used the plant to treat headaches and hangovers.

Medicinal Actions & Uses Like its close relative thyme (*Thymus vulgaris*, p. 143), wild thyme is antiseptic and antifungal. It may be taken as an infusion or syrup to treat flu and colds, sore throats, coughs, whooping cough, chest infections, and bronchitis. Wild thyme has anti-catarrhal properties and helps clear a stuffy nose, sinusitis, ear congestion and related complaints. It has been used to expel threadworms and roundworms in children, and is used to settle wind and colic. Wild thyme's antispasmodic action makes it useful in relieving period pain. Externally, it may be applied as a poultice to treat mastitis (inflammation of the breast), and an infusion may be used as a wash to help heal wounds and ulcers. Wild thyme is also used in herbal baths and pillows.

Related Species See thyme (*T. vulgaris*, p. 143).

Caution For worms in children, use only under professional supervision.

Tilia spp. (Tiliaceae)

Lime,

Linden

Description Deciduous trees growing to a height of 30 m (100 ft), with smooth grey bark, heart-shaped leaves, and clusters of pale yellow flowers with wing-like bracts.

Habitat & Cultivation Native to Europe, lime is found in the wild, but is also much planted in gardens and along roads. The flowers are collected in summer.

Lime flowers from several species, including Tilia europaea, *are used in herbal medicine.*

Parts Used Flowers and bracts.

Constituents Lime contains flavonoids (especially quercetin and kaempferol), caffeic and other acids, mucilage (about 3%), tannins, volatile oil (0.02%-0.1%) and traces of benzodiazepine-like compounds. The flavonoids improve circulation.

History & Folklore Greek myth recounts how Philyra, a nymph, was raped by the god Saturn in the guise of a horse, and eventually gave birth to the famed centaur, Cheiron. Philyra was so devastated that she begged the gods not to leave her amongst mortals. The gods granted her wish by transforming her into a lime tree.

Medicinal Actions & Uses Lime is an antispasmodic, sweat-inducing and sedative remedy. It relieves tension and sinus headaches, helping to calm the mind and allow easy sleep. Lime is an excellent remedy for stress and panic, and is used specifically to treat nervous palpitations. The flowers bring relief to colds and flu by reducing nasal catarrh and soothing fever. Lime flowers are commonly taken to lower high blood pressure, particularly when there are emotional factors involved. The flowers are used over the long term to treat high systolic blood pressure associated with arteriosclerosis. Because of their emollient quality, lime flowers are used in France to make a lotion for itchy skin.

Trifolium pratense (Fabaceae)

Red Clover

Description Perennial herb growing to 40 cm (16 in). Has a hairy upright stem, leaves with 3 (or, rarely, 4) oval leaflets with a white crescent marking, and pink to purple egg-shaped flowerheads.

Habitat & Cultivation Native to Europe and Asia, and naturalized in North America and Australia, red clover is widely cultivated for hay and as a nitrogen-fixing crop. The flowerheads are collected when newly opened in summer.

Parts Used Flowerheads.

Constituents Red clover contains volatile oil, including benzyl alcohol and methyl salicylate, isoflavones, coumarins and cyanogenic glycosides. The isoflavones occur at relatively high levels and are phytoestrogenic. The isolated isoflavones are now marketed as a treatment for problems related to the menopause.

History & Folklore This herb has traditionally been used to treat breast cancer. A concentrated decoction was applied to the site of the tumour in order to encourage it to grow outwards and clear the body.

Medicinal Actions & Uses Red clover is used to treat skin conditions, normally in combination with other purifying herbs such as burdock (*Arctium lappa*, p. 65) and yellow dock (*Rumex crispus*, p. 264). It is also expectorant and may be used for spasmodic coughs. Red clover's significant phytoestrogenic activity has led to increasing use of the herb to relieve menopausal symptoms. In most cases it will be preferable to use extracts of red clover flowers rather than the isoflavones on their own.

Research The isoflavones have an established phytoestrogenic activity. Red clover isoflavones been shown to have not only therapeutic use during the menopause, helping to reduce the impact of falling oestrogen levels, but also to exert a protective effect on the heart and circulation in menopausal women with low oestrogen levels. Early stage research points to the isoflavones countering bone loss, making them potentially of use in osteoporisis. Due to the isoflavones' ability to "compete" with the body's own oestrogen, it is now thought that red clover may be helpful in both preventing and treating breast cancer.

***Red clover** is a common wayside plant, but it is also cultivated as a fodder crop.*

Trigonella foenum-graecum (Fabaceae)

Fenugreek

Description Strongly aromatic annual growing to about 80 cm (32 in). Has trifoliate leaves, yellowish-white pea-like flowers and sickle-shaped pods.

Habitat & Cultivation Native to North Africa and countries bordering the eastern Mediterranean, fenugreek grows on wasteground and is widely cultivated, notably in India. The seeds are collected during the autumn months.

Parts Used Seeds.

Constituents Fenugreek contains a volatile oil, alkaloids (including trigonelline), saponins (based on diosgenin), flavonoids, mucilage (about 27%), protein (about 25%), fixed oil (approximately 8%), vitamins A, B_1 and C, and minerals.

History & Folklore The Egyptian Ebers papyrus, which dates from *c.* 1500 BCE, records a prescription for burns that includes fenugreek. The seeds were also used in ancient Egypt to induce childbirth. In the 5th century BCE the Greek physician Hippocrates considered fenugreek to be a valuable soothing herb. Dioscorides, writing in the 1st century CE recommended fenugreek as a

remedy for all manner of gynaecological problems, including infection of the uterus and inflammation of the vagina and vulva.

Medicinal Actions & Uses Fenugreek is much used in herbal medicine in North Africa, the Middle East and India, being esteemed as a remedy for a wide variety of conditions. The nourishing seeds are given during convalescence and to encourage weight gain, especially in anorexia. They are also helpful in lowering fever, with some authorities comparing their ability to that of quinine.

Fenugreek seeds

The seeds' soothing effect makes them of value in treating gastritis and gastric ulcers. They are used to induce childbirth and to increase breast-milk production. Fenugreek is also thought to be anti-diabetic and to lower blood cholesterol levels. Externally, the seeds may be applied as a paste to treat abscesses, boils, ulcers and burns, or used as a douche for excessive vaginal discharge.

Research Research indicates that fenugreek seed (preferably powdered) can prove effective in controlling insulin resistance and late-onset diabetes. The seeds help to stabilize blood sugar levels, though the recommended dosage of seed required is so far unclear. The seeds also lower blood cholesterol levels. Other potential uses for the seeds include cramping period pains, polycystic ovary syndrome (PCOS) and Parkinson's disease. An Iranian clinical trial in 2014 found that 2–3 g (1/10 oz) of powdered seed helped to reduce menstrual cramps.

Caution Do not take during pregnancy.

Trillium erectum (Liliaceae)
Beth Root

Description Attractive perennial with an erect stem growing to 40 cm (16 in). Has 3 wavy leaves and an unpleasant-smelling, 3-petalled, red to yellow flower.

Habitat & Cultivation Native to North America, beth root grows in shady positions in woodlands. The rhizome is usually unearthed after the leaves have fallen in autumn.

Part Used Rhizome.

Constituents Beth root contains steroidal saponins (such as trillin), tannin, resin, fixed oil, and a trace of volatile oil.

History & Folklore Various *Trillium* species were used by Native Americans to aid childbirth, to treat irregular menstrual periods, period pain and excessive vaginal discharge, and, as a poultice, to soothe sore nipples.

Medicinal Actions & Uses Beth root is a valuable remedy for heavy menstrual or intermenstrual bleeding, helping to reduce blood flow. It is also used to treat bleeding associated with uterine fibroids. Beth root may also be taken for bleeding within the urinary tubules and, less commonly, for the coughing up of blood. It remains a valuable herb in facilitating childbirth. A douche of beth root is useful for excessive vaginal discharge and thrush.

Caution Do not take during pregnancy except under professional supervision.

Tropaeolum majus (Tropaeolaceae)
Common Nasturtium

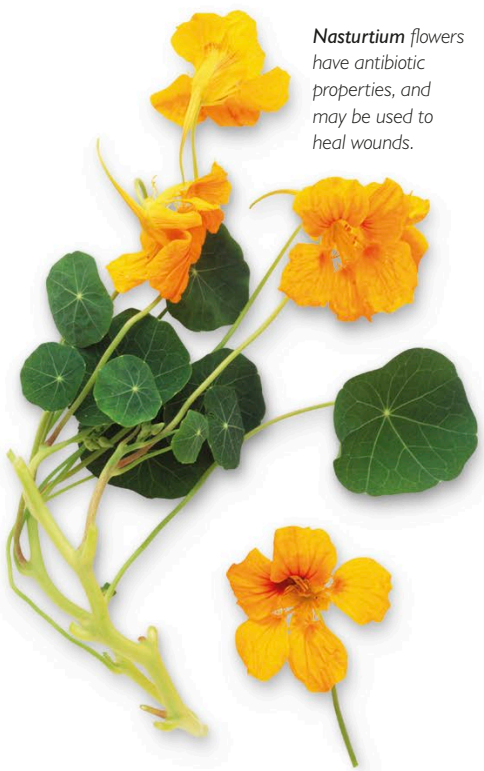
Description Climbing annual growing to 3 m (10 ft). Has straggling stems, rounded leaves and orange to yellow trumpet-shaped flowers with a long spur.

Habitat & Cultivation Native to Peru, common nasturtium flourishes in sunny sites. It is grown as an ornamental and as a salad herb. All parts of the plant are harvested in summer.

Parts Used Flowers, leaves, seeds.

Constituents Common nasturtium contains glucosinolates, sulphur glycosides, glucotropaeolin, flavonoids, spilantolic acid and iodide. Glucotropaeolin is converted into mustard oils by gut bacteria and acts as an antibiotic within the urinary and respiratory systems.

History & Folklore Common nasturtium has long been used in Andean herbal medicine as a disinfectant and wound healing herb, and as an expectorant to relieve chest conditions.



Nasturtium flowers have antibiotic properties, and may be used to heal wounds.

Medicinal Actions & Uses All parts of common nasturtium appear to have antibiotic activity. An infusion of the leaves may be used to increase resistance to bacterial infections and to clear nasal and bronchial catarrh – apparently the remedy both reduces catarrh formation and stimulates the clearing and coughing up of phlegm. It can also prove useful in bacterial cystitis and it makes an effective antiseptic wash for external application. The juice of the plant has been taken internally for the treatment of scrofula (tubercular infection of the lymph nodes). The piquant-tasting leaves and flowers (and juice) of common nasturtium are high in vitamin C, and make a good salad vegetable, while the ground seeds have purgative properties.

Tsuga canadensis (Pinaceae)
Hemlock Spruce

Description Evergreen tree growing to 30 m (100 ft). Has reddish-brown bark, short narrow needle leaves and small male and female cones.

Habitat & Cultivation Hemlock spruce is native to eastern parts of North America, growing in woodland and marshy sites. The bark is collected from mature trees throughout the year.

Part Used Bark.

Constituents Hemlock spruce contains volatile oil (with alpha-pinene, bornyl acetate and cadinene), 10–14% tannins and resin.

History & Folklore Native Americans may have given hemlock spruce to the explorer Jacques Cartier in 1535. He and his crew, exploring the St Lawrence river, had fallen sick with scurvy, but all made a quick recovery upon taking a decoction of leaves and bark. Many Native American peoples used the bark to treat wounds.

Medicinal Actions & Uses The bark of hemlock spruce is astringent and antiseptic. A decoction may be taken to treat diarrhoea, colitis, diverticulitis and cystitis. Externally, hemlock spruce can be employed as a douche to treat excessive vaginal discharge, thrush and a prolapsed uterus; as a mouthwash and gargle for gingivitis and sore throats; or as a wash to cleanse and tighten wounds.

Tussilago farfara (Asteraceae)
Coltsfoot

Description Perennial herb growing to 30 cm (12 in). Has flowering stems with purple scales, yellow-gold flowers and heart-shaped leaves.

Habitat & Cultivation Indigenous to Europe and northern Asia, and naturalized in

North America, coltsfoot is a common plant often found along roadsides and on verges and wasteground. The flowers are gathered in late winter, the leaves in summer.
Parts Used Leaves, flowers.
Constituents Coltsfoot contains flavonoids, about 8% mucilage (polysaccharides), 10% tannins, pyrrolizidine alkaloids, vitamin C and zinc. The pyrrolizidine alkaloids may have a toxic effect on the liver, but are largely destroyed when the parts are boiled to make a decoction. The polysaccharides are anti-inflammatory and immunostimulant. The flavonoids are anti-inflammatory and antispasmodic.
History & Folklore For at least 2,500 years, coltsfoot has been taken as a cough remedy and smoked as a means to ease breathing. Dioscorides, a Greek physician of the 1st century CE, recommended it for dry coughs, and "for those who are unable to breathe except standing upright".
Medicinal Actions & Uses An effective demulcent and expectorant herb, coltsfoot is one of the most popular European remedies for treating chest problems. In Europe, the leaves are preferred to the flowers (which contain higher amounts of pyrrolizidine alkaloids), but in China the flowers are preferred. Both parts of the plant are taken as a decoction for chest conditions. When used as a syrup or a medicinal cigarette, coltsfoot relieves asthma. This herb is used as a specific treatment for spasmodic coughs. It is particularly effective when used in combination with liquorice (*Glycyrrhiza glabra*, p. 101), thyme (*Thymus vulgaris*, p. 143) and wild cherry (*Prunus serotina*, p. 257).
Research Extracts of the whole plant have been shown to increase immune resistance. In a Chinese trial involving 36 patients suffering from bronchial asthma, 75% showed some improvement after treatment, but the anti-asthmatic effect was short-lived.
Cautions Do not use coltsfoot flowers. Do not take the leaves for more than 3–4 weeks at a time. Do not take coltsfoot during pregnancy or while breast-feeding. The herb is not suitable for children under 6. Coltsfoot is subject to legal restrictions in some countries.

***Coltsfoot** has long been used as a remedy for coughs.*

Tylophora asmatica (Asclepidaceae)

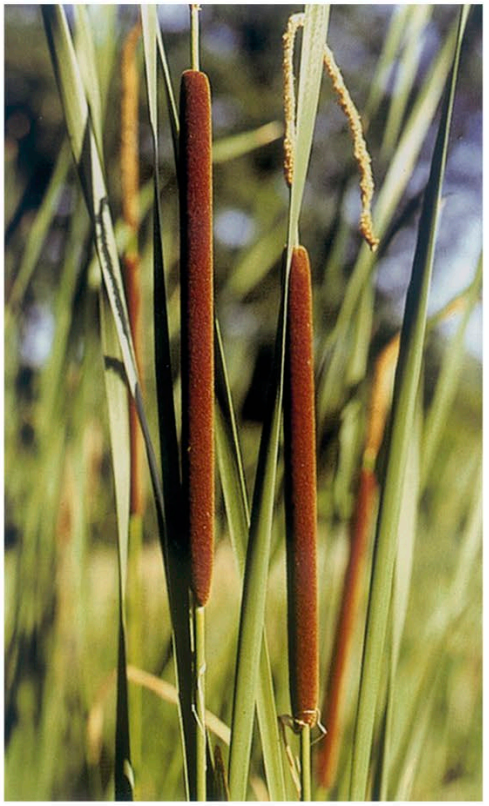
Asmatica,
Indian Lobelia

Description Perennial twining climber with lance-shaped leaves and greenish flowers producing many flat seeds.
Habitat & Cultivation Native to the Indian sub-continent, asmatica grows wild on the plains of India. The leaves are gathered when the plant is in flower.
Parts Used Leaves.
Constituents Asmatica contains alkaloids (including tylophorine), flavonoids, sterols and tannins. Tylophorine has anti-inflammatory and anti-tumour properties.
History & Folklore Asmatica has long been used in Ayurvedic medicine to induce vomiting and expectoration, and to treat dysentery and rheumatic conditions.
Medicinal Actions & Uses Considered a specific remedy for asthma, asmatica may relieve symptoms for up to 3 months. It is also beneficial in cases of hay fever, and is prescribed for acute allergic problems such as eczema and nettle rash. It holds potential as a treatment for chronic fatigue syndrome and other immune system disorders. Asmatica may relieve rheumatoid arthritis, and may also be of value in the treatment of cancer.
Research Extensive laboratory and clinical research in India has established that asmatica is an effective remedy for asthma. In the 1970s, a number of clinical trials showed that a majority of asthmatic patients taking the herb for just 6 days gained relief from asthma for up to a further 12 weeks. However, subsequent studies have failed to reproduce these results. The leaves produce side-effects including nausea and vomiting.
Caution Take asmatica only under professional supervision.

Typha angustifolia (Typhaceae)

Bulrush,
Pu Huang (Chinese)

Description Stout upright plant growing to a height of 2 m (6½ ft). Has long, flat, narrow leaves rising parallel to the stem, a distinctive brown cylindrical head of female flowers, and straw-coloured male flowers immediately above.
Habitat & Cultivation Bulrush flourishes in marshes, swamps and other freshwater sites in both temperate and tropical zones, and is cultivated. The pollen is shaken off the plant while it is in bloom.
Part Used Pollen.
Constituents Bulrush contains isorhamnetin, pentacosane and sterols.
History & Folklore The pollen is highly inflammable and has been used in the manufacture of fireworks. The root is edible and has been eaten in times of famine. The young shoots can be eaten raw or cooked in spring, and are said to taste like asparagus (*Asparagus officinalis*, p. 174).



***Bulrush** or pu huang is used to staunch wounds and stop internal bleeding.*

Although "bulrushes" are mentioned in many notable editions of the Bible, it is likely the plant being referred to is *Cyperus papyrus*.
Medicinal Actions & Uses In Chinese herbal medicine, the astringent pollen has been employed chiefly to stop internal or external bleeding. The pollen may be mixed with honey and applied to wounds and sores, or taken orally to reduce internal bleeding of almost any kind – for example, nosebleeds, uterine bleeding or blood in the urine. The pollen is now also used in the treatment of angina (pain in the chest or arm due to lack of oxygen to the heart muscle). In India, the dried pollen has been used for kidney stones, to treat nose bleeds and internal bleeding, as well as for painful menstruation. Bulrush does not appear to have been used as a medicine in the European herbal tradition.
Research Chinese research suggests that bulrush pollen protects blood vessels from inflammation and acts as an immunosuppressant.
Caution Do not take during pregnancy.

Uncaria rhynchophylla (Rubiaceae)

Gou Teng

Description Climbing perennial growing to 10 m (33 ft). Has opposite lance-shaped leaves, thorns, and composite flowerheads.
Habitat & Cultivation Native to China and South-East Asia, *gou teng* is cultivated in the southern and eastern provinces of China. The stems and thorns are collected in autumn and winter.
Parts Used Stems, thorns.
Constituents *Gou teng* contains indole alkaloids, flavonoids, triterpenoid and polysaccharides.
History & Folklore The first recorded use of *gou teng* in Chinese medicine is in the *Miscellaneous Records* (*c.* 500 CE).
Medicinal Actions & Uses *Gou teng* is a sedative and antispasmodic, and is mainly used to ease symptoms such as tremors, seizure, spasms, headache and dizziness. It is also prescribed for infantile convulsions. In Chinese herbal medicine it "extinguishes [internal] wind and stops tremors". It is also used by the Chinese to reduce high blood pressure and excess liver "fire".
Research Chinese tests on laboratory animals indicate that *gou teng* lowers blood pressure, reduces anxiety and has notable sedative activity.
Related Species Like *gou teng*, pale catechu (*U. gambier*) contains a constituent that lowers blood pressure. See also cat's claw (*U. tomentosa*, *following entry*).
Caution Take gou teng only under professional supervision.

Uncaria tomentosa (Rubiaceae)

Cat's Claw,
Una De Gato

Description Climbing vine growing to 30 m (100 ft) or more, with stems up to 20 cm (8 in) in diameter, large, glossy leaves and sharp hooks (the "cat's claws").
Habitat & Cultivation A native of tropical rainforests in the central and eastern Andes, especially Peru, Ecuador and Colombia, cat's claw has also been found in Guatemala, Costa Rica and Panama. Until recently, the root bark was the part most commonly used as medicine. However, by the early 1990s collection from the wild threatened the species' survival. Only the stem bark, from ecologically sustainable sources, should be used.
Parts Used Stem bark.
Constituents Cat's claw contains pentacyclic oxindole alkaloids (POA), tetracyclic oxindole alkaloids (TOA) in one chemotype only, triterpenoid glycosides, sterols, flavonoids and tannins, including epicatechin and proanthocyanidins.
History & Folklore Known by the Ashaninka and other indigenous peoples of central Peru for its power in regulating illness, cat's claw has been used since the earliest times to treat serious illness, from asthma and diabetes to arthritis and cancer. Native healers are able to distinguish between what are botanically identical plants, selecting those that have a low TOA content and are therefore most likely to prove effective in strengthening immunity.
Medicinal Actions & Uses Like echinacea (*Echinacea* spp., p. 92), with which it combines effectively, cat's claw supports a weakened immune system, and can reinvigorate the body's efforts to counter infection and inflammation. The herb's antioxidant activity also helps to contain the widespread cellular damage that occurs in chronic degenerative disease. Conditions that may benefit include infections such as chronic fatigue syndrome and HIV/AIDS; chronic inflammatory diseases such as rheumatoid arthritis and ulcerative colitis; and asthma. Cat's claw may also be taken to help prevent cancer, particularly breast cancer, and is useful in countering the damaging effects of chemotherapy.
Research Investigations into the root and stem bark have established that cat's claw has potent anti-inflammatory, antioxidant and immune-stimulant activity. The POAs and water extracts of the bark stimulate production of white blood cells and non-specific immune resistance, and appear to inhibit tumour development and growth; extracts of the bark are strongly anti-inflammatory and may inhibit inflammatory gene expression. Nevertheless, the bark's medicinal activity probably results from the synergistic effect of several compounds, including the tannins. Clinical research in Peru indicates that cat's claw may have use in the treatment for HIV and AIDS. Of the two types of cat's claw, only the one containing POAs should be used as medicine, since the TOAs may suppress immune function. Cat's claw has a contraceptive activity. A small-scale clinical trial in Brazil found that patients with advanced cancer had more energy and some improvement in quality of life when taking a cat's claw extract.
Caution Avoid during pregnancy and while breast-feeding.

Urginea maritima
syn. *Drimia maritima* (Liliaceae)

Squill

Description Perennial growing to 1.5 m (5 ft) from a large white or red bulb. Has a single flowering stem, a rosette of large basal leaves and a dense spike of white flowers.

***Squill** contains substances that have a strongly tonic effect on the heart.*

Habitat & Cultivation Native to southern Spain, the Canary Islands and South Africa, squill is cultivated in the Mediterranean region. The bulb of the white (but not the red) variety is unearthed in late summer.
Part Used Bulb.
Constituents Squill contains cardiac glycosides (0.15–2.4% bufadienolides, including scillaren A), flavonoids, stigmasterol anthocyanidins and mucilage. The cardiac glycosides are strongly diuretic and relatively quick-acting. They do not have the same cumulative effect as those present in foxglove (*Digitalis purpurea*, p. 202).
History & Folklore Squill appears in the Egyptian Ebers papyrus (*c.* 1500 BCE). In Greece it was used by Pythagoras and Hippocrates in the 6th and 5th centuries BCE.
Medicinal Actions & Uses Squill is a diuretic, emetic, cardiotonic and expectorant plant that finds use in a wide range of conditions. It makes a good diuretic in cases of water retention. Since its active constituents do not accumulate to a great degree within the body, it is a potential substitute for foxglove in aiding a failing heart. At low dosage, squill is an effective expectorant. At higher doses, the herb acts as an emetic. Squill is also used in homeopathic preparations.
Caution Use only under professional supervision. Squill is toxic in excessive doses.

Vaccinium macrocarpon
(Ericaceae)

Cranberry

Description Small, slender, evergreen shrub, growing to 30 cm (1 ft), with oval, dark green leaves, pink flowers and round or slightly pear-shaped red berries.
Habitat & Cultivation Native to eastern North America and northern Asia, cranberry

thrives in acidic soils and in wet, boggy ground. It is widely cultivated in north-eastern US.
Parts Used Berry (fruit).
Constituents Cranberry contains tannins (catechins, proanthocyanidins and polyphenols), flavonoids and vitamin C.
History & Folklore Best known for cranberry sauce, cranberry has traditionally been taken as a tart, acidic drink in Sweden. Cranberry was first cultivated in Britain in 1808 by the English botanist Joseph Banks, and in the US – now the principal grower of cranberries – in the 1840s.
Medicinal Actions & Uses A classic remedy for urinary tract infections, cranberry can be used both to prevent and to treat problems such as cystitis and urethritis. Taken as berries, juice or extract, it will help to disinfect the urinary tubules and may be taken for problems associated with poor urinary flow such as enlarged prostate, as well as bladder infections. In cases of acute infection, cranberry is likely to work better in combination with herbs such as buchu (*Barosma betulina*, p. 71) and bearberry (*Arctostaphylos uva-ursi*, p. 170). Cranberry may also be used long term to prevent the development of calcium carbonate urinary stones.
Research Research published in 1994 found that cranberry juice reduced the need for antibiotics in women suffering from chronic urinary tract infection. It seems likely that cranberry works by making it more difficult for bacteria to cling to the urinary tract wall, and infection is therefore more easily flushed out. The proanthocyanidins and catechins are probably responsible for this action.
Cautions In kidney disease, use only on professional advice.

Verbascum thapsus (Scrophulariaceae)
Mullein

Description Upright biennial growing to 2 m (6½ ft). Has slightly hairy, grey-green, oval to lance-shaped leaves, and spikes of bright yellow flowers.
Habitat & Cultivation Mullein is native to central and southern Europe and western Asia. It is now also naturalized in many other temperate regions. Mullein grows on open uncultivated land and along roadsides. The leaves and flowers are collected during the summer.
Parts Used Leaves, flowers.
Constituents Mullein contains mucilage, flavonoids, triterpenoid saponins, volatile oil and tannins.
History & Folklore Mullein was once credited with magical as well as medicinal virtues. John Gerard, a 16th-century herbalist, expressed doubts about the former: "there be some who think that this herbe being carryed aboute one, doth help the falling sickness… which thing is vaine and superstitious". However, he did affirm mullein's value as a cough medicine.
Medicinal Actions & Uses Mullein is a valuable herb for coughs and catarrh, and is a specific treatment for tracheitis and bronchitis. The leaves and the flowers may be used as an infusion to reduce mucus formation and stimulate the coughing up of phlegm. Mullein combines well with other expectorants such as coltsfoot (*Tussilago farfara*, p. 278) and thyme (*Thymus vulgaris*, p. 143). Applied externally, mullein is emollient and makes a good wound healer. In Germany, the flowers are steeped in olive oil, and the resulting fixed oil is used as a remedy for ear infections and haemorrhoids.

Mullein is a good expectorant remedy for coughs and other chest problems.

Veronica officinalis (Scrophulariaceae)
Speedwell

Description Creeping hairy perennial growing to 50 cm (20 in). Has oval leaves and darkly veined lilac flowers.
Habitat & Cultivation A common wild plant in Europe and North America, speedwell is most often found on heaths and in dry grassy places. It is picked in summer.
Parts Used Aerial parts.
Constituents Speedwell contains iridoid glycosides (including aucubin), acetopenone glucosides, and flavonoids (including apigenin and scutellarin).
History & Folklore Speedwell was formerly considered a useful diuretic and expectorant. It was much used to treat catarrh, coughs and chronic skin conditions. It was also given to counter nervous exhaustion due to excessive mental activity or concentration. However, in 1935, the French medicinal plant specialist Leclerc stated that "the infusion has no more virtue than the hot water used to prepare it".
Medicinal Actions & Uses Speedwell is now considered to have only a slight therapeutic effect. It is little used today.

Viburnum prunifolium (Caprifoliaceae)
Black Haw

Description Deciduous shrub growing to 5 m (16 ft). Has serrated oval leaves, clusters of white flowers and blue-black berries.
Habitat & Cultivation Native to central and southern North America, black haw grows in woodland. The branch bark is stripped in the spring or autumn, the root bark in the autumn only.
Parts Used Bark, root bark.
Constituents Black haw contains coumarins (including scopoletin and aesculetin), salicin, 1-methyl-2,3-dibutyl hemimellitate, viburnin, plant acids, a trace of volatile oil and tannin.
History & Folklore The Catawba people used black haw bark to treat dysentery. In the 19th century, the bark was considered to be a uterine tonic, and a decoction was commonly used to help arrest haemorrhage of the uterus.
Medicinal Actions & Uses Black haw is antispasmodic and astringent, and is regarded as a specific treatment for menstrual pain. Echoing its 19th-century applications, the bark is also used to treat other gynaecological conditions, such as prolapse of the uterus, heavy menopausal bleeding, morning sickness and threatened miscarriage. Black haw's antispasmodic property makes it of value in cases where colic or other cramping pain affects the bile ducts, the digestive tract or the urinary tract.
Related Species The closely related *V. rufidulum* was used by the Menominee people to treat cramps and colic. *See also* cramp bark (*Viburnum opulus*, p. 150).
Caution People who are allergic to aspirin should not take black haw.
Self-help Use Period pain, p. 315.

Vinca minor (Apocynaceae)
Lesser Periwinkle

Description A mainly ground-hugging evergreen shrub arching to 45 cm (18 in). Has rooting stems, shiny elliptical leaves and 5-petalled, violet-blue flowers.

Habitat & Cultivation Native to Europe, lesser periwinkle grows in hedgerows and along woodland borders. It is also cultivated as a garden plant. The leaves are gathered in spring.
Parts Used Leaves.
Constituents Lesser periwinkle contains about 7% indole alkaloids (including vincamine, vincine and vincaminine), a bisindol alkaloid (vincarubine) and tannins. Vincamine increases blood flow and oxygen supply to the brain.
History & Folklore In his *Herbarium*, the 2nd-century CE Roman writer Apuleius describes lesser periwinkle's virtues "against the devil sickness and demoniacal possessions and against snakes and wild beasts". He also specifies the rituals used in harvesting the herb: "This wort thou shalt pluck thus, saying, 'I pray thee, *vinca pervinca*, thee that art to be had for thy many useful qualities… outfit me so that I be shielded and ever prosperous and undamaged by poisons and by water.' When thou shalt pluck this wort, thou shalt be clean of every uncleanness, and thou shalt pick it when the moon is nine nights old."
Medicinal Actions & Uses Lesser periwinkle is employed as an astringent and blood-staunching herb. Its astringency makes it a useful mouthwash for sore throats, gingivitis and mouth ulcers. Its staunching ability is effective against internal bleeding, heavy menstrual bleeding and nosebleeds. Since vincamine was discovered in the leaves, lesser periwinkle has been used to treat arteriosclerosis and for dementia due to insufficient blood flow to the brain.
Related Species Greater periwinkle (*V. major*) also has similar astringent activity. See also Madagascar periwinkle (*V. rosea, following entry*).
Caution Do not take during pregnancy.

Vinca rosea (Apocynaceae)
Madagascar Periwinkle

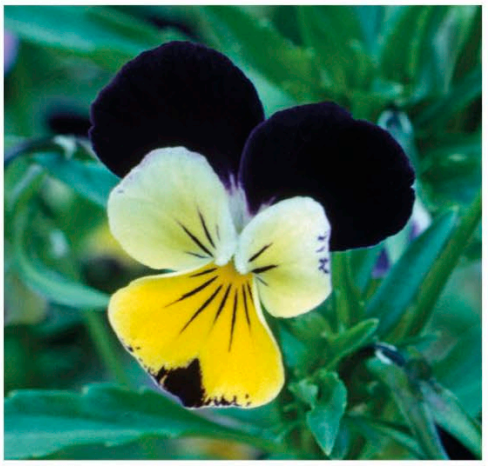
Description Fleshy perennial growing to 80 cm (32 in). Has glossy oval leaves and bright, white to red, 5-petalled flowers.
Habitat & Cultivation Thought to be a native of Madagascar, this herb is now common in many tropical and sub-tropical regions worldwide. It is cultivated commercially as a garden ornamental. The herb and root are gathered in summer.
Parts Used Aerial parts, root.
Constituents Madagascar periwinkle contains over 70 different indole alkaloids, including vinblastine, vincristine, alstonine, ajmalicine, leurocristine and reserpine.
Medicinal Actions & Uses This plant is used in folk medicine in the Philippines as a remedy for diabetes. In the Caribbean, the flowers are used as a soothing eyewash.
Research Madagascar periwinkle's traditional use as a treatment for diabetes has led to extensive investigation into its properties. Vincristine and vinblastine are powerful anti-cancer agents, and are two of the most important medicinal compounds found in plants in the last 40 years. Vincristine is a standard treatment for Hodgkin's disease, and vinblastine for childhood leukaemia. While extracts from Madagascar periwinkle have been shown to lower blood sugar levels, simple preparations of the whole plant may not be effective.
Caution Take Madagascar periwinkle only under professional supervision.

Viola odorata (Violaceae)
Sweet Violet

Description Creeping perennial growing to 15 cm (6 in). Has toothed oval leaves, and very attractive, violet-blue or white flowers with a 5-petalled corolla.
Habitat & Cultivation Native to much of Europe and Asia, sweet violet is a common wayside plant also found in hedgerows and woodland. The flowers and leaves are collected in spring, the root in autumn.
Parts Used Flowers, leaves, root.
Constituents Sweet violet contains phenolic glycosides (including gaultherin), saponins (myrosin and violin), flavonoids, an alkaloid (odoratine) and mucilage.
History & Folklore In classical myth, sweet violet was associated with death, but classical physicians also knew it as an effective emetic and cough remedy. The 17th-century herbalist Nicholas Culpeper stated that: "All the violets are cold and moist while they are fresh and green, and are used to cool any heat or distemperature of the body either inwardly or outwardly."
Medicinal Actions & Uses Sweet violet flowers and leaves have a gentle expectorant and demulcent action and they induce light sweating. They are often used as an infusion or syrup for treating coughs, chest colds and catarrh. They are used in British herbalism to treat breast and stomach cancer. The root is a much stronger expectorant and, at higher doses, is emetic.
Research Iranian researchers investigated the use of two drops of sweet violet essential oil applied to the nostrils as a remedy for insomnia. The study, which lasted a month, found positive improvements in sleep measurements in those using the oil. A 2015 study of children with asthma concluded that sweet violet syrup helped to reduce symptoms of dry irritable cough.
Related Species The related dog violet (*V. canina*) has approximately the same uses as sweet violet. The Chinese *V. yedoens* is prescribed for hot swellings and tumours, mumps and abscesses. See also heartsease (*V. tricolor, following entry*).

Viola tricolor (Violaceae)
Heartsease

Description Annual, biennial or perennial plant growing to 38 cm (15 in). Has lobed, oval leaves and handsome violet, yellow and white pansy-type flowers.
Habitat & Cultivation Heartsease is native to Europe, North Africa and temperate regions of Asia, and has become naturalized in the Americas. It thrives in many habitats, from grasssy mountainous areas to coastal sites, and is also cultivated as a garden plant. The aerial parts are gathered in summer.
Parts Used Aerial parts.
Constituents Heartsease contains saponins, flavonoids, salicylates, mucilage, gums and a resin.
History & Folklore K'Eogh wrote in his 1735 *Irish Herbal* that heartsease flowers "cure convulsions in children, cleanse the lungs and breast and are very good for fevers, internal inflammations and wounds".
Medicinal Actions & Uses In Western herbal medicine, heartsease is used as an anti-inflammatory and purifying herb and is taken for skin conditions such as eczema. An infusion also makes a useful wash for itchiness. Being expectorant, heartsease is used to treat bronchitis and whooping cough. The plant's established diuretic action makes it useful for treating rheumatism, cystitis and difficulty in passing urine.
Research Recent research has found that heartsease has potential anti-cancer properties. It promoted programmed cell death (apoptosis) and inhibited blood vessel growth (angiogenesis), both important anti-cancer effects. A clinical trial in children with asthma found that heartsease syrup helped to control dry irritable cough alongside prescribed medication for asthma.
Self-help Use Nettle rash, p. 303.



Heartsease *grows wild in temperate areas, and is widely cultivated as a garden plant.*

Viscum album (Loranthaceae)

Mistletoe

Description Parasitic evergreen shrub that forms bunches up to 3 m (10 ft) across on host trees. Has narrow leathery leaves, yellowish flowers in clusters of 3, and sticky, round, white berries.

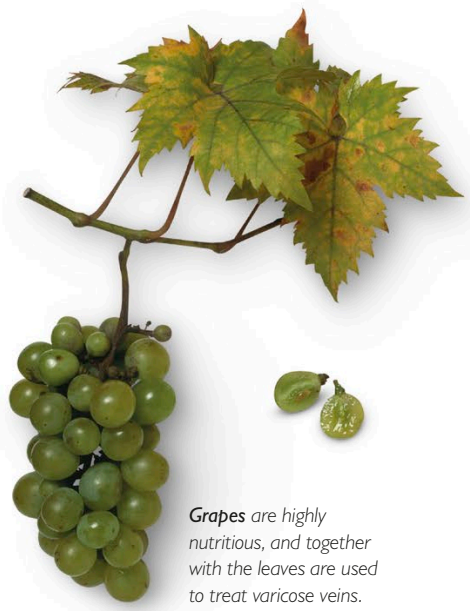
Mistletoe was the "golden" bough that saved the legendary Aeneas from the underworld.

Habitat & Cultivation Native to Europe and northern Asia, mistletoe grows on host trees, especially apple trees (*Malus* species). It is harvested in autumn.
Parts Used Leaves, branches, berries.
Constituents Mistletoe contains glycoproteins, polypeptides (viscotoxins), lectins, flavonoids, caffeic and other acids, lignans, acetylcholine and, in the berries, polysaccharides. Viscotoxins inhibit tumours and stimulate immune resistance.
History & Folklore In Norse mythology, a mistletoe bough was used to slay Balder, the god of peace. The plant was subsequently entrusted to the goddess of love, and kissing under it became obligatory.
Medicinal Actions & Uses Mistletoe is chiefly used to lower blood pressure and heart rate, ease anxiety and promote sleep. In low doses it also relieves panic attacks, headaches, and improves the ability to concentrate. Mistletoe is also prescribed for tinnitus and epilepsy. It may be used to treat hyperactivity in children. In anthroposophical medicine, extracts of the berries are injected to treat cancer.
Research Mistletoe's efficacy as an anti-cancer treatment has been subject to a significant amount of research. There is no doubt that certain constituents, especially the viscotoxins, exhibit an anti-cancer activity, but the value of the whole plant in cancer treatment is not yet fully accepted.
Caution Mistletoe, and especially the berries, are highly toxic. Take only under professional supervision.

Vitis vinifera (Vitaceae)

Grape Vine

Description Deciduous climber with erect stems, tendrils, palm-shaped leaves, clusters of small, pale green flowers, and bunches of fruit (grapes) that vary in colour from green to black.
Habitat & Cultivation Native to southern Europe and western Asia, the grape vine is cultivated in warm temperate regions throughout the world for its fruit and to produce wine. The leaves are collected in summer, the fruit in autumn.
Parts Used Leaves, fruit, seeds, sap.
Constituents Grape vine contains flavonoids, tannins, tartrates, inositol, carotenes, choline and sugars. The fruit contains tartaric and malic acids, sugars, pectin, tannin, flavone glycosides, anthocyanins (in red leaves and red grapes), vitamins A, B_1, B_2 and C, and minerals. The anthocyanins reduce capillary permeability.
History & Folklore Nicholas Culpepper in 1652 extolled the virtues of the grape vine, describing it as "a most gallant tree of the sun very sympathetical to the body of man, and that's the reason spirit of wine is the greatest cordial amongst all vegetables."
Medicinal Actions & Uses Grape vine leaves, especially the red leaves, are astringent and anti-inflammatory. They are taken as an infusion to treat diarrhoea, heavy menstrual bleeding and uterine haemorrhage, as a wash for mouth ulcers, and as a douche for vaginal discharge. Red leaves and grapes are helpful in the treatment of varicose veins, haemorrhoids and capillary fragility. The sap from the branches is used as an eyewash. Grapes are nourishing and mildly laxative and they support the body through illness, especially of the gastro-intestinal tract and liver. Because the nutrient content of grapes is close to that of blood plasma, grape fasts are recommended for detoxification.



Grapes are highly nutritious, and together with the leaves are used to treat varicose veins.

The dried fruit (raisins or sultanas) is mildly expectorant and emollient, with a slight effect in easing coughs. Wine vinegar is astringent, cooling and soothing to the skin.
Research Grape seed extract has potent antioxidant and circulatory-protective activity. It appears to normalize blood pressure and heart rate, working best as a preventative, anti-ageing remedy that supports healthy circulation. One study found grape seed extract reduced leg swelling in healthy women required to sit for long periods of time at work. Recent studies also indicate that grape seed extract can be useful in non-alcoholic fatty liver disease and late-onset diabetes.

Ziziphus jujuba (Rhamnaceae)

Jujube,
Da Zao (Chinese)

Description Spiny deciduous tree growing to approximately 8 m (26 ft). Has oblong, bluntly toothed leaves, clusters of small greenish-yellow flowers and reddish-brown or black oval fruit.
Habitat & Cultivation Native to China, Japan and South-East Asia, the jujube is widely cultivated in tropical and sub-tropical regions of Asia and the Mediterranean. The fruit is collected in early autumn.
Part Used Fruit.
Constituents Jujube contains saponins, bioflavonoids, polyphenols, polysaccharides, volatile oil, mucilage, vitamins A, B_2 and C, in addition to calcium, phosphorus and iron. It contains 20 times more vitamin C than citrus fruit.
History & Folklore Used in Chinese herbal medicine for at least 2,500 years, jujube has a pleasant, sweet taste and high nutritional value. It is mentioned in the *Classic of Odes*, a 6th-century BCE anthology of Chinese poetry.
Medicinal Actions & Uses Jujube is both a delicious fruit and an effective herbal remedy. It aids weight gain, improves muscular strength and increases stamina. In Chinese medicine, jujube is prescribed as a *qi* tonic to strengthen liver function. Mildly sedative and anti-allergenic, it is given to reduce irritability and restlessness. It is also used to improve the taste of unpalatable prescriptions.
Research In Japan, jujube has been shown to increase immune-system resistance. In China, laboratory animals fed a jujube decoction gained weight and showed improved endurance. In one clinical study, 12 patients with liver ailments were given jujube, peanuts and brown sugar nightly. In 4 weeks, their liver function had improved.
Related Species The sedative *Z. spinosa* is used in Chinese medicine to "nourish the heart and quieten the spirit".

HERBAL REMEDIES FOR HOME USE

Herbal medicines have been used since the earliest times. They are a vital part of our natural and medical heritage, and there is immense satisfaction to be had in growing, harvesting and processing herbs for home use. Taken sensibly, and with the respect due to medicines of all kinds, medicinal plants can greatly improve health. This section provides practical cultivation advice and step-by-step instructions on how to make and use safe and effective herbal remedies for a range of common ailments, from allergies and digestive complaints to skin conditions and stress-related disorders.

"A man may esteem himself happy when that which is his food is also his medicine."

Henry David Thoreau

Growing Medicinal Plants

Growing medicinal plants may be more time-consuming than buying them, but it brings with it the unique pleasure of producing your own herbal remedies. Many medicinal herbs are easy to grow and will flourish indoors, on a windowsill or in the garden, providing a year-round supply of fresh, sweet-smelling natural medicines.

The Medicinal Herb Garden

Planning a herb garden depends on a range of factors including the space available, aspect, soil, conditions and climate. As a starting point, details of ten of the most common and useful medicinal plants for growing in temperate climates are given in the chart below. Some of them, such as thyme (*Thymus vulgaris*, p. 143) and sage (*Salvia officinalis*, p. 131) may be grown indoors. A number of other medicinal herbs, including German chamomile (*Chamomilla recutita*, p. 77), lady's mantle (*Alchemilla vulgaris*, p. 163) and lavender (*Lavandula officinalis*, p. 108) also grow well in a temperate climate and are well worth cultivating. If in doubt about how to care for plants or what will grow well in your garden, consult a nursery.

Outdoor Gardens

Choose a range of hardy herbs to grow in your garden that will establish themselves easily and produce plenty of foliage that can be harvested. Plant exotic or less hardy herbs in sheltered sunny sites or in containers.

Container Gardens

Many medicinal plants such as peppermint (*Mentha × piperita,* p. 114) or bay laurel (*Laurus nobilis,* p. 226) can be grown in pots, hanging baskets or window boxes. Care must be taken to prevent them from drying out or becoming pot-bound (when the plant becomes too large for the container). Less hardy plants should be moved to sheltered sites or indoors during winter.

Growing Plants Under Cover

Sheltered gardening offers the opportunity to grow more unusual plants. Use the greenhouse to cultivate exotic plants, such as lemon grass (*Cymbopogon citratus,* p. 198), for medicinal and culinary use, as well as for growing seedlings to be planted out. Tender plants, such as holy basil (*Ocimum tenuiflorum,* p. 116), thrive indoors, and some indoor plants, such as aloe vera (*Aloe vera,* p. 60), have the added advantage of absorbing polluting chemicals from the air.

Buying Medicinal Herbs

Reputable herb nurseries are the best place to buy herbs when particular varieties or species are required. Be clear about what plants you want before visiting the nursery. When buying for medicinal use, purchase the standard medicinal, rather than an improved or ornamental, variety.

Cultivation

Bear in mind the following points when planning the garden and choosing herbs.

Site

The majority of medicinal plants prefer a sunny aspect and moderately well-drained soil. It is possible to improve a site, for example by planting hedges as windbreaks. Choose sheltered, sunny corners for delicate and half-hardy herbs, and avoid planting on land formerly used for industrial purposes, which may be contaminated.

Temperature

Some plants tolerate only very specific temperature ranges and many herbs, such as rosemary (*Rosmarinus officinalis*, p. 128), are only half-hardy and will not survive exposure to deep or long periods of frost. Protect tender and half-hardy plants from the wind to avoid the wind chill factor. Spring is the best time to plant most herbs. Wintering plants in a greenhouse or cool indoor site is often the only way to keep sub-tropical plants in cool temperate climates, while other herbs will thrive indoors all year round in a warm, sunny position.

Soil

Soils vary greatly depending on the proportions of sand, silt and clay content. Sandy soils drain easily and need feeding, while clay soils can become waterlogged and require drainage.

Pruning

Pruning is used to remove dead wood and improve the shape, size and quality of growth. It is an important garden activity and needs to be done correctly for different woody plants to benefit – check the best time of year for each plant. Deadheading plants, especially shrubs,

Useful Herbs to Grow

PLANT	WHEN TO PLANT	CULTIVATION METHOD	CONDITIONS & CARE	MEDICINAL USES
Aloe vera (*Aloe vera*, p. 60)	spring/autumn	offsets	■ sunny site indoors; pot up as needed; do not overwater	■ fresh plant gel for minor burns and wounds
Comfrey (*Symphytum officinale*, p. 138)	spring/autumn	seed/division	■ warm sunny site; moist soil	■ ointment or poultice for sprains and bruises (use the leaf only)
Feverfew (*Tanacetum parthenium*, p. 140)	autumn/spring	seed/cutting/division	■ well-drained or dry, stony soil in sun	■ fresh leaf or tincture for headaches and migraines
Lemon balm (*Melissa officinalis*, p. 113)	spring/autumn	seed/cutting/division	■ moist soil in sun; cut back after flowering	■ infusion for anxiety, poor sleep and nervous indigestion; lotion for cold sores
Marigold (*Calendula officinalis*, p. 73)	spring/autumn	seed	■ well-drained soil; full sun; remove dead flowerheads	■ cream for cuts, grazes, inflamed skin; infusion for fungal infections
Peppermint (*Mentha × piperita*, p. 114)	spring/autumn	cutting/division	■ sunny but moist site; do not allow to dry out	■ infusion for indigestion and headaches; lotion for itchy skin
Rosemary (*Rosmarinus officinalis*, p. 128)	spring/autumn	seed/cutting	■ sunny sheltered site; protect with sacking in winter	■ infusion as a stimulating nerve tonic and to aid a weak digestion
Sage (*Salvia officinalis*, p. 131)	autumn/spring	seed/cutting/layering	■ well-drained or dry, sunny sheltered site	■ infusion for sore throats, mouth ulcers and diarrhoea
St John's wort (*Hypericum perforatum*, p. 106)	spring/autumn	seed/division	■ well-drained to dry soil with sun or partial shade	■ tincture for depression and menopause; infused oil is antiseptic and heals wounds
Thyme (*Thymus vulgaris*, p. 143)	spring/summer	seed/cutting/division	■ well-drained soil, may need a layer of gravel; sunny site	■ infusion for coughs, colds and chest infections; lotion for fungal infections

Cultivated herb gardens *can create a colourful, aromatic area with the added benefit of providing a ready supply of fresh herbs to use both medicinally and in cooking.*

encourages fresh growth. Pruning and tidying the garden regularly also reduces pests and diseases.

Watering

Water well after planting and then, if needed, once a week (rather than a little each day) in the morning or early evening. Do not overwater as many herbs produce medicinally active constituents in dry conditions. Water dry pot plants thoroughly before planting.

Weeding & Fertilizing

Weeding is necessary as weeds compete with other plants for nutrients and water. Keep beds and containers as free from weeds as possible. Most medicinal herbs should not be fed or mulched as this tends to reduce their therapeutic strength. However, sandy soils should be fed with a good-quality fertilizer to maintain the nutrients in the soil.

Pests & Diseases

Use only organic methods to treat pests, diseases and insect infestation. Greenfly can be eradicated using soapy water or water in which garlic skins have been soaked for 2 days. Separate any infected plants to prevent further contamination.

Propagation Methods

There is a wide variety of propagation methods. Choose the one most suited to the plant. When planting, prepare the ground in advance, taking into account the requirements of the individual plant, and the soil, site and time of year, as well as the anticipated size of the mature plant.

Seed

Seeds can be sown either in containers or in prepared soil in open ground. It is important to time the sowing of seeds to enable seedlings to be planted out when weather and soil become sufficiently warm. Annuals and biennials can be grown with ease from seed and will grow vigorously throughout the summer. Check the germination requirements of perennials before buying seeds, as some varieties germinate easily, while others, such as Siberian ginseng (*Eleutherococcus senticosus*, p. 94), can be far more difficult.

Cuttings

This is one of the most popular methods of propagation. It is suitable for woody perennial herbs. Cuttings are usually taken from the stem, although some plants may also be propagated from roots. Choose young healthy plants and take the cutting just below a leaf and stem joint using a clean, sharp knife. Strip off the lowest leaves and dip the stem in hormone rooting preparation before inserting it in suitable compost. Some plants are very difficult to propagate this way, so check before attempting this method.

Root Division

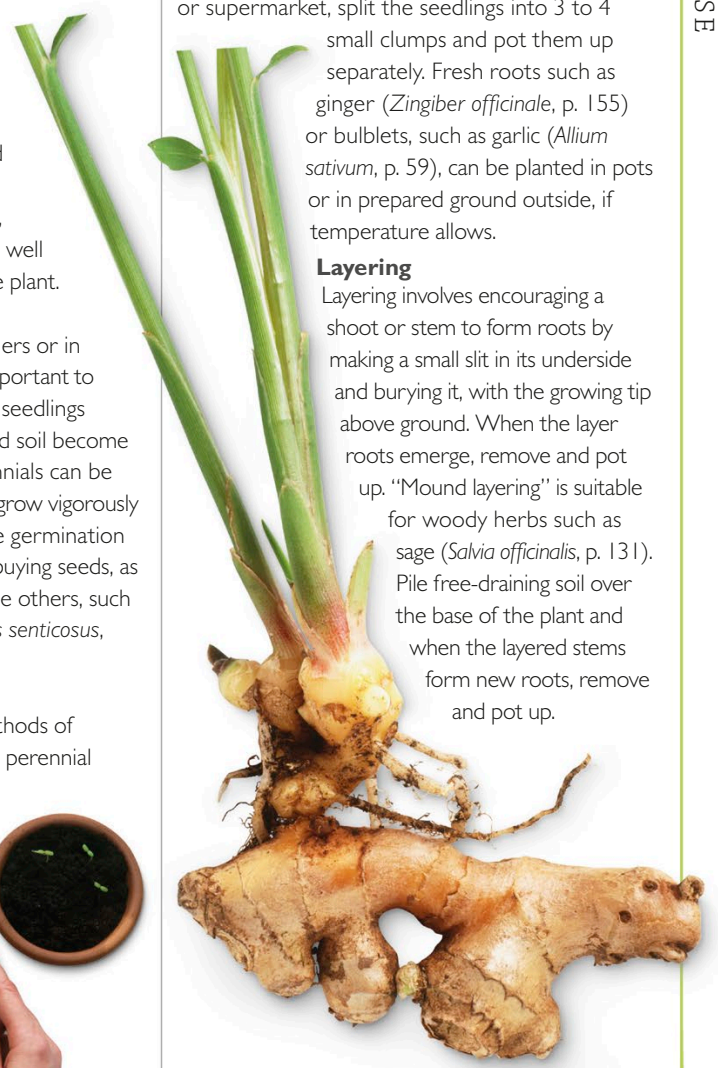
This is an easy way to propagate plants that form clumps. Divide spring-flowering herbaceous plants in autumn, and autumn-flowering herbaceous plants in spring. Carefully lift a mature plant, divide it into smaller sections and replant both the new and the mature plant.

Plants from Produce

Purchase pots of culinary herbs from a grocery or supermarket, split the seedlings into 3 to 4 small clumps and pot them up separately. Fresh roots such as ginger (*Zingiber officinale*, p. 155) or bulblets, such as garlic (*Allium sativum*, p. 59), can be planted in pots or in prepared ground outside, if temperature allows.

Layering

Layering involves encouraging a shoot or stem to form roots by making a small slit in its underside and burying it, with the growing tip above ground. When the layer roots emerge, remove and pot up. "Mound layering" is suitable for woody herbs such as sage (*Salvia officinalis*, p. 131). Pile free-draining soil over the base of the plant and when the layered stems form new roots, remove and pot up.



Fresh ginger root *rapidly produces many new shoots if planted in moist compost in warm conditions above 21°C (70°F).*

Offsets

Offsets are produced from most herbs that grow from a bulb or corm, such as garlic (*Allium sativum*, p. 59). These can be detached during dormancy and replanted.

Sowing Seeds in Containers

1 *Fill a seed tray with seed compost and water well. Sprinkle on the seeds, covering large seeds with a fine layer of compost. Cover the tray with glass or place in a plastic bag and store in a warm place (up to 21°C/70°F).*

2 *Once the seeds have germinated, fill a number of pots with compost. Gently lift up a seedling, insert it in a small hole in the compost and pack the soil around it. Water thoroughly and do not allow to dry out.*

Harvesting & Processing

Although there are some herbs that may be collected all year round, most have a particular growing season and must be harvested and either used immediately or preserved for use in the following year. See the individual entries on pp. 56–283 for harvesting times. Herbs need to be processed quickly to prevent deterioration and retain their healing action.

Harvesting from the Wild

Wild plants offer a free and natural source of herbal remedies. Furthermore, active constituents are often more highly concentrated in wild plants as the herb is likely to be growing in its preferred habitat.

Identification

Proper identification of wild plants is essential. Use a field or wild flower guide to help you. If in doubt, do not pick the plant, as poisoning can result from misidentification.

Ecological & Legal Factors

While common species, such as nettle (*Urtica dioica*, p. 146), may be readily harvested from the wild, many rarer species are under great pressure due to the lack of a suitable habitat. In many countries it is illegal to uproot any wild plant and certain species may be protected. Although gathering medicinal plants such as gentian (*Gentiana lutea*, p. 99) may be legal in some countries, it will only reduce their future chances of survival in the wild. *Never pick rare or uncommon plants from the wild, even if they are locally plentiful, and do not collect more than you will use. Do not harvest bark from the wild.* Before harvesting, consider where the plant is growing and whether it could be contaminated by pollution. Do not collect from roadsides, close to factories or in areas where crop spraying has occurred.

Harvesting from your Garden

Cultivated herbs provide a ready supply of fresh material in a controlled environment. Cut perennials carefully so that plants can quickly regrow. Some plants, such as lemon balm (*Melissa officinalis*, p. 113), provide two or more crops per year.

General Advice

Harvesting medicinal herbs requires careful planning to ensure the parts are processed in peak condition and fast enough to retain their active ingredients.

Equipment

Ideally, use a wooden tray or open basket for collecting herbs. This prevents the plant being crushed. In the wild, a non-nylon rucksack or sack may be more appropriate. Always cut with a sharp knife or scissors to minimize damage to the plant and try to handle plants as little as possible. Wear gloves if gathering prickly or allergenic plants, such as rue (*Ruta graveolens*, p. 265).

What to Look For

Collect material from healthy plants, free from insect damage and pollution. It is important to discard damaged plants as they can lead to disease or decay in dried plant material. Do not mix cut plant material to avoid mistakes in identification.

When to Harvest

Gather herbs in dry weather, preferably on a sunny morning after the dew has evaporated. Picking when the plant is at its peak of maturity ensures that it will have a high concentration of active constituents. Unless otherwise stated in the individual plant entries on pp. 56–283, leaves are best collected as they open during the spring or summer months, flowers as they start to bloom, fruit and berries just as they become ripe, and roots in the autumn once the plant has drawn its vitality back beneath ground. Bark must be gathered with great care if the shrub or tree is to survive – in most cases harvest it in spring or autumn.

The Correct Medicinal Part

In many cases, different parts of the same plant, for example the leaves and seeds, can have quite different actions and uses. Make sure that you harvest the correct medicinal part of the plant for your purposes.

Processing Quickly

Only collect plant material that you will be able to use or process immediately after harvesting. This is because fresh plant material deteriorates very quickly and the medicinally active constituents are often the first to be affected. In particular, aromatic herbs can lose their volatile oils within hours. Salad leaves and culinary herbs are best eaten straight away to make the most of their nutrients, although they can be stored for a few days in a plastic bag filled with air in a refrigerator.

Storing Herbs

It is vital to store dried herbs properly or they will not last. Leaves, flowers, roots and other parts should be stored in sterilized, dark glass containers with airtight lids. They may also be stored in new brown paper bags which must be kept dry and away from light. Metal and plastic containers are inadvisable as they may contaminate the herb. If stored in a cool dark place, herbs can be kept for about 12 months after harvesting. Herbs frozen in plastic bags can be used for up to 6 months. Label the container with the herb, source, date of harvesting, and strength of preparation if appropriate. Watch out for insect infestation.

Ramsons *can be found carpeting shady sites in damp woods. The bulb and aerial parts are harvested in early summer for their antibiotic, healing properties.*

If this occurs, discard all affected material and sterilize the container.

Processing

Herbs can be preserved in a number of ways, the simplest being air or oven drying. A warm, dry place such as an airing cupboard is ideal. Use plain paper for drying herbs, never printed newspaper. Dried herbs can be stored for many months in a dark glass jar or a brown paper bag (see p. 288).

Aerial Parts

These include all the parts of the plant growing above ground – stems, leaves, flowers, berries and seeds. The stems are normally cut 5–10 cm (2–4 in) above ground shortly after the plant has begun to flower, when it is putting most effort into growth. Perennials may be cut higher above ground to encourage further crops. Remove and dry large flowers and leaves separately; smaller ones can be dried on the stem.

- Hang bunches of about 8–10 stems in a warm (but not hot), well-ventilated, dark place. Ensure that the stems and leaves are not too tightly packed together to enable air to circulate freely around them.
- Once brittle but not bone dry, separate small stems, leaves, flowers and seeds from the stems by rubbing the bunches over a large sheet of plain paper.
- Carefully pour the dried material into a dark glass jar or a brown paper bag.

Large Flowers

In most cases, flowers are picked just after they have opened. Sometimes only specific parts of the flower are used, such as the petals of marigold (*Calendula officinalis*, p. 73), while other flowers are used whole.

- Separate large flowerheads from stems and remove any insects or dirt. Place the flowers on absorbent paper on a tray in a dry place, allowing sufficient room between them for air to circulate.
- Once dry, store flowerheads in a brown paper bag or dark glass jar. Remove marigold petals from the central part of the flower before storing.

Small Flowers

Small blooms can be picked with the stalk attached and separated later. Hang small flowers, such as lavender (*Lavandula officinalis*, p. 108), upside down in a paper bag, or suspended over a tray (see drying seeds below). If the stems are fleshy, dry as for large flowers, above.

Fruit & Berries

Harvest fruit and berries in early autumn when ripe but still firm. If left to become over-ripe, they may not dry properly. They can be picked individually or in bunches.

- Place berries or fruit on absorbent paper on trays. Put in a warmed oven (turned off) with the door ajar for 3–4 hours. Move to a dry, warm, dark site and turn occasionally. Discard any mouldy berries or fruit.

***Brightly coloured** petals indicate high levels of active constituents.*

Roots, Rhizomes, Tubers & Bulbs

The underground parts of the plant are usually gathered in autumn after the aerial parts have withered or become inactive and before the soil is waterlogged or frozen. Many roots may also be collected in early spring before the aerial parts begin to grow. Dig deeply around the root, prising it out of the ground. Some tap roots are difficult to uproot completely. Remove the required amount and replant the remaining root.

- Shake off any soil and wash thoroughly in warm water, removing any small unwanted side roots or damaged soft spots. Chop into small slices or pieces with a sharp knife.
- Spread out the root pieces on absorbent paper on a tray and place in a warmed oven (turned off) with the door ajar for 2–3 hours. Move to a warm place until dry.

Seeds

Collect ripe seed pods, capsules or flowering stems in late summer before the seeds have been scattered.

- For tiny seeds, hang small bunches of seedheads upside down over a paper-lined tray, or place in a paper bag. Allow to dry and gently shake. Remove larger seeds by hand when dry.

Sap & Gel

Only harvest sap from your own garden. Collect sap in the spring as it rises, or as it falls in the autumn. Trees such as silver birch (*Betula pendula*, p. 178) produce huge quantities of sap if tapped, although this reduces the tree's vitality. Bore a deep hole into the trunk – no more than a quarter of its diameter – and place a collecting cup under the hole. In spring, litres of sap may be produced and it is essential to stop the hole with resin or wood filler once about a litre of fluid has been removed. Collect milky juices or latex from plants such as dandelion (*Taraxacum officinale*, p. 141) by squeezing the stems over a bowl. Wear gloves as latex or sap can be corrosive. The gel from aloe vera (*Aloe vera*, p. 60) is scraped out after slicing the leaf lengthwise and peeling back the edges.

Bark

Only harvest bark from your own shrubs or trees as it carries the risk of losing the whole plant through over-stripping or "ringing" (removing a whole band of bark). It is best to collect bark from outlying branches which can then be pruned back. If stripping bark from a plant, gather it in autumn when the sap is falling. Remove insects, lichen and moss from the bark, cut it into small pieces and place on a tray to dry.

Other Ways to Preserve Herbs

Apart from simply air-drying herbs, there are a number of other ways to preserve their medicinal benefits.

Dehumidifying

An effective but expensive way to dry herbs is to use a dehumidifier, which literally sucks water out of the plant. The dehumidifier should be placed in a more or less sealed small room in which the herbs are hung in loose bunches or placed on mesh trays.

Freeze-drying

Freeze-drying retains colour and flavour but is more suited to culinary than to medicinal herbs. Whole sprigs of herbs can be frozen in plastic bags. There is no need to defrost before use as the leaves crumble easily when still frozen. Chickweed (*Stellaria media*, p. 272) can also be frozen and used topically for itchy and weeping skin conditions. Many plants may be juiced (see p. 297), frozen as ice cubes and thawed as required.

Microwaving

It is possible to dry herbs in a microwave oven, though this is not recommended. The cut parts should be spread out on kitchen paper and dried in the microwave according to the manufacturer's guidelines.

***A drying rack** for herbs can be simply made by covering a wooden frame with wire mesh.*

Making Herbal Remedies

In the past, medicinal herbs have been made into an extraordinary variety of formulations – not only infusions, decoctions and tinctures, but preparations such as oxymels and elixirs. The following pages give simple step-by-step instructions on making common herbal preparations. Making most types of herbal medicine is not difficult, but it can be time-consuming – if you lack time or equipment, buy ready-made remedies from a herbal supplier (see *Buying Herbal Medicines*, p. 17).

Identification
Before using medicinal plants that have been collected from the wild, it is essential that they are correctly identified. If in doubt, do not use the herb. The wrong identification of herbs has led to many cases of poisoning. Foxglove leaves (*Digitalis purpurea*, p. 202) for example, are often mistaken for comfrey (*Symphytum officinale*, p. 138).

Utensils
Use glass, enamel or stainless steel pots and pans, wooden or steel knives and spatulas, and plastic or nylon sieves. A wine press is useful for making tinctures. Do not use aluminium utensils, as this potentially toxic element is easily absorbed by herbs.

Sterilization
All utensils used to make herbal remedies should be sterilized for at least 30 minutes in a well-diluted sterilizing solution, such as the type used for a baby's bottle. After soaking, rinse thoroughly with boiled water and dry in a hot oven or wash in a dishwasher. Proper sterilization maintains hygiene and prevents remedies, especially creams and syrups, from turning mouldy.

Weights & Measures
For most purposes, ordinary kitchen scales are suitable, although electronic scales are more accurate. Metric measurements of grams and litres are generally much easier to use than imperial measures when making remedies. If it is difficult to weigh a small quantity, such as 10 g, on your scales, measure double the weight, i.e. 20 g, then halve the quantity. Liquids can be measured in a kitchen measuring jug, although conical or straight-sided glass measures are more accurate. Very small volumes of liquid can be measured in drops (see *Measuring Remedies*, right).

Storage
Different preparations may be kept for varying periods of time before they begin to lose their medicinal properties. Infusions should be made fresh each day and decoctions must be consumed within 48 hours. Store both in a refrigerator or cool place. Tinctures and other liquid preparations, such as syrups and essential oils, need to be stored in dark glass bottles in a cool environment away from sunlight, but can be kept for a number of months or years. Ointments, creams and capsules are best kept in dark glass jars, although plastic containers are also acceptable. See also *Storing Herbs*, p. 288.

Measuring Remedies

1 ml = 20 drops
5 ml = 1 teaspoon
20 ml = 1 tablespoon
150 ml = 1 herbal cup
250 ml = 1 cup

Never exceed the quantity of herbs used or the recommended dosage. Although these measurements are approximate, they are accurate enough for most purposes and are used as standard throughout this book. The number of drops to 1 ml depends on the calibre of the pipette (or size of the dropper tip) being used. This can be checked by counting the number of drops required to fill a 5 ml measuring spoon (this book assumes that 100 drops is equal to 5 ml) and then adjusting the drop dosage as necessary.

The Basic First Aid Kit

Adding herbal remedies to the conventional first aid kit in your home increases the options available to you and your family when accidents happen or illness strikes. The 13 remedies in this first aid kit can generally be found in pharmacies, herbal stores and health food shops. Alternatively, some can be made at home, as detailed on the following pages. *Check any cautions for each herb before use.*

Infusions

An infusion is the simplest way to prepare the more delicate aerial parts of plants, especially leaves and flowers, for use as a medicine or as a revitalizing or relaxing drink. It is made in a similar way to tea, using either a single herb or a combination of herbs, and may be drunk hot or cold.

The medicinal value of many herbs lies chiefly in their volatile oils, which will disperse into the air if a lid is not used. This is especially important in the case of German chamomile (*Chamomilla recutita*, p. 77). Use a teapot, or place a lid or saucer over a cup if making a small quantity. Use water that has just boiled. Popular herbal teas, such as German chamomile, are often taken as much for their refreshing taste as for their medicinal value and can be safely consumed in quantities of up to 5 or 6 cups a day. Some herbs, however, such as yarrow (*Achillea millefolium*, p. 56), are significantly stronger and must be taken in less frequent doses. Other herbs, such as feverfew (*Tanacetum parthenium*, p. 140), are so strong that they are not suitable for use in infusions. Always check the recommended dosage and quantity of herb to use, as infusions have medicinal actions and can produce unwanted effects at the wrong dosage.

1 Place the herb in the strainer of the tisane cup and place the strainer in the cup. Fill the cup with freshly boiled water.

2 Cover the cup with the lid and infuse for 5–10 minutes before removing the tisane strainer. Add a teaspoon of honey to sweeten, if desired.

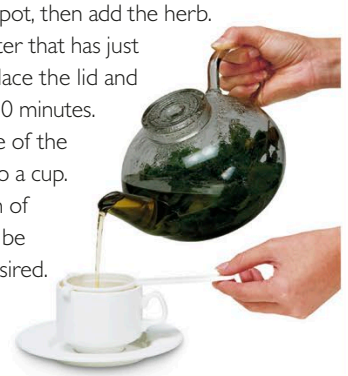
Standard Quantity
CUP 1 tsp (2–3 g) dried or 2 tsp (4–6 g) fresh herb (or mixture of herbs) to a cup of water (this makes 1 dose)
POT 20 g dried herb or 30 g fresh herb (or a mixture of different herbs) to 500 ml of water

Standard Dosage
Take 3–4 doses (500 ml) each day.

Storage
Store in a covered jug in a refrigerator or cool place for up to 24 hours.

Pot Infusion

Warm the pot, then add the herb. Pour in water that has just boiled, replace the lid and infuse for 10 minutes. Strain some of the infusion into a cup. A teaspoon of honey may be added if desired.



Decoctions

Roots, bark, twigs and berries usually require a more forceful treatment than leaves or flowers to extract their medicinal constituents. A decoction involves simmering these tougher parts in boiling water. Fresh or dried plant material may be used and should be cut or broken into small pieces before decocting. Like infusions, decoctions can be taken hot or cold.

Decoctions are generally made using roots, bark and berries, but sometimes leaves and flowers may be included. Add these more delicate parts of a plant once the heat is turned off and the decoction has finished simmering and is beginning to cool. Then strain and use as required.

Chinese Decoctions
In traditional Chinese medicine, decoctions are the main way in which herbal medicines are prepared. Large quantities of herb are often used to produce a highly concentrated liquid, or the decoction is further reduced so that there is only 200 ml of liquid remaining. This increases the preparation's concentration. This process is useful for astringent barks such as babul (*Acacia nilotica*, p. 159) and common oak (*Quercus robur*, p. 260), which may be used externally to tighten gums or wash weeping skin rashes. (Do not take internally.)

1 Place the herbs in a saucepan. Cover with cold water and bring to the boil. Simmer for about 20–30 minutes, until the liquid is reduced by about one-third.

2 Strain the liquid through a sieve into a jug. Pour the required amount into a cup, then cover the jug and store in a cool place.

Standard Quantity
20 g dried or 40 g fresh herb (or mixture of herbs) to 750 ml cold water, reduced to about 500 ml after simmering (this makes 3–4 doses)

Standard Dosage
Take 3–4 doses (500 ml) each day.

Storage
Store in a covered jug in a refrigerator or cool place for up to 48 hours.

Tinctures

Tinctures are made by soaking a herb in alcohol. This encourages the active plant constituents to dissolve, giving tinctures a relatively stronger action than infusions or decoctions. They are convenient to use and last up to two years. Tinctures can be made using a jug and a jelly bag, instead of a wine press. Although mainly used in European, American and Australian herbal medicine, tinctures play a part in most herbal traditions.

Standard Quantity
200 g dried or 300 g fresh herb chopped into small pieces to 1 litre alcohol – vodka of 35–40% alcohol is ideal, although rum hides the taste of bitter or unpalatable herbs

Standard Dosage
Take 5 ml (1 tsp) 2–3 times a day diluted in 25 ml of water or fruit juice.

Storage
Store in sterilized, dark glass bottles, in a cool dark place for up to 2 years.

Tinctures are strong preparations and it is essential to check the recommended dosage. Never use industrial alcohol, methylated spirits (methyl alcohol) or rubbing alcohol (isopropyl alcohol) in tinctures.

Alcohol-reduced Tinctures
Alcoholic tinctures should sometimes be avoided, for example during pregnancy or a gastric inflammation. Adding 5 ml of tincture to a small glass of almost boiling water and leaving it for 5 minutes allows the alcohol to evaporate. To make non-alcoholic tinctures, replace the alcohol with vinegar or glycerol.

Tincture Ratios
Tinctures are made in different strengths, expressed as ratios. In this book, a 1:5 ratio (1 part herb to 5 parts alcohol) is used, unless otherwise stated.

1 *Place the herb in a large, clean glass jar and pour on the alcohol, ensuring that the herb is covered. Close and label the jar. Shake well for 1–2 minutes then store in a cool dark place for 10–14 days, shaking the jar every 1–2 days.*

2 *Set up the wine press, placing a muslin or nylon mesh bag securely inside. Pour in the mixture and collect the liquid in the jug.*

3 *Slowly close the wine press, extracting the remaining liquid from the herbs until no more drips appear. Discard the leftover herbs.*

4 *Pour the tincture into clean, dark glass bottles using a funnel. When full, stopper with a cork or screw top and label the bottles.*

Capsules & Powders

Powdered herbs are most easily taken as capsules but can be sprinkled on food or taken with water. Externally, they can be applied as a dusting powder to the skin or mixed with tinctures as a poultice (see p. 295).

Standard Quantity
Fill size 00 capsules, which contain approximately 250 mg of powdered herb

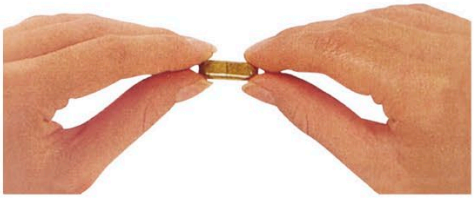
Standard Dosage
Take 2–3 capsules twice a day.

Storage
Store in airtight, dark glass containers in a cool place for up to 3–4 months.

Reputable herbal suppliers are the best place to buy powdered herbs and, in general, the finer the powder the better the grade and quality. Gelatin or vegetarian capsule cases are also available from specialist outlets. Powdered slippery elm (*Ulmus rubra*, p. 145) makes a useful base for poultices (see p. 295), and astringents such as witch hazel (*Hamamelis virginiana*, p. 102) may be applied to weeping skin or mixed into ointments (see p. 295) for haemorrhoids and varicose veins.

Making Capsules

1 *Pour the powder into a saucer and slide the capsule halves towards one another, scooping up the powder (or use a capsule-making tray).*



2 *When the halves of the capsule are full of powder, slide them together without spilling the powder and store.*

Tonic Wines

Tonic wines are an agreeable way to take strengthening and tonic herbs to increase vitality and improve digestion. Neither strictly medicinal, nor simply appealing to the palate, they are easy to prepare at home. Tonic wines are made by steeping tonic herbs, such as Chinese angelica (*Angelica sinensis*, p. 63), or bitter herbs, such as southernwood (*Artemisia abrotanum*, p. 172), in red or white wine for several weeks.

Standard Quantity
100 g dried or 200 g fresh tonic herbs or 25 g dried bitter herbs and 1 litre of red or white wine

Standard Dosage
Drink 70 ml each day before a meal.

Storage
Use a ceramic vat with a tap at its base, or a sterilized glass jar. Store for 3–4 months, ensuring wine covers the herbs. If the herbs go mouldy discard the remedy.

A simple and effective way to make a tonic wine is in a jar or a ceramic vat with a tap at the base to enable the wine to be drawn off without disturbing the herbs. Wine can be added periodically to keep the herbs covered, although, in time, this will reduce the wine's tonic effectiveness. If exposed to the air, the herbs may go mouldy, making the remedy not only ineffective but unsafe to take.

Herbal Wines
Herbal wines are made by fermenting the herb in the same way that wine is produced from grapes. With the correct equipment this is a simple process, but fermentation alters the activity of the herbs and tends to reduce their medicinal value.

1 *Place the herb in a large clean jar or vat. Pour in enough wine to cover the herb completely. Close the jar securely, shake carefully and leave to stand.*

2 *Allow the wine to mature over 2–6 weeks, then take a dose from the tap or jar. Regularly top up the mixture with wine.*

Syrups

Honey and unrefined sugar are effective preservatives and can be combined with infusions or decoctions to make syrups and cordials. They have the additional benefit of having a soothing action and therefore make a perfect vehicle for cough mixtures as well as relieving sore throats. With their sweet taste, syrups can disguise the taste of unpalatable herbs and are therefore greatly appreciated by children.

Standard Quantity
500 ml infusion or decoction (see p. 291), infused or heated for the maximum time (see left); 500 g honey or unrefined sugar

Standard Dosage
Take 5–10 ml (1–2 tsp) 3 times a day.

Storage
Store in dark glass bottles with cork tops in a cool place for up to 6 months.

A syrup is made with equal proportions of a herbal infusion or decoction and honey or unrefined sugar. When making an infusion or decoction for a syrup, it needs to be infused or simmered for the maximum time in order to optimize its medicinal action. Infusions should be infused for 15 minutes and decoctions should be simmered for 30 minutes. Press the soaked herb through the strainer or sieve to remove as much liquid as possible. Small amounts of neat tincture can be added to the cooled syrup to increase its effectiveness.

Syrups made with Tinctures
Syrups may also be made with tinctures instead of infusions or decoctions. Combine 500 g of honey or unrefined sugar with 250 ml of water. Gently heat until all the sugar or honey has dissolved and the mixture has thickened. Remove from the heat. Once cool, stir 1 part of the tincture, or mixture of tinctures, into 3 parts of the syrup and bottle as directed opposite.

1 *Pour the infusion or decoction into a pan. Add the honey or sugar. Gently heat, stirring constantly until all the honey or sugar has dissolved and the mixture has a syrupy consistency. Remove from the heat and cool.*

2 *Pour the cooled syrup into sterilized glass jars using a funnel and store in a cool dark place. Seal the jars with cork stoppers, as syrups are prone to ferment and may explode if kept in screw-topped bottles.*

Infused Oils

Infusing a herb in oil allows its active, fat-soluble ingredients to be extracted; hot infused oils are simmered, while cold infused oils are heated naturally by the sun. Both types of oil can be used externally as massage oils or added to creams and ointments. Infused oil should not be confused with essential oil, which is an active constituent naturally present in a plant and has specific medicinal properties and a distinct aroma. Essential oil may be added to an infused oil to increase its medicinal efficacy.

Standard Quantity (infused oils)
250 g dried or 500 g fresh herb to 750 ml olive, sunflower or other good-quality vegetable oil

Storage
Store in sterilized, airtight, dark glass bottles for up to 1 year; for the best results, use within 6 months.

Hot Infused Oils

Although hot infused oils can last up to a year, they are most potent when used fresh. If only using infused oils very occasionally, make a smaller quantity than the standard amount with the same proportion of herb to oil. The wine press may be replaced with a jug – when cool enough to touch, squeeze the oil through the jelly bag as illustrated in *Cold Infused Oils* below.

Many herbs make effective hot infused oils, especially spicy herbs such as ginger (*Zingiber officinale*, p. 155), chilli (*Capsicum frutescens*, p. 74) and pepper (*Piper nigrum*, p. 250). These oils can be rubbed into the skin to relieve rheumatic and arthritic pain, improve local blood flow and relax muscles. Other hot infused oils from leafy herbs, such as comfrey (*Symphytum officinale*, p. 138), speed wound healing. Oil infused with mullein (*Verbascum thapsus*, p. 281) is used for earache and ear infections, and chickweed (*Stellaria media*, p. 272) ointment may be produced from a hot infused oil (see p. 295).

1 *Stir the chopped herb and oil together in a glass bowl over a saucepan of boiling water. Cover and simmer gently for 2–3 hours.*

2 *Remove from the heat and allow the mixture to cool, then pour into the wine press (or jug if not available) with a jelly bag in place. Collect the strained oil in a jug, pressing all the liquid out of the herb.*

3 *Pour the infused oil into clean, dark glass bottles, using a funnel. Seal and label each bottle.*

Cold Infused Oils

Making a cold infused oil is a slow process and involves leaving a jar packed with herbs and oil to stand for several weeks. Sunlight encourages the plant to release its active constituents into the oil. It is the most suitable method of oil infusion for fresh plant material, especially the more delicate parts such as flowers. St John's wort (*Hypericum perforatum*, p. 106), marigold (*Calendula officinalis*, p. 73) and melilot (*Melilotus officinalis*, p. 234) are three of the most commonly produced cold infused oils. St John's wort oil is anti-inflammatory and analgesic and may be applied topically or taken internally (after consulting a herbalist) for peptic ulceration.

Olive oil is particularly suitable for cold infusion as it rarely turns rancid. The intensity of sunlight and length of time a herb is infused for affects the concentration of its medicinal constituents. For greater strength, add the extracted oil to a fresh supply of herbs and infuse again.

1 *Place the herb in a clear glass jar. Pour in oil until it completely covers the herb, close the jar and shake well. Place the jar in a sunny spot, such as on a windowsill, and leave for 2–6 weeks.*

2 *Pour the oil and herb mixture into a jelly bag, secured to the rim of a jug or bowl with string (or use a wine press as pictured above in hot infused oils). Allow the oil to filter through the bag.*

3 *Squeeze out the remaining oil from the bag. Pour the infused oil into dark glass bottles, label and store. Alternatively, repeat the whole process with the infused oil and fresh herbs.*

Ointments

Ointments contain oils or fats heated with herbs and, unlike creams, contain no water. As a result, ointments form a separate layer on the surface of the skin. They protect against injury or inflammation of damaged skin and carry active medicinal constituents, such as essential oils, to the affected area. Ointments are useful in conditions such as haemorrhoids or where protection is needed from moisture, as in chapped lips and nappy rash.

Standard Quantity
60 g dried or 150 g fresh herb (or mixture of herbs) to 500 g of petroleum jelly or soft paraffin wax

Standard Application
Apply a little 3 times a day.

Storage
Store in sterilized, dark glass jars with lids for up to 3 months.

Ointments can be made with dozens of bases and they vary in consistency, depending on the constituents and proportions used. The simplest way to make a soft, all-purpose ointment is to use petroleum jelly or soft paraffin wax (other methods are explained below). Petroleum jelly is impermeable to water and provides a protective barrier for the skin. Single herbs or mixtures of herbs may be used as required, provided they are finely cut, and essential oil can be stirred into the ointment just before straining.

Different Consistencies

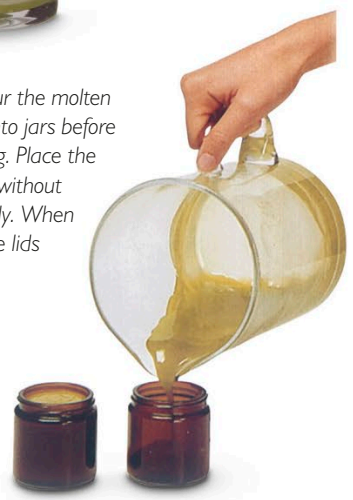
A solid and relatively grease-free ointment will spread easily and is useful for preparations such as lip balms. This may be made by using alternatives to mineral oils. Melt 140 g of coconut oil with 120 g of beeswax and 100 g of powdered herb. Simmer gently for 90 minutes in a glass bowl set in a pan of boiling water, or a double boiler, then strain and pour into jars.

A less solid ointment, for conditions such as skin rashes, may be made by combining olive oil and beeswax. Melt 60 g of beeswax with 500 ml of olive oil and 120 g of dried or 300 g of fresh herb in a glass bowl. Cover and place in a warm oven for 3 hours, then remove, strain and pour into jars. This ointment can also be made by combining 500 ml of hot infused oil (see p. 294) with 60 g of melted beeswax.

1 *Melt the petroleum jelly or wax in a glass bowl set in a pan of boiling water, or use a double boiler. Add the finely cut herb and simmer for 15 minutes, stirring continuously.*

2 *Pour the herb mixture into a jelly bag secured to the rim of a jug with string, and allow the liquid to filter through.*

3 *Wearing rubber gloves, squeeze as much of the hot herb mixture as possible through the bag into the jug.*



4 *Quickly pour the molten ointment into jars before it sets in the jug. Place the lid on each jar without securing it firmly. When cool, tighten the lids and label.*

Poultices

A poultice is a mixture of fresh, dried or powdered herbs that is applied to an affected area. Poultices are used to ease nerve or muscle pains, sprains or broken bones, and to draw pus from infected wounds, ulcers or boils.

Standard Quantity
Sufficient herb to cover the affected area

Standard Application
Apply a new poultice every 2–3 hours. Repeat as often as required.

A poultice of self-heal (*Prunella vulgaris*, p. 256) relieves sprains and fractures, while St John's wort (*Hypericum perforatum*, p. 106) can help ease muscle or nerve pains.

Drawing Boils & Infected Wounds

Slippery elm powder (*Ulmus rubra*, p. 145) mixed with marigold (*Calendula officinalis*, p. 73) tincture or myrrh (*Commiphora molmol*, p. 85) tincture makes a useful poultice for drawing boils and wounds.

1 *Simmer the herb for 2 minutes. Squeeze out any excess liquid, rub some oil on to the affected area to prevent sticking and apply the herb while hot.*

2 *Bandage the herb securely in place using gauze or cotton strips. Leave on for up to 3 hours, as required.*

Creams

Making a cream involves combining oil or fat and water in an emulsion. If the process is rushed, the oil and water may separate. Unlike ointments, creams blend with the skin and have the advantage of being cooling and soothing while at the same time allowing the skin to breathe and sweat naturally. They can, however, deteriorate quite quickly and are best stored in dark, airtight jars in a refrigerator.

Standard Quantity
30 g dried or 75 g fresh herb, 150 g emulsifying wax, 70 g glycerine and 80 ml water

Standard Dosage
Rub a little into the affected area 2–3 times a day.

Storage
Store in sterilized, airtight, dark glass jars in a refrigerator for up to 3 months.

Small quantities of additional ingredients such as tinctures, powders and essential oils can be added to a cream before or after it is put in jars. Adding an essential oil, such as 1 ml of tea tree (*Melaleuca alternifolia*, p. 112) to 100 ml of cream, counters mould growth and lengthens shelf life, as does 5 ml of borax. Other recipes for making cream use infusions, tinctures or infused oils.

1 *Melt the emulsifying wax in a glass bowl set in a pan of boiling water or a double boiler. Add the glycerine, water and herb while stirring, and simmer for 3 hours.*

2 *Strain the mixture through a wine press or a jelly bag. Stir slowly but continuously until it cools and sets.*

3 *With a small knife or spatula, place the set cream into dark glass jars. Tighten the lids and label. Store in a refrigerator as soon as possible.*

Compresses & Lotions

Lotions are water-based herbal preparations such as infusions, decoctions or diluted tinctures that are used to bathe inflamed or irritated skin. Compresses are cloths soaked in a lotion and held against the skin. Lotions and compresses are both simple ways to use herbs externally and can be very effective in relieving swelling, bruising and pain, soothing inflammation and headaches, and cooling fevers.

Standard Quantity of Lotion
500 ml infusion or decoction, or 25 ml tincture in 500 ml water

Standard Application of Compress or Lotion
Use as required. Prepare a fresh compress or lotion when it cools (if hot) or when it dries (if cool).

Storage
Store lotions in sterilized bottles, with lids, in a refrigerator for up to 2 days.

After an accident or sports injury, bruising and swelling can often be reduced or prevented if a hot compress is swiftly applied, provided the skin is unbroken. Cold compresses are particularly useful in soothing inflammation, cooling fevers and easing headaches. Both hot and cold compresses should be frequently soaked and re-applied for maximum benefit.

Applying a Lotion

As specified, make an infusion or decoction (see p. 291), and strain it well. Alternatively, dilute a tincture with water. Soak a clean cloth in the lotion and wring it out thoroughly. Then gently bathe the affected area with the cloth (rather than laying it on the skin as you would a compress).

Applying a Compress

1 *Wash your hands thoroughly and soak a soft cloth or clean flannel in the lotion. Wring out the excess liquid. Before applying, rub some oil on the affected area to prevent sticking.*

2 *Place the compress against the affected area. For pain and swellings, secure the compress with plastic film and safety pins and leave for up to 1–2 hours. Re-apply as required.*

Other Preparations

Different herbal preparations suit different ailments. Most of the following preparations provide localized relief. Steam inhalations, for example, help clear various respiratory complaints; gargles and mouthwashes soothe sore throats and mouth ulcers; massage oils can ease aching muscles; and skin washes relieve inflamed skin conditions.

Steam Inhalations

Steam inhalations are an effective way to clear catarrh, and relieve sinusitis, hay fever and bronchial asthma. The combination of steam and antiseptic ingredients clears the airways throughout the respiratory system.

To make Pour 1 litre of freshly boiled water into a large bowl, add 5–10 drops of essential oil and stir well. Alternatively, make an infusion of 25 g of herb to 1 litre of water, brew for 15 minutes, and pour into a bowl. Cover the head and bowl with a towel, close the eyes, and inhale the steam for about 10 minutes or until the preparation cools. After a steam inhalation, it is advisable to stay in a warm room for 15 minutes to allow the airways to adjust and any catarrh to clear.

***Inhalations using** essential oil relieve many respiratory complaints.*

Gargles & Mouthwashes

Gargles and mouthwashes usually contain astringent herbs which tighten the mucous membranes of the mouth and throat. Astringent herbs such as rhatany (*Krameria triandra*, p. 225) and myrrh (*Commiphora molmol*, p. 85), can be made more palatable and more effective for sore throats by adding a little liquorice (*Glycyrrhiza glabra*, p. 101) or a pinch of chilli pepper (*Capsicum frutescens*, p. 74) to the preparation. As gargles and mouthwashes are made from infusions, decoctions, or diluted tinctures, they can generally be swallowed for internal treatment. Ensure you do not exceed the daily internal dose of a herb.

To make Make an infusion (see p. 291) but allow it to stand for 15–20 minutes in order to increase its astringency. Strain, then gargle, or rinse the mouth with a cupful. Alternatively, use a decoction (p. 291) or dilute about 5 ml of tincture in 100 ml of hot water and use in the same way. Repeat as often as required unless specified.

***Infusions** made with antiseptic herbs make useful gargles and mouthwashes for sore throats and mouth ulcers.*

Pessaries & Suppositories

Pessaries and suppositories are waxy pellets containing essential oil or fine powder. They are used when oral medicine is likely to be broken down during digestion before reaching its intended site. Pessaries are inserted into the vagina and suppositories into the anus where they melt at body temperature. The herb is quickly absorbed into the bloodstream providing fast relief. It is best to buy ready-made suppositories.

To make pessaries Use a pessary mould or make 24 moulds from cooking foil shaped around a thimble. Mix 10 g of soft soap, 50 ml of glycerine and 40 ml of methylated spirits and pour into the moulds. Leave for a few minutes to coat the moulds then pour out the excess and leave to harden. Melt 20 g of cocoa butter, remove from the heat and add 30 drops of essential oil or 5 g of powder. Pour into the shells and leave to set for 3 hours, before removing the pessaries. Store in a cool place in a pot lined with greaseproof paper for up to 3 months.

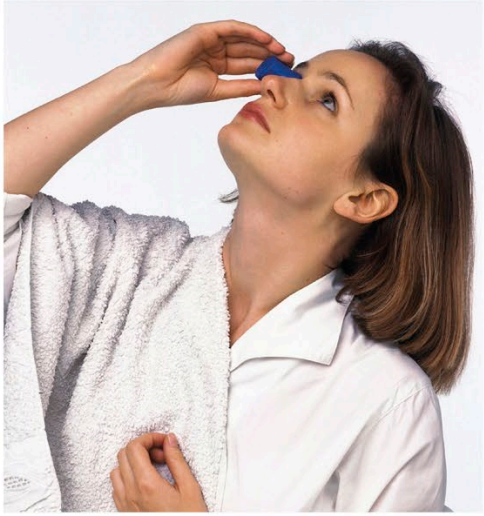
Essential Oils

Essential oils can be used in massage to soothe minor aches and pains. Before use, they should be diluted with a carrier oil as they can irritate the skin. Essential oils deteriorate rapidly after dilution, so it is best to mix small quantities as you need them.

For massage Mix 5–10 drops of essential oil with 1 tbsp of carrier oil, such as wheatgerm or almond oil, and massage gently into the skin.

Oil burner Use 5–10 drops of neat essential oil mixed with water. Burn for 30 minutes.

***Essential oils** are used in baths, oil burners and in massage to relieve tension and stress.*



***The eyebath is applied** to the affected eye and the head is tilted well back.*

Baths & Skin Washes

Herbal baths and skin washes can relieve many conditions, including aching limbs and stuffy sinuses. They are made from diluted essential oils or infusions. Eyebaths soothe sore, inflamed or irritated eyes.

To make a herbal bath Add 500 ml of strained infusion (see p. 291) or 5–10 drops of essential oil to a running bath.

To make a skin wash Make an infusion, strain it and bathe the affected area.

To make an eyebath Make a small quantity of an infusion or use a herbal teabag. Strain the liquid carefully into a sterilized eyebath. Alternatively, add 2–3 drops of a tincture to an eyebath filled with water that has just boiled. Allow to cool and place the eyebath firmly over the eye. Tip the head back and bathe the eye by continuously blinking. Repeat up to 3 times a day.

General cautions Eyebaths should be very weak, so as not to sting the eyes. Always use boiled, cooled water in a sterilized container. Do not bathe eyes over a period of more than 2–3 weeks at a time. If bathing eyes frequently, add a tiny pinch of salt to each eyebath to counter leaching of salts and minerals from the eye.

Cold Macerations

Heat destroys the active constituents of some herbs and a cold maceration is more appropriate than a decoction.

To make Pour 500 ml of cold water on to 25 g of herb and leave to stand overnight. Strain and use as you would a decoction

Juices

The juices extracted from many herbs can be taken internally or applied externally.

To make Pulp the plant preferably using a mechanical juicer. Otherwise use a food processor. Squeeze the pulp through a jelly bag to collect the juice. Some herbs need to be cooked in order to extract their juice.

Using Herbal Remedies Safely

One reason that herbal remedies are so popular is that plant medicines are safer and cause fewer side-effects than conventional ones. However, herbal remedies are not always safe, and – like medicines of every kind – they need to be used with care.

What Can Go Wrong?

Following a few simple rules will normally ensure that the worst that happens when taking a herbal medicine is that there is no improvement in your condition. Nevertheless, there are situations in which herbal remedies can cause damage, and several medicinal herbs have been shown to interact with conventional medicines. In very rare circumstances people have become seriously ill or have died from taking herbal medicines, though in almost every case the problem has resulted from one of the following safety factors being ignored. If at any time you think that you are reacting badly to a herbal medicine, stop taking it immediately, and contact a qualified herbalist or naturopath, or your doctor.

How Problems Can Occur

The wrong herb is used due to mistaken identification. Usually, when herbs are bought over the counter you have no need to worry, as the necessary checks have been made to ensure it has been correctly identified. If you are harvesting herbs from the wild, you must be certain what herb it is that you are collecting. For example, ragwort (*Senecio jacobaea*), which is very toxic to the liver, can easily be mistaken for St John's wort (*Hypericum perforatum*, p. 106): both grow on wasteground and produce clusters of bright yellow flowers in the summer. In rare cases, the physical act of picking certain highly toxic herbs could be dangerous as absorption takes place across the skin. Hemlock (*Conium maculatum*, p. 194), for example, is so toxic that serious side-effects can result from simply handling the plant.

***Ragwort** is a toxic plant and, with its yellow flowers, easily mistaken for St John's wort.*

The wrong part of a herb is used. It is important to use the correct part of the herb. Sometimes one part of a plant is safe, while all other parts are poisonous. For example, while the potato tuber (*Solanum tuberosum*, p. 271) makes good, nutritious food, all other parts of the plant are highly toxic.

Poor-quality material is used or the herb has been poorly prepared. If you are making up your own remedy, follow the recommended methods for storage and preparation (see *Harvesting & Processing*, pp. 288–289). If buying over the counter check the section on *Quality Control* (see p. 17) for advice on purchasing good-quality products.

The wrong herbal remedy is being used. You can avoid this problem if you stick to using well-known herbs and take them to treat the conditions for which they are usually recommended. Ginger (*Zingiber officinale*, p. 155) and sweet flag (*Acorus calamus*, p. 57) both help to relieve nausea and indigestion, but ginger is an all-together safer medicine – it is better known, is a common treatment for travel and morning sickness and, unlike sweet flag, has no known side-effects.

The herbal remedy interacts with other medicines. Herbal remedies are medicines, so it should come as no surprise that conventional medicines can interact with them. Several herbs are known to interact with conventional medicines. St John's wort, for example, speeds up the rate at which the liver breaks down a range of drugs, including certain antibiotics, anti-epileptics and immune-suppressants. This reduces their effectiveness within the body and in extreme situations could threaten life. It is also inadvisable to take St John's wort at the same time as other antidepressants. A number of herbs, notably Chinese Angelica (*Angelica sinensis*, p. 63), interact with anticoagulant drugs, such as warfarin and clopidogrel. These drugs are prescribed to prevent blood clotting. Herbal products containing these herbs will interact with anticoagulants and increase the risk of internal or external bleeding. Always tell health-care professionals what medicines you are using – both herbal and conventional. If you are taking medicines prescribed by your doctor, it is always sensible to seek advice before starting to take herbal remedies.

***Chinese angelica** has been shown to thin the blood and is known to interact with conventional anticoagulants such as warfarin.*

The herbal remedy causes an allergic reaction. By and large, allergic reactions to herbs result from touching the herb (contact dermatitis) and from breathing in pollen or powdered herb (airborne allergies). Some plants are well known for causing contact dermatitis – rue (*Ruta graveolens*, p. 265) for example – and should not be handled by those prone to allergies. Some powdered herbs can stimulate sneezing attacks in the sensitive – for example lime (*Tilia* spp., p. 277). In some cases, herbal medicines may trigger allergic reactions within the body. This kind of response is more worrying and if you are prone to allergies it is advisable to see a qualified herbalist before taking all but the commonest herbs.

Other treatment is needed. Sometimes herbal medicine is not the appropriate form of treatment. If you have an acute illness or injury, are seriously ill, or do not recover as expected after taking a herbal remedy, *do not delay* – seek professional advice or emergency treatment.

Remedies for Common Ailments

Herbal knowledge is continuing to grow as more people choose herbs as an alternative to pharmaceutical drugs. The following remedies are safe and effective treatments for a range of common ailments but, like all medicines, they must be treated with respect. The suggestions given here are mostly quite straightforward. However, if you are unsure about what to do, always seek professional advice (see p. 320). For instructions on how to make herbal preparations see pp. 290–297.

Essential Information

Before using remedies read the following.

Dosage

- Except in *Infants & Children* (see p. 318), all dosages given are for adults.
- Do not exceed the stated dose; doubling it will *not* make the medicine twice as effective.
- Before taking a remedy, check the cautions in the relevant herb entry (see pp. 56–283).
- Do not take more than 2 internal remedies at any one time or more than 1 internal and 1 external remedy for the same complaint, unless specified. Where different forms of a remedy are given (e.g. take tincture or infusion), the first is preferable.

How Long to Take Remedies

Take remedies until symptoms disappear. If there is no improvement within 2–3 weeks, if the condition worsens, or if in doubt, consult a professional practitioner (see p. 320).

Professional Advice

- Advice is given on when to seek professional guidance. Consult a professional if taking a remedy for over 3 weeks.

Infants & Children

- Do not give babies under 6 months any internal herbal (or other) medicine without professional advice.
- *Infants & Children*, p. 318, gives children's dosages.

Remedies elsewhere can be used for children under 12. Reduce doses as follows:

- 6–12 months old – 1/10 adult dose
- 1–6 years old – 1/3 adult dose
- 7–12 years old – 1/2 adult dose.

Older People

Older adults, due to slower metabolism, may require less than the standard dose. Those over 70 should usually take 3/4 of the adult dose.

Pregnancy

- During the first 3 months of pregnancy, avoid all medicines, herbal or otherwise, unless absolutely essential.
- Avoid alcoholic tinctures in pregnancy.
- The herbs mentioned in *Pregnancy* (see p. 317) are safe to use. Many of the remedies elsewhere in this section are also safe, but some are not. *Always check the cautions for the remedy and in the relevant herb entry (see pp. 56–283) before taking a herb during pregnancy.*

Prescription Medicine

As explained opposite, some herbs are known to interact with pharmaceutical drugs; others may interact in as-yet unknown ways. If you are taking a prescribed medicine, consult a professional practitioner before taking a herb and do not discontinue any medicine without their approval.

***Infusions** make effective remedies; some are also relaxing or refreshing drinks.*

Herbal Preparations

- All quantities are for dried herbs unless specified.
- Where more than one part of a herb is used, the instructions specify which part to use. Only use that part. Do not use seeds sold for horticultural purposes.
- Unless specified otherwise, preparations are made with standard quantities of dried herb, as follows:

Infusions (to make, see p. 291). Use a teaspoon of herb to a cup of water, or make enough for 3–4 doses using 20 g of herb to 500 ml of water. Use a covered container to retain the herb's valuable volatile oils.

Decoctions (to make, see p. 291). Use 20 g herb to 750 ml of water.

Inhalations (to make, see p. 297). Add 5–10 drops essential oil to 1 litre of steaming hot water or use an infusion.

Lotions (to make, see p. 296). Use 500 ml infusion or decoction, or 25 ml tincture diluted in 500 ml of water.

Tablets or capsules (to make, see p. 292). Many herbs are available over-the-counter in both forms. Take according to the instructions on the packet.

Tinctures (to make, see p. 292). Some tinctures are available ready-made. Take tinctures with cold water unless specified. Sometimes the number of drops recommended is given as a range, e.g. 20–40 drops. In these cases, start with the lowest amount and increase by 5–10 drops per dose as required.

Essential Oils

Do not take essential oils internally unless advised to do so by a professional practitioner. For external use, dilute essential oils with a carrier oil, such as sunflower or almond, in a ratio of 1 part essential oil to 20 parts carrier oil, e.g. 5 drops essential oil to 1 tsp (5 ml) carrier oil. For a bath, add 5–10 drops of neat essential oil to the running water. To use essential oils in massage, see p. 297.

Other Information

For other preparations, weighing & measuring, and equipment see pp. 291–297.

Self-help

Lifestyle, diet and exercise advice is given in this section. In general, these suggestions do not provide a "quick fix" solution and need to be followed long-term if they are to be effective. They should be used in addition to the recommended herbal remedy. By ensuring that your body has the right nutrition and level of fitness, you protect yourself against many ailments such as infections and circulatory problems as well as increasing your chances of a speedy and effective recovery.

Allergies

Nettle
(Urtica dioica)

Allergies often develop when the body's immune system overreacts to an external irritant such as pollen, insect stings and certain plants, or internal substances such as chemicals and foods. The allergens trigger a reaction in those who have an in-built or natural sensitivity. In the long-term, allergies are treated by both reducing contact with allergens (if known) and working to reduce the body's oversensitivity. Herbal remedies can bring relief to some allergic states and are helpful in gradually reducing allergic reactions. See also *Skin Rashes*, p. 303.

Seek immediate professional advice for:

- Life-threatening allergies, such as asthma. Consult a professional practitioner prior to taking any herbal remedies for such conditions
- Any allergy that shows signs of deterioration after taking a herbal remedy

Allergic Rhinitis, Including Hay Fever

Allergic rhinitis is an umbrella term for allergic reactions to irritants such as pollution, dust or pollen. Allergic rhinitis may occur all year round, while hay fever is usually caused by seasonal grass or pollens. Symptoms include sneezing, copious nasal catarrh, sinus congestion, watery, irritated eyes and even asthma-like wheezing. Self-treatment will help relieve mild conditions but, for severe outbreaks, consult a professional practitioner who can prescribe herbs such as ephedra (*Ephedra sinica*, p. 95). See also *Catarrh, Sinus Problems & Earache*, p. 312.

Diet

Reduce your intake of or cut out mucus-forming foods such as dairy produce, eggs, sugar, white flour, fatty foods and alcohol.

General Remedies

Herbs Nettle (*Urtica dioica*, p. 146), elderflower (*Sambucus nigra*, p. 132)
Remedy Make a nettle infusion. Take 450–600 ml a day for 3 months at a time. Alternatively, make an infusion with 1 tsp of each herb to 300 ml of water and take daily for 3 months at a time.

Herb Baical skullcap (*Scutellaria baicalensis*, p. 134)
Remedy Make a decoction from the herb and take 300 ml a day.

Hay Fever

Herb Elderflower (*Sambucus nigra*, p. 132)
Remedy Make an infusion and take 300–450 ml a day. Take for a few months before, as well as during, the hay fever season.

Allergic Rhinitis with Catarrh

Herbs Eyebright (*Euphrasia* spp., p. 209), common plantain (*Plantago major*, p. 251), goldenrod (*Solidago virgaurea*, p. 271), boneset (*Eupatorium perfoliatum*, p. 208)
Remedy Make an infusion with one or a mixture of all of the herbs and drink up to 450 ml a day.
Note Use this remedy especially for copious, watery catarrh.

Herbs Echinacea (*Echinacea* spp., p. 92), marshmallow (*Althaea officinalis*, p. 165), elderflower (*Sambucus nigra*, p. 132), thyme (*Thymus vulgaris*, p. 143)
Remedy Take 1 tsp of equal parts of each tincture 3 times daily with warm water.
Note Use this remedy especially for thick yellow/green catarrh and sinus congestion.

Eczema

Characterized by red, inflamed skin, eczema causes irritation, flaking, scaling and tiny blisters. Although it is often the result of an allergic reaction to certain substances, eczema can also be inherited, result from prolonged contact with an irritant, or it may simply appear for an unknown reason. It is best to consult a professional practitioner as eczema is difficult to self-treat. However, the following remedies, taken for at least a week, can bring relief. Two remedies may be used at once. Chickweed reduces soreness or itchiness, and oats can be used to impart a soothing, emollient effect to bathwater. See also *Skin Rashes*, p. 303.

Self-help

To avoid scratching, cover the affected area with an absorbent, non-irritating material such as cotton.

General caution If there is no improvement, or if the condition deteriorates, consult a professional practitioner.

General Remedies

Herbs Peppermint (*Mentha × piperita*, p. 114), chickweed (*Stellaria media*, p. 272)
Remedy 1 Make peppermint lotion by infusing 1 tsp of herb to 150 ml of water. Leave for 10 minutes, then strain and cool. Use to wash gently over the affected skin 2–3 times a day.
Remedy 2 Apply chickweed ointment, cream or freshly squeezed juice up to 5 times a day.
Option Add 2 drops of peppermint oil to 1 tsp of any of the chickweed preparations.

Herb Gotu kola (*Centella asiatica*, p. 76)
Remedy Dust the affected area with powder 2–3 times a day. Alternatively, mix the powder with enough water to make a thick paste and spread over the affected area 1–2 times a day.

Eczema with Weeping Skin

Herb Witch hazel (*Hamamelis virginiana*, p. 102)
Remedy Apply lotion or cream up to 5 times a day (the lotion is preferable). Alternatively, make a decoction with 2 tsp of leaves to 150 ml of water. Leave for 15 minutes, strain and cool. Use as a wash up to 5 times a day.

Herb German chamomile (*Chamomilla recutita*, p. 77)
Remedy Make an infusion using 50 g of herb to 750 ml of water. Apply directly to the itchy area when cool, or add the hot infusion to a warm bath and soak in it for at least 20 minutes.

Herb Oats (*Avena sativa*, p. 175)
Remedy Fill a muslin (or similar) bag with milled oats and place under a hot tap whilst running a bath. Relax in the bath for 5–10 minutes.

Mild Asthma, Wheeziness & Shortness of Breath

Asthma is usually prompted by an allergic reaction to substances such as pollen, dust, animal hair or certain foods, but may also be related to an infection. The listed remedies will relieve immediate symptoms, but in order to find the cause of your ailment, or for long-term treatment, it is best to consult a herbalist. All the herbal remedies that are suggested here can be taken alongside conventional treatment. Herbs such as nettle, thyme, cramp bark and echinacea help to ease breathing, while essential oil of German chamomile reduces inflammation.

General cautions Seek professional help for asthma. Do not stop using steroidal or other inhalants. Their use should be phased out gradually and only with professional guidance.

Wheeziness & Shortness of Breath

Herbs Nettle (*Urtica dioica*, p. 146), thyme (*Thymus vulgaris*, p. 143)
Remedy Make an infusion using 15 g of each herb to 750 ml of water and drink throughout the day.

Herb German chamomile (*Chamomilla recutita*, p. 77)
Remedy Make an infusion with 2 heaped tsp of the herb to 150 ml of water and leave to stand for 10 minutes in a covered saucepan. Remove the lid, inhale the steam, and strain and drink the tea.

Option Use the essential oil in a steam inhalation, or inhale 2 drops of undiluted oil placed on a handkerchief.

Herb Baical skullcap (*Scutellaria baicalensis*, p. 134)
Remedy Make a decoction and take up to 300 ml a day.

Breathing Difficulty & Tight Chest

Herb Cramp bark (*Viburnum opulus*, p. 150)
Remedy Take 1 tsp of tincture with water up to 8 times a day for 3 days, then reduce the dose to a maximum of 1 tsp 3 times a day for 7 days.

Mild Bronchial Asthma from Colds & Chest Infections

Herb Echinacea (*Echinacea* spp., p. 92)
Remedy Take tablets or capsules, or ½ tsp of tincture with water 2–3 times a day.

Circulatory Problems

Witch Hazel
(Hamamelis virginiana)

To maintain good health, the body's ten trillion cells need to be bathed in fluid which brings them vital nutrients and removes waste products. When this process is undermined by poor circulation, the body may react with conditions such as raised blood pressure, which places a long-term strain on the heart. A high-vegetable, low sugar diet and regular aerobic exercise help to keep the heart active and the arteries clear of fatty deposits that can "fur up" their linings. A number of herbs act preventively to sustain good circulation – few more so than garlic (*Allium sativum*, p. 59).

Seek immediate professional advice for:

- Severe chest pain
- Palpitations lasting several minutes
- Hot, swollen or ulcerated tender veins, or dark red discoloration of the skin or veins
- Fainting or dizziness with weakness, numbness or tingling in any part of the body

Anaemia

There are several types of anaemia. Iron deficiency anaemia, caused by blood loss from a wound or menstrual bleeding, can be countered with herbs. Bitter herbs, such as gentian, improve the absorption of nutrients and nettle contains plenty of iron. Increase your intake of other green herbs that contain iron.

General caution Seek professional advice to determine the type of anaemia you have before home treatment.

General Remedies

Herbs Gentian (*Gentiana lutea*, p. 99), wormwood (*Artemisia absinthium*, p. 66)
Remedy Take 2–5 drops of either tincture with water, half an hour before meals.
Caution Do not take wormwood during pregnancy.

Herb Chiretta (*Swertia chirata*, p. 273)
Remedy Take 5–10 drops of tincture with water 3 times a day before meals.

Anaemia due to Heavy Menstrual Bleeding

Herb Nettle (*Urtica dioica*, p. 146)
Remedy Make an infusion using 25 g of herb to 750 ml of water. Sip the whole dose at intervals throughout the day.
See also *Heavy Menstrual Bleeding* – Four Things Soup remedy, p. 315.

High Blood Pressure & Arteriosclerosis

Mild cases of high blood pressure and arteriosclerosis (hardening of the arteries) can benefit from herbs. Garlic thins the blood, reduces fatty deposits and lowers blood pressure; beetroot and ginkgo aid circulation, reduce blood pressure and prevent arteriosclerosis; and ginger improves circulation, especially to the capillaries.

General caution Seek professional advice, especially if already taking medication for a circulatory condition.

General Remedies

Herbs Garlic (*Allium sativum*, p. 59), beetroot (*Beta vulgaris*, p. 178), pomegranate (*Punica granatum*, p. 259)
Remedy Take a garlic tablet or eat 1–2 fresh garlic cloves each day. Drink 125 ml of beetroot or pomegranate juice once a day.
Note These are most effective when used to support a healthy circulation and prevent illness.

Herb Ginkgo (*Ginkgo biloba*, p. 100)
Remedy Take tablets or ½ tsp of fluid extract with water twice a day for approximately 2–3 months at a time.

Herb Ginger (*Zingiber officinale*, p. 155)
Remedy Grate 1 tsp of fresh ginger into your food each day.

Before taking any herbal remedies, see pages 290 & 298–299

Palpitations & Panic Attacks

Palpitations occur when the heart suddenly beats faster or irregularly. They can result from stress, anxiety and nervous tension; however, they may also be caused simply by drinking too much caffeine (in tea, coffee and cola drinks). In rare cases, palpitations indicate a heart problem. They are a key symptom of panic attacks, which are characterized by sudden, acute feelings of fear and anxiety. Lime flowers and valerian root are especially relaxing and calming for the nervous system, specifically helping to reduce underlying anxiety.

General caution Seek immediate professional advice if palpitations last for several minutes.

Palpitations

Herb Lime (*Tilia* spp., p. 277)
Remedy Make an infusion with up to 20 g of lime to 750 ml of water. Divide into 3–4 doses and drink throughout the day.

Herb Dan shen (*Salvia miltiorrhiza*, p. 130)
Remedy Make a decoction and take 3–4 doses during the day for up to 1 week. Alternatively, take half the daily dose for up to 2–3 weeks.

Cautions Do not take *dan shen* with anticoagulant or anti-platelet drugs, or during pregnancy.

Panic Attacks

Herbs Lime (*Tilia* spp., p. 277), valerian (*Valeriana officinalis*, p. 148)
Remedy Make an infusion using 1 tsp of lime and ½ tsp of powdered valerian to 150 ml of water. Drink 600 ml a day.

Herbs Motherwort (*Leonurus cardiaca*, p. 227), lime (*Tilia* spp., p. 277)
Remedy Make an infusion of motherwort or make an infusion using ½ tsp of each herb to 150 ml of water. Drink up to 600 ml of either remedy a day.

Caution Do not take motherwort during pregnancy.

Cold Extremities & Chilblains

Poor circulation can cause discomfort and painful chilblains (sores caused by poor local blood flow) on the fingers and toes. By stimulating the circulation and getting more "warmth" into the system with herbs and exercise, the blood flow to the hands and feet is improved. Hot, acrid herbs, such as cayenne or ginger, stimulate the flow of blood through the arteries, helping to prevent the development of chilblains.

Exercise

Aerobic exercise is often the key to improving this condition.

General caution Seek professional advice if fingers and toes frequently become cold and numb.

Poor Circulation to the Hands & Feet

Herb Chilli (*Capsicum frutescens*, p. 74)
Remedy Take cayenne tablets in winter.
Option Add a pinch of cayenne powder or chilli sauce to every main meal.

Caution Do not take tablets during pregnancy.

Herbs Cramp bark (*Viburnum opulus*, p. 150), northern prickly ash (*Zanthoxylum americanum*, p. 153)
Remedy 1 Make a decoction using 15 g of cramp bark to 750 ml of water and take 3 doses each day.
Remedy 2 Mix 5 g of prickly ash and 10 g of cramp bark and make a decoction using 750 ml of water. Take 3 doses each day.

Caution Do not take prickly ash during pregnancy.

Chilblains

Herbs Ginger (*Zingiber officinale*, p. 155), lemon (*Citrus limon*, p. 82), echinacea (Echinacea spp., p. 92)
Remedy (Internal) Grate 1 tsp of fresh ginger into your food each day. Alternatively, drink 70 ml of ginger wine each day.
Remedy (External) Apply either fresh ginger, undiluted lemon juice or neat echinacea tincture to unopened chilblains twice a day.

Note The external remedy helps to prevent blistering and weeping. Once the blister opens you can continue to apply, but it will sting upon contact.

Varicose Veins & Haemorrhoids

Varicose veins result from a weakness, or increased pressure, in the veins. This causes the thin supporting walls of the veins to bulge out, resulting in distended veins and the pooling of blood. Haemorrhoids are usually caused by constipation. Many herbs can be of use in relieving these conditions. Distilled witch hazel is an excellent astringent and yarrow has healing, astringent and anti-inflammatory properties.

Self-help

Home treatment should aim to relieve pressure on the veins. Varicose vein sufferers should avoid tight clothing around the waist or legs. To ease haemorrhoids, try to maintain regular bowel movements (see *Constipation & Diarrhoea*, p. 307).

General caution Do not massage or rub varicose veins.

Varicose Veins

Herbs Witch hazel (*Hamamelis virginiana*, p. 102), marigold (*Calendula officinalis*, p. 73)
Remedy Gently apply distilled witch hazel, or witch hazel cream or ointment to the affected area 1–2 times a day, or combine equal parts of the creams of both herbs and apply 1–2 times a day.
NOTE This remedy is particularly effective on painful varicose veins.

Herb Yarrow (*Achillea millefolium*, p. 56)
Remedy (External) Wash varicose veins in a cool infusion, or apply the ointment 1–2 times a day.
Remedy (Internal) Make an infusion and leave for 10 minutes. Take 150–300 ml a day for up to 10 weeks.

Caution Do not take yarrow during pregnancy.

Haemorrhoids

Herbs Witch hazel (*Hamamelis virginiana*, p. 102), lesser celandine (*Ranunculus ficaria*, p. 260), common oak (*Quercus robur*, p. 260), marigold (*Calendula officinalis*, p. 73)
Remedy 1 Apply either distilled witch hazel or witch hazel ointment, or lesser celandine ointment, 1–2 times a day.
Remedy 2 Mix 1 tsp of common oak bark powder with 2½ tbsp of marigold ointment and apply 1–2 times a day.

Difficult Passage of the Stool & Painful Haemorrhoids

Herb Slippery elm (*Ulmus rubra*, p. 145)
Remedy Take either slippery elm "food" (see *Acidity & Indigestion*, p. 307) or tablets.

Herb Psyllium (*Plantago* spp., p. 123)
Remedy Take 1–2 tsp of seeds soaked in 150 ml of water overnight, twice a day.

Skin Problems

Marigold
(Calendula officinalis)

The largest organ of the body, the skin protects against heat, cold, infection and trauma from the outside world. Although continuously shedding its surface, the skin needs regular cleansing and nourishing to remain healthy. Its ability to resist injury and recover from damage largely depends on the health of the body as a whole. While many minor skin problems respond promptly to simple external remedies, severe or chronic skin conditions need internal treatment and usually require professional advice. See also *Eczema*, p. 300.

Seek immediate professional advice for:

- Changes to freckles, moles or warts
- Sudden swelling or allergic reaction
- Non-minor burns, including sunburn
- Shingles or suspected shingles
- Boils that do not disperse or burst
- Serious wounds, grazes, bruising, bites and stings

Minor Bites, Stings & Swellings

Inflamed, swollen areas of skin are a common reaction to bites and stings. Although they can be very uncomfortable, most only cause local itching and inflammation which usually subside within a few hours. All the remedies listed will help to ease irritation and soreness. For the most effective relief, use both an external and internal remedy. Lavender relieves irritation as well as being an insect repellent, aloe vera is soothing and healing, and both marigold and St John's wort reduce inflammation. Echinacea stimulates the immune system and nettle is anti-allergenic.

General cautions Seek immediate professional attention if prone to, or if there are signs of, extreme allergic reactions, or if there is a sting in the mouth and the throat starts to swell. Some stings and animal bites are poisonous and may need inoculation and immediate medical attention.

External Remedies

Herb Lavender (*Lavandula officinalis*, p. 108)
Remedy Rub fresh leaves, neat tincture or essential oil on and around the bite or sting.
Other uses This will also repel insects.

Herbs Sweet basil (*Ocimum basilicum*, p. 241), holy basil (*Ocimum tenuiflorum*, p. 116), sage (*Salvia officinalis*, p. 131), thyme (*Thymus vulgaris*, p. 143)
Remedy Apply freshly squeezed juice from the leaves of one of the herbs.

Herbs Aloe vera (*Aloe vera*, p. 60), marigold (*Calendula officinalis*, p. 73), St John's wort (*Hypericum perforatum*, p. 106)
Remedy Apply either aloe vera gel, marigold ointment, cream, lotion or tincture, or St John's wort oil. To make the marigold lotion, infuse 2 heaped tbsp of marigold in 150 ml of water. Strain, cool, then apply.
Option Add 5 drops each of lavender (*Lavandula officinalis*, p. 108) and German chamomile (*Chamomilla recutita*, p. 77) essential oils to 1 tsp of one of the above preparations.
Caution Do not apply chamomile oil in pregnancy.
Tip Apply neat lemon juice (*Citrus limon*, p. 82) if there is nothing else available.

Internal Remedies

Herb Nettle (*Urtica dioica*, p. 146)
Remedy Make an infusion and drink 450 ml a day, or take 1 tsp of tincture with water 3 times a day for up to 3 days.

Herb Echinacea (*Echinacea* spp., p. 92)
Remedy Take tablets or tincture.

Skin Rashes, Minor Burns & Sunburn

More annoying than debilitating, skin rashes and minor burns, including sunburn, usually clear up without assistance, although herbal treatment can speed recovery.

Nettle rash (urticaria) is usually caused by an allergic reaction but can also be triggered by heat, cold or sunlight. It only lasts for a few hours but will often recur. For the most effective relief, apply chickweed cream and take one of the internal remedies.

Skin rashes have many causes, such as allergy, infection, irritation, bites, stings and temperature changes. Use these remedies to alleviate itchiness and swelling.

Small-scale burns usually respond well to herbal medicine, but even small burns may be deep and can quickly become infected. Before using a remedy, bathe the burnt area in clean, cold water and keep the area cool for up to 3 hours with a clean cotton cloth that has been soaked in cold water.

General caution If there is any sign of infection seek professional advice.

Nettle Rash (Urticaria)

Herbs Nettle (*Urtica dioica*, p. 146), heartsease (*Viola tricolor*, p. 282), marigold (*Calendula officinalis*, p. 73)
Remedy (Internal) Drink an infusion of 5 g of each herb and 750 ml of water regularly during the day. Repeat for 1 week. If symptoms persist, take for another week.

Herbs Dandelion (*Taraxacum officinale*, p. 141), yellow dock (*Rumex crispus*, p. 264), burdock (*Arctium lappa*, p. 65)
Remedy (Internal) Make a decoction with 5 g of each root to 750 ml of water. Drink 300 ml a day and repeat for at least 1 week.
Caution Do not take yellow dock in pregnancy.

Herb Chickweed (*Stellaria media*, p. 272)
Remedy (External) Apply cream as required.

Inflamed Skin Rashes

Herbs Marigold (*Calendula officinalis*, p. 73), comfrey (*Symphytum officinale*, p. 138)
Remedy Apply marigold or comfrey ointment, cream or lotion to troubled areas 2–4 times a day. For the lotion, make an infusion, strain, cool and then apply.
Caution Do not apply comfrey to broken skin.

Weeping Skin

Herbs Aloe vera (*Aloe vera*, p. 60), witch hazel (*Hamamelis virginiana*, p. 102)
Remedy Apply aloe vera gel or distilled witch hazel or witch hazel ointment to the affected area 2–4 times a day.

Minor Burns & Sunburn

Herbs Aloe vera (*Aloe vera*, p. 60), lavender (*Lavandula officinalis*, p. 108)
Remedy Apply aloe vera gel or neat lavender essential oil to the affected area as needed.

Herb Marigold (*Calendula officinalis*, p. 73)
Remedy Infuse 1 heaped tbsp of herb in 150 ml of water. Strain, cool and apply as a lotion to the affected area as required.

Before taking any herbal remedies, see pages 290 & 298–299

Minor Wounds & Bruises

Minor wounds, bruises and grazes are part of everyday life and the remedies listed make effective home treatments. Witch hazel is a very good astringent for minor grazes, bruises and swellings, protecting and soothing the damaged area. Arnica can be used to relieve bruising, pain and swelling, and it combines well with witch hazel. Wounds can be cleansed with aloe vera gel which, like comfrey, is an excellent wound healer. Comfrey ointment is helpful in clearing old scars. See also *Sprains & Fractures*, p. 312.

General caution Seek immediate medical attention for serious or deep wounds, bruising or grazes, especially if the pain has not considerably lessened after 24 hours.

Cleansing Wounds

Herb Yarrow (*Achillea millefolium*, p. 56)
Remedy Make a yarrow lotion, allow to cool and use as a wash.

Herb Marigold (*Calendula officinalis*, p. 73)
Remedy Make a marigold lotion with 2 heaped tsp of herb to 150 ml of water, or use the tincture neat or diluted in water. Apply either preparation to the wound.

Note Marigold tincture will sting strongly, but it has a greater antiseptic action.

Herb Aloe vera (*Aloe vera*, p. 60)
Remedy Cleanse the wound with the gel and cover with a dressing soaked in gel. Change frequently.

Herb Witch hazel (*Hamamelis virginiana*, p. 102)
Remedy Apply distilled witch hazel (available over the counter) to the affected area 2–3 times a day.

Healing Wounds

Herbs Comfrey (*Symphytum officinale*, p. 138), aloe vera (*Aloe vera*, p. 60)
Remedy Apply comfrey ointment at the edges of the wound or, once a scab has formed, use a comfrey poultice. Use aloe vera gel to cleanse the wound (see left).

Caution Do not use comfrey on an open wound.

Bruises

Herbs Arnica (*Arnica montana*, p. 172), witch hazel (*Hamamelis virginiana*, p. 102)
Remedy Apply arnica ointment to bruises and swellings 2–3 times a day or use distilled witch hazel, as above.

Caution Do not use arnica on broken skin.

Cold Sores, Chicken Pox, Shingles & Warts

Herbal medicine can help all these viral infections that affect the skin.

Cold sores are caused by the herpes simplex virus, and usually occur when the body has an infection or has been exposed to sunshine or wind. Tiny blisters form, mainly around the nostrils and lips.

Shingles and chicken pox are the result of a similar virus, causing sores to form all over the body. Shingles are a sign that the nervous system is run down and open to infection, so herbs that support the nerves and the immune system as a whole are as important as ones that work topically.

Warts, caused by the papilloma virus, can be difficult to clear. With persistence, the remedies here are often effective.

General cautions Always consult a professional practitioner if you have, or suspect you have, shingles. Take professional advice if you notice a sudden change to a wart.

Cold Sores, Chicken Pox & Shingles

Herbs Echinacea (*Echinacea* spp., p. 92), St John's wort (*Hypericum perforatum*, p. 106)
Remedies Take ½ tsp of tincture of either herb with water 2–3 times a day. Alternatively, take echinacea tablets or capsules, or make an infusion of St John's wort and drink up to 150 ml a day.

Herbs Garlic (*Allium sativum*, p. 59), ginger (*Zingiber officinale*, p. 155), lemon (*Citrus limon*, p. 82)
Remedy (Internal) Eat 1–2 cloves of garlic and 1–2 slices (1 g) of fresh ginger a day.
Remedy (External) Apply either fresh ginger, half a clove of garlic or lemon juice to unopened cold sores, shingles or pox marks up to 6 times a day.

Herb Lemon balm (*Melissa officinalis*, p. 113)
Remedy (Internal) Make an infusion and drink up to 750 ml a day.
Remedy (External) Make a lotion by infusing 1½ tbsp of fresh or 3 tsp of dried leaves in 150 ml of water for 10 minutes. Strain and dab on to spots 3–5 times a day.

Warts

Herb Aloe vera (*Aloe vera*, p. 60)
Remedy Apply the gel directly to the wart 2–3 times a day for up to 3 months.

Herb Arbor-vitae (*Thuja occidentalis*, p. 276)
Remedy Apply neat tincture to the wart 1–2 times a day for up to 3 months.

Fungal Skin Infections, Including Athlete's Foot

Fungal skin infections are easily picked up through physical contact, and can be hard to clear. Athlete's foot is a fungus (tinea) that grows in the skin between and under the toes, causing it to split and peel away. This itchy, sore condition can be difficult to treat at home.

Self-help

Keep feet dry and clean and do not wear synthetic socks or tightly fitting shoes.

General Remedies

Herb Comfrey (*Symphytum officinale*, p. 138)
Remedy Make a poultice and firmly apply to the affected area for 1–2 hours each day.

Caution Do not use comfrey on broken skin.

Herbs Tea tree (*Melaleuca alternifolia*, p. 112), clove (*Eugenia caryophyllata*, p. 97), marigold (*Calendula officinalis*, p. 73), thyme (*Thymus vulgaris*, p. 143)
Remedy Mix 5 drops of tea tree, clove or thyme essential oil with 1 tsp of marigold ointment. Apply 1–2 times a day.

Caution Do not use thyme oil during pregnancy.

Herb Garlic (*Allium sativum*, p. 59)
Remedy Rub on ½ clove 2–3 times a day.

Athlete's Foot

Herbs Turmeric (*Curcuma longa*, p. 90), marigold (*Calendula officinalis*, p. 73)
Remedy Mix ½ tsp of turmeric powder with 15 ml of marigold ointment. Rub in between and under the toes each day.

Acne & Boils

Acne and boils are the result of local infection, hormonal imbalance or internal toxicity, which cause inflammation of the hair follicles and, with acne, sebaceous glands. They should be treated on the surface of the skin and internally.

Acne generally occurs during the teenage years and results in whiteheads, pustules and cysts, usually on the face and back.

Boils are large, pus-filled areas of skin. They either disperse or burst in a week. As boils are often the body's way of expelling toxins, recurrent boils may indicate a weakened immune system. They can also suggest diabetes or a deep-seated bacterial infection.

Herbs such as tea tree and garlic are antiseptic and antibiotic. Marigold and comfrey promote healing and comfrey helps to mend scarring.

Self-help

Increase intake of vitamin C and garlic.

General cautions Do not squeeze or burst boils or acne spots as the infection may spread. Seek professional advice for recurrent boils.

External Remedies

Herbs Tea tree (*Melaleuca alternifolia*, p. 112), clove (*Eugenia caryophyllata*, p. 97), garlic (*Allium sativum*, p. 59)
Remedy Dab 1 drop of neat tea tree or clove essential oil on to the pus-filled head of a boil or spot twice a day. Alternatively, cut a clove of garlic in half and rub over the area twice a day.

Herb Marigold (*Calendula officinalis*, p. 73)
Remedy Apply ointment or cream, or dab undiluted tincture on to the pus-filled area twice a day.

Herb Comfrey (*Symphytum officinale*, p. 138)
Remedy Apply comfrey ointment or cream to the pus-filled area twice a day.
Caution Do not use comfrey on broken skin.

Herb Lemon (*Citrus limon*, p. 82)
Remedy Dab neat lemon juice on to the pus-filled area, or dilute 1 tsp of lemon juice with 1 tbsp of water and use as a skin wash twice a day.

Herbs Slippery elm (*Ulmus rubra*, p. 145), marigold (*Calendula officinalis*, p. 73), myrrh (*Commiphora molmol*, p. 85), echinacea (*Echinacea* spp., p. 92)
Remedy Mix 1 level tsp of slippery elm powder with sufficient marigold, myrrh or echinacea tincture to make a thick, smooth paste. Place on and around the boil, and bandage securely. Remove after 1–2 hours.
Note This remedy is especially useful for drawing painful boils and splinters.

Internal Remedies

Herbs Dandelion (*Taraxacum officinale*, p.141), burdock (*Arctium lappa*, p. 65)
Remedy Make a decoction using 5 g of burdock root and 10 g of dandelion root with 750 ml of water. Divide into 3 doses and drink during the day.

Herb Echinacea (*Echinacea* spp., p. 92)
Remedy Take echinacea tablets or capsules, or make a decoction of 10 g of root to 750 ml of water and drink during the day.

Digestive Disorders

Ginger
Zingiber officinale

Everyone falls prey to certain digestive problems and, for those with a weak or unsettled digestion, life can be a misery. Poor digestive health usually results from insufficient digestive secretions, infections (such as gastroenteritis), disordered gut bacteria, stress and anxiety. Herbal medicines can improve the complex functioning of the digestive system, helping to relieve acidity, nausea and bloating. Eating simple wholesome food can be beneficial, but it is difficult to generalize about diet. Some conditions may require fasting while, in other cases, a certain type of food might need to be avoided.

Seek immediate professional advice for:

- Difficulty in swallowing
- Severe pain
- Vomiting blood
- Blood in the stool

Important Note
For continuing or recurrent digestive problems, seek professional advice to determine the cause.

Stomach Ache

Cramping pain is a sign that the stomach and intestines are sore and irritated. This is normally due to poor digestion, excessive nervous tension, food poisoning or infection. Stomach ache may occur on its own or lead to vomiting and diarrhoea (in which case, use the remedies on p. 306). Garlic and marigold are antiviral and will help clear digestive infections. Relaxing herbs, such as German chamomile and cramp bark, relieve stomach spasm. For maximum benefit, they are mixed with carminative herbs to help relieve wind.

General cautions Seek professional advice if stomach pain is severe or recurrent. All species of mint (*Mentha* spp.) are unsuitable for children under 5.

Stomach Spasm

Relaxing herbs German chamomile (*Chamomilla recutita*, p. 77), lemon balm (*Melissa officinalis*, p. 113), cramp bark (*Viburnum opulus*, p. 150)
Carminative herbs Anise (*Pimpinella anisum*, p. 248), fennel (*Foeniculum vulgare*, p. 212), mint (*Mentha* spp., pp. 234–235), angelica (*Angelica archangelica*, p. 168)
Remedy Mix 3 parts of a relaxing herb to 1 part of a carminative herb and make an infusion. (For the carminative herbs, use fennel seeds, aniseed, mint leaves or angelica root.) Drink up to 750 ml a day.

Digestive Infections

Herb Garlic (*Allium sativum*, p. 59)
Remedy Eat 1–2 fresh cloves a day.

Herb Marigold (*Calendula officinalis*, p. 73)
Remedy Infuse 2 tsp of herb in 750 ml of water and drink up to 750 ml a day.

Herbs Yarrow (*Achillea millefolium*, p. 56), peppermint (*Mentha × piperita*, p. 114), catnip (*Nepeta cataria*, p. 239)
Remedy Mix equal parts of each herb. Make an infusion of 2 tsp of mixture to 150 ml of water. Drink 300 ml a day.
Caution Do not take yarrow in pregnancy.

Before taking any herbal remedies, see pages 290 & 298–299

Nausea & Vomiting, Including Travel Sickness

Nausea and vomiting can occur for various reasons, including food poisoning, infections, fever, migraine, stress or emotional problems, as well as travel sickness. For short-term conditions, there are many herbs that reduce or relieve the unpleasant, empty, gnawing symptoms of nausea and vomiting. Most of the herbs listed are also very useful for travel sickness.

Ginger, in particular, and other close relatives such as galangal and turmeric, are widely used for nausea and vomiting. They help to "warm" and settle the digestion.

Chiretta strengthens a weak digestion and relieves nausea.

Lemon is an excellent cleansing remedy for a weak and sluggish digestion.

If you are pregnant, or suspect you may be pregnant, see *Morning Sickness*, p. 317, before taking any of these remedies.

General caution Seek professional advice if nausea is severe or is recurrent. All types or species of mint (*Mentha* spp.) are unsuitable for children under 5.

Nausea & Travel Sickness

Herbs Ginger (*Zingiber officinale*, p. 155), galangal (*Alpinia officinarum*, p. 61), turmeric (*Curcuma longa*, p. 90)

Remedy Make an infusion with one of the herbs listed using about 1–2 slices (0.5 g) of fresh root or ¼–½ tsp of dried, powdered or grated root to 150 ml of water. Use the fresh root if possible. Infuse for at least 5 minutes and sip while hot. Drink up to 750 ml a day. Add 1–2 cloves (*Eugenia caryophyllata*, p. 97) if desired.

Option Use the remedy under *Nausea with Headache*.

Tip For travel sickness, take the infusion in a flask or chew crystallized ginger.

Weak Digestion

Herbs Chiretta (*Swertia chirata*, p. 273), centaury (*Erythraea centaurium*, p. 206)

Remedy Take 2–4 drops of one of the tinctures on the tongue each hour.

Herb Lemon (*Citrus limon*, p. 82)

Remedy Drink the freshly squeezed juice of a lemon, neat or diluted, each morning.

Nausea due to Emotional Problems

Herb Lemon balm (*Melissa officinalis*, p. 113)

Remedy Make an infusion with the dried herb or use 2 tsp of fresh herb per 150 ml of water. Drink up to 750 ml a day.

Vomiting with Dizziness & Vertigo

Herb Black horehound (*Ballota nigra*, p. 176)

Remedy Make an infusion and drink up to 750 ml a day.

Caution Seek professional advice if symptoms do not immediately improve.

Nausea with Headache

Herbs Peppermint (*Mentha* x *piperita*, p. 114), pennyroyal (*Mentha pulegium*, p. 235), *bo he* (*Mentha haplocalyx*, p. 234)

Remedy Make an infusion with 1 level tsp of one herb per 150 ml of water. Drink up to 600–750 ml a day.

Other uses This remedy combats abdominal fullness and helps improve the appetite and digestion.

Caution Do not give these herbs to children under 5. Do not take pennyroyal during pregnancy.

Loss of Appetite & Vomiting

Herb Codonopsis (*Codonopsis pilosula*, p. 83)

Remedy Make a decoction and sip 50 ml every 2–3 hours until the vomiting stops or the dose has been taken over 2 days.

Other uses For anorexia, add 5 g of liquorice (*Glycyrrhiza glabra*, p. 101).

Caution Do not take liquorice during pregnancy.

Wind & Bloating

Wind and bloating are common digestive problems. As a preventative, take bitter herbs, such as centaury and gentian, which improve the digestion. Infusions of aromatic plants such as fennel, cardamom, anise, lemon verbena or peppermint are effective remedies. All the herbs listed under *General Remedies* can be combined by adjusting the measurements of each herb using the same proportion to water.

General cautions Bitters are generally unsuitable and unpalatable for children under 5. All types or species of mint (*Mentha* spp.) are unsuitable for children under 5.

Protection & Prevention

Herbs Centaury (*Erythraea centaurium*, p. 206), gentian (*Gentiana lutea*, p. 99)

Remedy Take 5–10 drops of tincture 3 times a day with water.

General Remedies

Herbs Fennel (*Foeniculum vulgare*, p. 212), anise (*Pimpinella anisum*, p. 248)

Remedy Make an infusion with ¼– ½ tsp of fennel or anise seeds per 150 ml of water and drink up to 750 ml a day.

Herb Cardamom (*Elettaria cardamomum*, p. 93)

Remedy Make an infusion with the crushed **seeds** of 2 cardamoms per 150 ml of water. Drink up to 750 ml a day.

Herb Lemon verbena (*Lippia citriodora*, p. 228)

Remedy Make an infusion using 1 tsp of dried or 2 tsp of fresh leaves per 150 ml of water and take up to 750 ml a day.

Herb Peppermint (*Mentha* x *piperita*, p. 114)

Remedy Make an infusion and drink up to 750 ml a day. (See *General cautions*.)

Mouth Ulcers & Gum Problems

Many astringent herbs can be used to treat mouth ulcers and tighten up weak gums and loose teeth. Sage is particularly effective as it also disinfects the mouth. Myrrh tincture will sting but it will also increase the rate of healing.

General Remedies

Herb Myrrh (*Commiphora molmol*, p. 85)

Remedy Dab neat tincture on to mouth ulcers and infected gums once every hour.

Herb Sage (*Salvia officinalis*, p. 131)

Remedy Use an infusion as a mouthwash, or rub gums with leaves or powder.

Mouth & Tongue Ulcers

Herbs Myrrh (*Commiphora molmol*, p. 85), echinacea (*Echinacea* spp., p. 92), liquorice (*Glycyrrhiza glabra*, p. 101)

Remedy Mix equal parts of the tinctures and apply neat or diluted (1 part tincture to 5 parts water) every hour.

Constipation & Diarrhoea

Herbs help both constipation and diarrhoea by gently restoring normal bowel function. Constipation often results from insufficient intake of fruit, vegetables and whole grains, while diarrhoea is usually caused by intestinal infection or inflammation, such as food poisoning. Irritable bowel syndrome gives rise to alternating bouts of constipation and diarrhoea and spastic constipation results from tension and muscle spasm in the colon.

Herbs

Dandelion root, liquorice and yellow dock are mild laxatives.
Senna is a strong laxative and should only be taken when other herbs have failed.
Psyllium seeds and husks cleanse the colon and encourage normal bowel habits.
Cramp bark has antispasmodic properties and can help spastic constipation.
Agrimony, bael, bistort and black catechu are astringent herbs that dry and tighten the bowel lining. Only take in the short-term, as they impair absorption of food. They are taken mixed with soothing, demulcent herbs, such as psyllium or marshmallow, for diarrhoea.

Diet for Constipation

Fruit acts as a gentle laxative within the large bowel. Eat plenty of fresh fruit each day, such as figs (*Ficus carica*, p. 211), apples, or tamarind (*Tamarindus indica*, p. 274), which also counter vomiting, wind and indigestion.

General caution Seek professional advice for persistent constipation or diarrhoea.

Constipation

Herbs Yellow dock (*Rumex crispus*, p. 264), Chinese rhubarb (*Rheum palmatum*, p. 126)
Remedy Make a decoction using 1 tsp of either herb to 150 ml of water. Take last thing at night.

Note Yellow dock is one of the mildest laxatives and should be tried first. If this has no effect, take a single dose of Chinese rhubarb each day. This has a stronger action than yellow dock.

Cautions Do not take Chinese rhubarb or yellow dock during pregnancy.

Persistent Constipation

Herbs Dandelion (*Taraxacum officinale*, p. 141), liquorice (*Glycyrrhiza glabra*, p. 101), yellow dock (*Rumex crispus*, p. 264)
Remedy 1 Make a decoction using 20 g of dandelion root to 750 ml of water and drink each day, or use the ground root to make an infusion and drink 450–600 ml a day.
Remedy 2 Mix 3 tsp of dandelion root and yellow dock and 1 tsp of liquorice. Use the mixture to make a decoction with 750 ml of water and drink 150–300 ml a day.

Cautions Do not take yellow dock or liquorice during pregnancy.

Herbs Senna (*Cassia senna*, p. 75), ginger (*Zingiber officinale*, p. 155)
Remedy Steep 3–6 senna pods and 2–3 slices (1 g) of fresh ginger in 150 ml of warm water. Alternatively, take senna tablets. Take either preparation for up to 10 days.

Note This is the strongest laxative listed.

Cautions Take for up to 10 days at a time. During pregnancy, take on advice of a health care practitioner. Do not give to children under 5.

Spastic Constipation

Herb Cramp bark (*Viburnum opulus*, p. 150)
Remedy Make a decoction using 15 g of the root to 750 ml of water and take 150–300 ml a day or take 2 tsp of tincture with water once per day.

Diarrhoea

Herbs Agrimony (*Agrimonia eupatoria*, p. 162), sage (*Salvia officinalis*, p. 131), bael (*Aegle marmelos*, p. 161), bistort (*Polygonum bistorta*, p. 253), black catechu (*Acacia catechu*, p. 158)
Remedy The above herbs are listed in ascending order of astringency. Make a decoction using 1 heaped tsp of one herb to 225 ml of water and simmer for 15–20 minutes. Take up to 450 ml a day for no longer than 3 days.

Note If using bistort or black catechu (the most astringent herbs), mix with demulcents such as psyllium seeds (*Plantago* spp., p. 123) or marshmallow root (*Althaea officinalis*, p. 165). Add 1 tsp, plus a pinch of peppermint (*Mentha* x *piperita*, p. 114) or other mint (*Mentha* spp., pp. 234–235), per 225 ml of decoction.

Cautions Do not take for more than 3 days at a time and do not take again for 3 days. If there is no improvement, seek professional advice. Do not take sage in pregnancy. Do not give mint to children under 5.

Chronic Diarrhoea & Irritable Bowel Syndrome

Herb Psyllium (*Plantago* spp., p. 123)
Remedy Take 1 heaped tsp of seeds and husks with at least 150 ml of water, 2–3 times daily, or mix with food and then drink at least 150 ml of water. Seeds may be soaked in cool water overnight before taking.

Acidity & Indigestion

Indigestion, caused by too much acid production, suggests a poor or inappropriate diet. To coat the inner lining of the stomach and intestines and protect them from excess acidity, take slippery elm, arrowroot or Iceland moss, which are sticky mucilaginous herbs when soaked in water. Meadowsweet strengthens the lining of the stomach and reduces acidic symptoms, while German chamomile is amazingly versatile for a number of gastro-intestinal problems.

Diet

Cut out acidic foods, such as oranges, red meat, spinach and tomatoes, as well as alcohol and tobacco if possible.

General Remedies

Herbs Slippery elm (*Ulmus rubra*, p. 145), arrowroot (*Maranta arundinacea*, p. 233), Iceland moss (*Cetraria islandica*, p. 186)
Remedy 1 Make an infusion with 2 heaped tsp of one of the herbs to 100 ml of water. Leave for 15 minutes. Take 100 ml up to 4 times a day.
Remedy 2 Make slippery elm "food" by mixing 1 heaped tsp of powder and 3 tsp of cold water. Stir in 250 ml of boiling water. Add a pinch of cinnamon (*Cinnamomum* spp., p. 81) or nutmeg (*Myristica fragrans*, p. 11) to taste. Take 250 ml 3 times a day.

Herbs Fennel (*Foeniculum vulgare*, p. 212), galbanum (*Ferula gummosa*, p. 211), anise (*Pimpinella anisum*, p. 248), or any one of the *Nausea & Vomiting* herbs listed on p. 306.
Remedy Make an infusion using 1 heaped tsp of fennel or anise seeds, or galbanum herb, to 750 ml of water. Drink during the day.

Indigestion, Abdominal Pain, Bloating & Hiccups

Herb German chamomile (*Chamomilla recutita*, p. 77)
Remedy Make an infusion in a covered container. Drink up to 750 ml a day.

Acidity with Gastritis

Herb Meadowsweet (*Filipendula ulmaria*, p. 98)
Remedy Make an infusion with the flowering tops. Drink up to 750 ml a day.

Before taking any herbal remedies, see pages 290 & 298–299

Nerve & Stress-related Problems

Valerian
(Valeriana officinalis)

Most of us have little opportunity to escape from daily pressures, and consequently the nervous system is unable to recover its natural vitality. Long-term stress can lead to anxiety, nervousness, depression, insomnia, palpitations and irritability. Herbal medicines can be wonderfully effective for nourishing the nervous system, calming and relaxing the mind, and gently stimulating or sedating the body. Headaches and migraine respond well to treatment with herbs, as can conditions directly affecting the nerves, such as neuralgia.

Seek immediate professional advice for:

- Severe nerve, chest or head pain
- Headache or pain that does not improve within 48 hours despite self-medication
- Loss of sensation or loss of movement
- Double vision
- Severe depression

Anxiety, Depression & Tension

Many people have experienced lack of well-being and feelings of powerlessness that develop as stress, anxiety and tension take hold. There is no instant answer but a remarkable number of herbs can reduce these symptoms, and, by supporting the nervous system, gradually restore health.

Lemon balm, skullcap and damiana are all calming herbs that ease physical tension and help maintain a balanced mental and emotional state. Lemon balm alleviates stress-related digestive problems, skullcap combats panic attacks and damiana acts as a gentle "pick-me-up".

Valerian has tranquillizing qualities.

Ginseng and Siberian ginseng are excellent for coping with stressful events such as competitive sports, examinations or moving house.

Withania is a supportive tonic herb, strengthening and encouraging recovery from long-term stress or chronic illness.

Lifestyle

When emotionally stressed, it is important to eat well, exercise regularly and allow time for relaxation. Yoga and Tai Chi can be particularly helpful.

General Remedies

Herbs Lemon balm (*Melissa officinalis*, p. 113), damiana (*Turnera diffusa*, p. 144), skullcap (*Scutellaria lateriflora*, p. 135)
Remedy Make an infusion using one of the herbs. Drink up to 600 ml a day.

Herb St John's wort (*Hypericum perforatum*, p. 106)
Remedy Take tablets or make an infusion and drink up to 600 ml a day.
Note This remedy may take 2–3 weeks before there is a noticeable effect.

Digestive Problems due to Stress

Herb Lemon balm (*Melissa officinalis*, p. 113)
Remedy Make an infusion with a handful of fresh leaves and 150 ml water, or make an infusion with the dried herb. Drink up to 750 ml a day, or add the daily dose to a bath.
NOTE This remedy also calms palpitations and encourages sleep.

Panic Attacks & Headaches

Herb Skullcap (*Scutellaria lateriflora*, p. 135)
Remedy Make an infusion and drink up to 750 ml a day.

Chronic Anxiety & Hyperactivity

Herb Valerian (*Valeriana officinalis*, p. 148)
Remedy Take 10 drops of tincture in water every hour for up to 2 weeks at a time.

Nervous Exhaustion, Muscle Tension & Headaches

Herb Codonopsis (*Codonopsis pilosula*, p. 83)
Remedy Make a decoction and drink in equal doses during the day, or cook up to 25 g of the root a day in a soup or stew.

Short-term Stress

Herbs Ginseng (*Panax ginseng*, p. 118), Siberian ginseng (*Eleutherococcus senticosus*, p. 94).
Remedy Either take ginseng tablets, chew 0.5–1 g of root a day or use it in cooking. Alternatively take 1–2 g of Siberian ginseng capsules up to twice day.
Cautions Do not take for more than 6 weeks at a time. Do not give to children under 12. Do not take during pregnancy. Avoid drinks that contain caffeine.

Long-term Stress & Convalescence

Herb Ashwagandha (*Withania somnifera*, p. 152)
Remedy Make a decoction using 3 g of root to 150 ml of water and take during the day, or chew the same amount of root.

Neuralgia (Nerve Pain)

Neuralgia is the pain caused by an irritated, damaged or trapped nerve. It usually occurs in brief, severe bouts and can be felt shooting along the nerve. Although it is difficult to treat, the following remedies may bring relief to minor problems. St John's wort is analgesic and antiviral, helping to relieve sciatica (pain caused by a trapped spinal nerve) and head pain. Cloves have an anaesthetic effect and peppermint eases pain. Try also the St John's wort oil rub (see *Back Pain*, p. 313).

General caution Seek professional advice if there is fever, or swelling of the gums with toothache.

General Remedies

Herbs St John's wort (*Hypericum perforatum*, p. 106), lavender (*Lavandula officinalis*, p. 108), clove (*Eugenia caryophyllata*, p. 97)
Remedy Apply neat St John's wort infused oil to painful areas, or add 20 drops each of clove and lavender essential oil to 50 ml of St John's wort infused oil and then apply every 2–3 hours as required.

Herb Peppermint (*Mentha x piperita*, p. 114)
Remedy Make an infusion with 25 g of herb to 750 ml of water and bathe the affected area. Alternatively, dilute 20 drops of essential oil in 50 ml of carrier oil and gently massage into the painful area.
Caution Do not use on children under 5.

Head Pain

Herb Clove (*Eugenia caryophyllata*, p. 97)
Remedy Mix ½ tsp of powder with water to make a thick paste and apply to the head.

Toothache

Herb Clove (*Eugenia caryophyllata*, p. 97)
Remedy Chew a clove or rub 1–2 drops of neat essential oil on to the affected tooth 2–3 times a day for up to 3 days.

Headaches & Migraine

Headaches and migraine can be very debilitating, especially when they occur frequently.

Headaches are caused by many factors, such as toothache, neck tension, eyestrain and hangovers. It is important to diagnose and treat the underlying cause, which could mean visiting a dentist, optician or osteopath in the first instance. Herbal medicine can be very helpful for headaches, although choosing the right herbs can be difficult. The following remedies contain relaxing herbs that alleviate headaches triggered by stress as well as other more specific factors. Lavender is soothing, while vervain is a tonic and relaxing herb for nervous exhaustion. Peppermint is effective for headaches that are linked to indigestion.

Migraine is a more specific problem. The remedies aim both to prevent the onset of a migraine as well as treat the symptoms.

Hangovers are not a nerve problem in a direct sense, but they should be treated in the same way as any other type of mild poisoning that requires detoxification and headache relief. Make sure you also drink plenty of water.

General caution For migraine or recurrent headaches, consult a professional practitioner to diagnose and treat the underlying cause.

General Remedy

Herb Lavender (*Lavandula officinalis*, p. 108)
Remedy Rub a few drops of neat essential oil on to the temples.

Tension & Sinus Headaches

Herb Lime (*Tilia* spp., p. 277)
Remedy Make an infusion using 1 heaped tsp of lime to 150 ml of water, or use teabags. Drink up to 750 ml a day.

Nervous Exhaustion & Overactivity

Herbs Vervain (*Verbena officinalis*, p. 149), valerian (*Valeriana officinalis*, p. 148)
Remedy Make an infusion of vervain and drink up to 600 ml a day. Alternatively, mix ½ tsp of each tincture and take with water up to 3 times a day.

Caution Do not take vervain during pregnancy.

Digestive Headaches & Biliousness

Herbs Peppermint (*Mentha* x *piperita*, p. 114), pennyroyal (*Mentha pulegium*, p. 235)
Remedy Make an infusion of either herb in a covered container, using either a teabag, a small handful of fresh leaves, or 1 level tsp of dried herb per 150 ml of water. Drink up to 750 ml a day for up to 1 week, or up to 600 ml a day if taking for 2–3 weeks.

Cautions Do not give to children under 5. Do not take pennyroyal during pregnancy.

Migraine Prevention

Herb Feverfew (*Tanacetum parthenium*, p. 140)
Remedy At the first sign of an impending attack, take tablets or 10 drops of tincture with water. Alternatively, place a fresh leaf between slices of bread and eat as a sandwich.

Cautions Do not give to children under 12. Do not take in pregnancy.

Migraine

Herb Skullcap (*Scutellaria lateriflora*, p. 135)
Remedy Make an infusion using 1 heaped tsp of herb to 150 ml of water. Drink up to 750 ml a day.

Herb Rosemary (*Rosmarinus officinalis*, p. 128)
Remedy Make an infusion using 1 level tsp of herb per 150 ml of water and take up to 600 ml each day.

Detoxification for Hangover

Herb Dandelion (*Taraxacum officinale*, p. 141)
Remedy Make a decoction using 15 g of root to 750 ml of water. Take the decoction in small quantities at frequent intervals throughout the day.

Insomnia

Difficulty in sleeping affects everyone at one time or another. Herbs can provide a safe and gentle solution to this problem.

Sedative herbs such as German chamomile, lime, lavender, hops and passion flower are relaxing and, unlike some herbs, are most likely to be effective against insomnia when taken at night. Hops are excellent when the mind refuses to "switch off".

Stimulant herbs are effective when the body suffers from nervous exhaustion and feels, paradoxically, too tired for sleep. Oats and ginseng encourage a good night's sleep, especially for people suffering from nervous tension and fatigue.

Herbal sleeping pills, containing combinations of valerian, hops, passion flower and similar herbs, are often helpful in overcoming mild sleep problems and in reducing feelings of anxiety and stress.

General Remedies

Herbs German chamomile (*Chamomilla recutita*, p. 77), lime (*Tilia* spp., p. 277), lavender (*Lavandula officinalis*, p. 108), passion flower (*Passiflora incarnata*, p. 119)
Remedy The above herbs are listed in ascending order of strength. Start with the weakest, German chamomile, and if it does not help, try the next strongest. Make an infusion in a covered container using 1–2 heaped tsp per 150 ml of water. Take prior to sleeping. Alternatively, take 1 tsp of tincture with water up to 3 times a night.

Herbs Valerian (*Valeriana officinalis*, p. 148), hops (*Humulus lupulus*, p. 104), passion flower (*Passiflora incarnata*, p. 119)
Remedy 1 Take tablets containing one or more of the herbs.
Remedy 2 Make a sachet with dried hops (see p. 104) and place inside your pillow.

Caution Do not take hops internally if feeling low or depressed.

Overactive Mind

Herb Hops (*Humulus lupulus*, p. 104)
Remedy Take the tincture with water at night. Start with 10 drops up to a maximum of 40 drops each night.

Caution Do not take hops internally if feeling low or depressed.

Poor sleep & nervous exhaustion

Herb Oats (*Avena sativa*, p. 175)
Remedy Eat oats daily, for example in porridge, and take 1 tsp of oat straw tincture with water 3 times a day.

Herbs Ashwagandha (*Withania somnifera*, p. 152), Siberian ginseng (*Eleutherococcus senticosus*, p. 94)
Remedy Take 1–2 g of ashwagandha or Siberian ginseng up to 3 times a day. Either chew the root, or cook it in a soup. Alternatively, take tablets.

Cautions Avoid taking caffeine while taking ashwagandha and Siberian ginseng. Do not take Siberian ginseng for more than 6 weeks at a time. Do not take during pregnancy. Do not give to children under 12.

Before taking any herbal remedies, see pages 290 & 298–299

Respiratory Tract Problems

Thyme
(Thymus vulgaris)

The respiratory system stretches from the lining of the eyes and sinuses to the base of the lungs, and is constantly exposed to dust, dirt and organisms in the air. It is no surprise that in our ever more polluted world we often face problems such as sinus congestion and asthma. Herbal remedies aim to protect the linings of the eyes, ears, sinuses, nose and throat, as well as the respiratory "tree" of the lungs by countering infection, clearing catarrh, soothing the mucous membranes, and relieving inflammation or allergy.

Seek immediate professional advice for:

- Difficulty in breathing or chest pain
- Cough that lasts for more than 2 weeks
- Severe pain in the respiratory tract
- Coughing up blood
- Fever of 39°C (102°F) or more
- Heavy nosebleed lasting longer than 1 hour

Coughs & Bronchitis

The act of coughing is usually a reaction to irritant particles in the bronchial tubes. It is worthwhile considering the type of cough you have and where it is centred. Herbal remedies can then be chosen to work effectively to clear or ease the cough.

Productive, chesty coughs may produce white, yellow or green phlegm.

Unproductive coughs are dry and irritant and often take a long time to clear.

Bronchitis occurs when the lining of the lungs' airways becomes inflamed, resulting in a chesty cough, possible breathlessness and a raised temperature. Use both an external and an internal remedy.

Herbs Thyme is an effective antiseptic for the whole system. Liquorice acts as a soothing expectorant for persistent coughs and makes any remedy more palatable. Take plenty of garlic to fight bronchitis.

General caution Seek professional advice if a cough lasts for more than 1 week without a cold or infection.

General Remedies

Herb Thyme (*Thymus vulgaris*, p. 143)
Remedy Take 750 ml of infusion a day.

Dry Coughs in the Throat & Chest

Herbs Balm of Gilead (*Populus* x *candicans*, p. 254), thyme (*Thymus vulgaris*, p. 143), liquorice (*Glycyrrhiza glabra*, p. 101)
Remedy Make an infusion using equal parts of thyme, balm of Gilead buds and liquorice powder. Take 75 ml 6 times a day, or mix equal parts of each tincture and take 1 tsp up to 5 times a day with water. Reduce the dosage as the cough eases.

Cautions Seek professional advice if no improvement occurs after 1 week. Do not take liquorice if pregnant.

Chesty Coughs & Bronchitis

Herbs Elecampane (*Inula helenium*, p. 107), eucalyptus (*Eucalyptus globulus*, p. 96), liquorice (*Glycyrrhiza glabra*, p. 101)
Remedy (Internal) Make a decoction of elecampane and take 300–450 ml a day. Add 5 g of liquorice powder to the decoction to improve the flavour if desired.

Note For acute bronchitis and coughs, add 5 g of eucalyptus leaf to the decoction.

Caution Do not take elecampane during pregnancy.

Herbs Echinacea (*Echinacea* spp., p. 92), garlic (*Allium sativum*, p. 59)
Remedy (Internal) Take ½ tsp of echinacea tincture with water 2–3 times a day, or take tablets. In addition, eat 2 garlic cloves daily.

Herbs Thyme (*Thymus vulgaris*, p. 143), cajuput (*Melaleuca leucadendron*, p. 234), eucalyptus (*Eucalyptus globulus*, p. 96)
Remedy (External) Mix 5 drops each of eucalyptus and thyme essential oils with 2 tsp of olive or sunflower oil. Massage over the chest and back, up to twice a day. Alternatively, burn 5–10 drops of one of the oils in a burner for 30 minutes.

Caution Do not apply thyme oil during pregnancy.

Nosebleeds

Many herbs are reputed to stop nosebleeds, and most are effective. Using a herb as snuff is a traditional way of staunching a nosebleed.

Caution If the nosebleed continues for some hours or is very heavy, seek immediate professional advice.

Prevention of Nosebleeds

Herbs Eyebright (*Euphrasia* spp., p. 209), nettle (*Urtica dioica*, p. 146)
Remedy Make an infusion using 25 g of either herb to 750 ml of water. Take up to 600 ml a day.

Nosebleeds

Herbs American cranesbill (*Geranium maculatum*, p. 216)
Remedy First, pinch the nostrils and tilt back the head. Then sniff ½ tsp of the powdered herb.

Eye Problems

Rather than treating the eyes themselves, these remedies benefit the mucous tissue lining the eyes, which is contiguous with the nose and throat. Problems affecting the linings of the eyes often respond well to local treatment with herbal remedies, but care must be taken not to irritate the eyes with particles of herbs left in the lotion.

Sore & Tired eyes

Herbs German chamomile (*Chamomilla recutita*, p. 77), *ju hua* (*Chrysanthemum* x *morifolium*, p. 78)
Remedy Make a compress by infusing a German chamomile teabag, or make a poultice with 15 g of either herb to 250 ml of water. Cool, squeeze out the excess, and place the teabag or poultice over the eye.

Conjunctivitis

Herbs Eyebright (*Euphrasia officinalis*, p. 209), cornflowers (*Centaurea cyanus*, p. 185)
Remedy Make an infusion with either herb and strain. When warm (not hot), put in an eyebath and bathe eyes well. Use no more than twice a day.

Caution Seek professional advice if there is no improvement in 3–4 days.

Colds, Flu & Fevers

The common cold, with which most of us are only too familiar, is a viral infection normally affecting the nose and throat. Flu is considerably more debilitating and may include fever, headache, muscular pain, nausea and vomiting. Both have a habit of striking when we are stressed or run down. Herbal home treatment is especially suitable for these familiar "self-limiting" ailments since it enables us to make life more comfortable, control fever and improve the body's recovery rate.

Garlic, ginger and lemon combine to create the classic flu remedy that can also be used to relieve colds, sore throats and tonsillitis.

Ginger, cinnamon, cloves and cayenne have heating properties and stimulate sweating. This helps to lower the body's temperature during fever.

Elderberry and yarrow are antiviral, stimulate sweating and astringe the mucus membranes of the nose and throat, reducing the production of catarrh.

Boneset and cayenne are particularly helpful for respiratory infections.

Wormwood and gentian are bitter herbs that cool the body and combat high fever.

Diet

For all these problems, eat lightly. Fruit and vegetables are best, the latter perhaps in a soup. Avoid greasy, fatty, sugar-rich food and dairy products.

Self-help

Reduce fever and temperature by washing with cool or cold water and drinking plenty of liquid, especially when sweating.

General cautions Remember that in the very young and very old, even a common cold can develop into pneumonia. Always seek professional advice if symptoms persist or suddenly get worse.

General Remedies

Herbs Garlic (*Allium sativum*, p. 59), ginger (*Zingiber officinale*, p. 155), lemon (*Citrus limon*, p. 82)
Remedy Crush a medium-sized garlic clove, grate a similarly sized piece of fresh ginger, and squeeze the juice from 1 lemon. Mix together with 1 tsp of honey. Add 150 ml of warm water and stir. Drink up to 450 ml a day while symptoms last.

Herbs Thyme (*Thymus vulgaris*, p. 143), boneset (*Eupatorium perfoliatum*, p. 208)
Remedy Make an infusion using ½ tsp of each herb with 150 ml of water and then drink 450–600 ml a day.

Note This remedy is very effective if thick green mucus and nasal congestion occur.

Colds

Herbs Lemon (*Citrus limon*, p. 82), cinnamon (*Cinnamomum* spp., p. 81)
Remedy Drink the freshly squeezed juice of 1 lemon, neat or diluted in warm water.
Option Add 1 tsp of honey to the juice and ½ tsp of cinnamon powder.

Herb Ginger (*Zingiber officinale*, p. 155)
Remedy Infuse 2–3 slices (1 g) of fresh ginger with 150 ml of water for 5 minutes. Take up to 750 ml a day.

Herbs Elderberry (*Sambucus nigra*, p. 132), lemon (*Citrus limon*, p. 82)
Remedy Take 5 ml of elderberry tincture or extract in warm water up to 3 times a day. Add in freshly squeezed juice from half a lemon.

High Fever

Herbs Yarrow (*Achillea millefolium*, p. 56), boneset (*Eupatorium perfoliatum*, p. 208), cayenne (*Capsicum frutescens*, p. 74)
Remedy Make an infusion using 1 tsp each of yarrow and boneset, with a pinch of cayenne, to 150 ml of water. Brew for 5 minutes and drink hot. Take up to 600 ml a day.
Options Add 1 or 2 of the following herbs: 2–3 cloves (*Eugenia caryophyllata*, p. 97), ½ tsp of powdered or grated fresh ginger (*Zingiber officinale*, p. 155), ½ tsp of chopped or powdered cinnamon bark (*Cinnamomum* spp., p. 81), 1–2 crushed cardamom seeds (*Elettaria cardamomum*, p. 93), 2–3 crushed peppercorns (*Piper nigrum*, p. 250).

Caution Do not take yarrow during pregnancy.

Herbs Wormwood (*Artemisia absinthium*, p. 66), gentian (*Gentiana lutea*, p. 99)
Remedy Take 10 drops of either tincture with water 3 times a day in addition to the remedy given above.

Caution Do not take wormwood during pregnancy.

Mild Fever

Herbs Yarrow (*Achillea millefolium*, p. 56), elderberry (*Sambucus nigra*, p. 132)
Remedy Make an infusion with ½ tsp of each herb in 100 ml water. Brew for 10 minutes and drink up to 600 ml a day.

Caution Do not take yarrow during pregnancy.

Herb Onion (*Allium cepa*, p. 164)
Remedy Bake a large onion at 200°C (400°F) for 40 minutes. Remove, and mix the juice with an equal amount of honey. Take 1–2 tsp an hour up to 8 times a day.

Flu with Muscle Aches & Pains

Herbs Thyme (*Thymus vulgaris*, p. 143), lemon balm (*Melissa officinalis*, p. 113), elderflower (*Sambucus nigra*, p. 132)
Remedy Make an infusion using 5 g of each herb to 750 ml of water. Brew for 10 minutes and drink up to 750 ml a day.

Herb Echinacea (*Echinacea* spp., p. 92)
Remedy Take tablets or capsules, or up to ½ tsp of tincture with water twice a day. Alternatively, make a decoction with 5 g of root to 750 ml of water and then drink 300–600 ml a day.

Sore Throats & Tonsillitis

The garlic, ginger and lemon mixture listed under *General Remedies for Colds, Flu & Fevers* (see above) can alleviate the symptoms of both sore throats and tonsillitis. The brave can slowly chew a clove of garlic; sage and echinacea are also strongly antiseptic. All these herbs will relieve symptoms and aid a speedy recovery.

General caution Always seek professional advice and treatment for children under 5 suffering from tonsillitis.

Sore Throats

Herbs Tamarind (*Tamarindus indica*, p. 274), lemon (*Citrus limon*, p. 82)
Remedy Gargle with either a decoction of tamarind fruit or 20 ml of lemon juice either neat, or diluted in warm water.

Herbs Rosemary (*Rosmarinus officinalis*, p. 128), sage (*Salvia officinalis*, p. 131), myrrh (*Commiphora molmol*, p. 85), echinacea (*Echinacea* spp., p. 92)
Remedy 1 Dilute 1 tsp of equal parts of all tinctures in 5 tsp of warm water and gargle. Swallow the mixture (except if pregnant).
Remedy 2 Make a sage infusion, brew for 10 minutes and allow to cool a little. Gargle, then swallow. Add 5 ml of vinegar and 1 tsp of honey to strengthen its action.

Caution Do not swallow sage during pregnancy.

Tonsillitis

Herbs Echinacea (*Echinacea* spp., p. 92), all herbs listed under *Sore Throats*
Remedy Take echinacea (see *Flu with Muscle Aches & Pains* above), or use one of the gargles listed under *Sore Throats*.

Caution Seek professional advice if there is no improvement after 2 days.

Before taking any herbal remedies, see pages 290 & 298–299

Catarrh, Sinus Problems & Earache

Excessive nasal catarrh is not always easy to treat and suggests poor air quality, inappropriate diet or an allergy. The shape of the nose and sinuses (the air-filled cavities in the bones around the nose) can also play a role in this condition. Sinuses can become blocked with fluid causing painful pressure. Earache may be caused by local infection – in which case garlic is particularly effective – or catarrh. Lavender is helpful in soothing the pain of all types of earache.

Diet

As a first step, reduce foods thought to increase mucus production, such as dairy produce, eggs, fried and fatty food, sugar and refined carbohydrates, such as white flour, as well as alcohol.

General caution Seek professional advice for earache, especially in children.

General Remedy

Herb Eucalyptus (*Eucalyptus globulus*, p. 96)
Remedy Make a steam inhalation by infusing 15 g of herb or put 5–10 drops of essential oil in 750 ml water. Inhale for 10 minutes.

Allergic States with Excessive Nasal Catarrh, such as Hay Fever

Herb German chamomile (*Chamomilla recutita*, p. 77)
Remedy Make a steam inhalation by infusing 15 g of herb or put 5–10 drops of essential oil in 750 ml water. Inhale for 10 minutes.

Earache

Herb Lavender (*Lavandula officinalis*, p. 108)
Remedy Place 2 drops of essential oil on to cotton wool and plug into the ear.

Earache caused by Infection

Herb Garlic (*Allium sativum*, p. 59)
Remedy Break open a garlic oil capsule, place 2 drops on to cotton wool and plug into the affected ear. Alternatively, crush a large clove of garlic and soak in 1 tbsp of sunflower or olive oil, for at least 24 hours. Strain the oil and warm it to body temperature. Then place 2 drops on to cotton wool and plug into the ear.

Earache due to Chronic Catarrh

Herbs Echinacea (*Echinacea* spp., p. 92), thyme (*Thymus vulgaris*, p. 143), marshmallow (*Althaea officinalis*, p. 165), elderflower (*Sambucus nigra*, p. 132)
Remedy Mix equal parts of each tincture and take 1 tsp 3 times a day with water.

Copious Liquid Catarrh & Sinus Congestion

See *Allergic Rhinitis*, p. 300.

Sinus headaches

See *Tension & Sinus Headaches*, p. 309.

Musculo-skeletal Problems

Cramp Bark
(Viburnum opulus)

Whether caused by accident, sports injury or simple wear and tear, musculo-skeletal problems can lead to a significant deterioration in quality of life. Manipulation is often the primary treatment, but herbal remedies can reduce pain and inflammation, relax muscles, detoxify the body and speed up the rate of healing. External treatments soothe back muscles and joints, and sprained or sore limbs. Persevering with the simple home treatments given below can bring about a marked improvement of many problems.

Seek immediate professional advice for:

- Severe pain
- Significant or sudden joint swelling
- Broken or suspected broken bones
- Any injury that may need an X-ray

Caution Only give external remedies to children. Seek professional advice before giving internal remedies to them.

Sprains & Fractures

Minor damaged areas benefit from herbs such as arnica and comfrey, which soothe bruising and speed up the healing process. Apply as soon as possible after treatment.

General caution Always seek professional treatment for broken bones, fractures and severe sprains.

Sprains

Herb Arnica (*Arnica montana*, p. 172)
Remedy Apply ointment or cream to the damaged area and gently massage into the skin at least 3 times a day.

Caution Do not use arnica on broken skin.

Fractures

Herb Comfrey (*Symphytum officinale*, p. 138)
Remedy Gently apply ointment, cream or infused oil to the area at least 3 times a day.

Caution Do not use comfrey on broken skin.

Muscle Aches & Cramps

Muscle aches and cramps are entirely normal, particularly after strenuous activity, and the pain should lessen in time. Meanwhile, rubs and ointments containing soothing herbs, such as arnica, thyme and cramp bark, can alleviate aching muscles. Rheumatism is a general term for muscle or joint pain and stiffness, and the remedies listed here and under *Joint Pain & Stiffness*, p. 313, are appropriate for this condition.

Tired & Aching Muscles

Herb Arnica (*Arnica montana*, p. 172)
Remedy Apply cream or ointment.

Caution Do not use arnica on broken skin.

Herbs Thyme (*Thymus vulgaris*, p. 143), rosemary (*Rosmarinus officinalis*, p. 128)
Remedy Make an infusion with 25 g of one herb to 750 ml water. Brew for 10 minutes, strain into a bath and soak for 20 minutes.

Option Try also the rub containing St John's wort oil, listed under *General Remedies for Back Pain*, p. 313.

Cramps & Muscle Spasms

Herb Cramp bark (*Viburnum opulus*, p. 150)
Remedy (Internal) Take 1 tsp of tincture with water up to 3 times a day.
Remedy (External) Rub neat tincture firmly into the affected area.

Joint Pain & Stiffness, Including Arthritis & Gout

The most common ailment characterized by joint pain and stiffness is arthritis, which is caused by inflammation of the joints. Ageing or wear and tear may be the cause, but some arthritic conditions, and other joint problems such as gout, are due to the build-up of waste products in the joints.

Devil's claw is anti-inflammatory, relieving swollen and inflamed joints.

Lemon juice reduces acidity in the body. White willow relieves inflammation and pain and, when combined with other herbs, can lead to significant improvement in mild to moderate arthritis.

Meadowsweet and celery combine well to reduce acidity. All the herbal remedies here can be safely taken for 1–2 months.

Self-help

Improving posture, managing anxiety and using herbal remedies to help the body eliminate toxins can all help control these conditions. Avoid acid-forming foods such as red meat, spinach, tomatoes and oranges. Regular (but not excessive) exercise is beneficial, as is a relaxed, positive attitude.

General cautions For severe arthritis, consult a professional practitioner. Do not take devil's claw, black cohosh or celery seed during pregnancy.

Arthritis & Inflamed Joints

Herb Devil's claw (*Harpagophytum procumbens*, p. 103)
Remedy Take tablets (see *General cautions*).

Herb Lemon (*Citrus limon*, p. 82)
Remedy Squeeze the juice from a lemon and drink neat or diluted in water each morning.

Herb White willow (*Salix alba*, p. 129)
Remedy Take tablets, or make a decoction using 10 g of root to 750 ml water. Take in 3 doses over 1–2 days as required.

Herbs Devil's claw (*Harpagophytum procumbens*, p. 103), celery (*Apium graveolens*, p. 64), white willow (*Salix alba*, p. 129)
Remedy Make a decoction with 8 g of each herb to 750 ml of water, divide into 4 doses and take 2–3 doses a day; or mix equal parts of the tinctures and take 1 tsp with water 3 times a day (see *General cautions*).
Option If arthritis develops during the menopause, replace devil's claw with 8 g of black cohosh (*Cimicifuga racemosa*, p. 79)

Herb Deadly nightshade (*Atropa belladonna*, p. 69)
Remedy Apply belladonna plasters in addition to one of the above remedies.

Arthritis associated with Acid Indigestion or Peptic Ulcer

Herbs Meadowsweet (*Filipendula ulmaria*, p. 98), celery (*Apium graveolens*, p. 64)
Remedy Make an infusion with meadowsweet and drink up to 750 ml a day, or mix 2 parts meadowsweet tincture with 1 part celery tincture and take ½ tsp with water 2–3 times a day (refer to *General cautions*).

Stiff & Aching Joints

Herbs St John's wort (*Hypericum perforatum*, p. 106), comfrey (*Symphytum officinale*, p. 138), lavender (*Lavandula officinalis*, p. 108)
Remedy Mix 2½ tbsp of St John's wort or comfrey infused oil with 20–40 drops of lavender essential oil and gently massage into the affected area.
Option Try the rub containing St John's wort infused oil under *General Remedies* for *Back Pain* below.

Gout

Herb Celery (*Apium graveolens*, p. 64)
Remedy Take tablets, or make a decoction with the seeds. Divide into 3 doses and drink during the day or add 25 g of seeds to food per day (see *General cautions*).

Back Pain

Above all, back problems require specialist attention and plenty of rest. Herbal remedies contribute to overall improvement by alleviating pain and muscle tension, and helping to make life more comfortable.

Cramp bark and prickly ash are warming, relaxing herbs, which when rubbed into the affected area help to "unknot" taut muscles.

Lavender and St John's wort are useful herbs when nervous tension is contributing to the problem.

Devil's claw and cramp bark have effective anti-inflammatory properties and help reduce swollen joints.

Passion flower encourages sleep, particularly when back pain is accompanied by nervous tension.

Sciatica (a painful condition caused by a trapped spinal nerve) and neuralgia can both be relieved by using an external rub containing St John's wort infused oil.

General cautions Back problems need specialist care. For chronic or severe back pain, seek the advice of a professional practitioner to gain the most benefit from herbal medicine.

General Remedies

Herbs Cramp bark (*Viburnum opulus*, p. 150), northern prickly ash (*Zanthoxylum americanum*, p. 153)
Remedy Make a decoction using 15 g of cramp bark and 5 g of northern prickly ash bark to 750 ml of water. Strain and rub into the affected area, or use 1 tbsp of tincture and apply in the same way.
Note Use especially for tense neck and lumbar regions.

Herb Thyme (*Thymus vulgaris*, p. 143)
Remedy Make an infusion using 25 g of herb to 750 ml of water and strain into a bath. Soak for 20 minutes.

Herbs St John's wort (*Hypericum perforatum*, p. 106), lavender (*Lavandula officinalis*, p. 108), pepper (*Piper nigrum*, p. 250), cramp bark (*Viburnum opulus*, p. 150)
Remedy Take 2 tbsp of sunflower oil or St John's wort infused oil, add 20 drops of lavender essential oil, 10 drops each of rosemary and pepper essential oil and 1 tsp of cramp bark tincture. Shake and rub into tense areas, either after a bath or having first warmed the area with a hot flannel.

Other uses Use for sciatica and other back problems that cause neuralgia, as well as for stiff joints and chronic muscle ache.

Back Pain due to Joint Inflammation

Herbs White willow (*Salix alba*, p. 129), cramp bark (*Viburnum opulus*, p. 150), devil's claw (*Harpagophytum procumbens*, p. 103)
Remedy Mix equal parts of each root and make a decoction. Divide into 6 doses and take over 2 days. If there is no improvement after 7 days, divide the decoction into 3 doses and take daily for up to a week.
Caution Do not take devil's claw during pregnancy.

Sleeplessness due to backache

Herbs Passion flower (*Passiflora incarnata*, p. 119), valerian (*Valeriana officinalis*, p. 148), cramp bark (*Viburnum opulus*, p. 150)
Remedy Make a decoction using 8 g each of passion flower, valerian and cramp bark to 750 ml of water and drink 150–300 ml at night (the decoction is sufficient for 2 days).

Before taking any herbal remedies, see pages 290 & 298–299

Urinary & Fungal Infections

Echinacea
(*Echinacea* spp.)

Infections signal that the body's resistance to disease has become weakened, particularly if they are long-lasting or recurrent. Minor infections affecting the kidneys and urinary system are common and, despite being hard to shake off, can be treated by boosting the body's natural defences. Fungal infections can also be difficult to clear and may require professional treatment, although herbs such as garlic (*Allium sativum*, p. 59) and tea tree (*Melaleuca alternifolia*, p. 112) are strongly antifungal. If the infection is chronic, it is necessary to support the immune system as a whole, with herbs such as echinacea (*Echinacea* spp., p. 92).

Seek immediate professional advice for:

- Infections that show no signs of improvement, or deteriorate after taking a herbal remedy
- Temperatures above 39°C (102°F)
- Pain in the kidneys
- Blood in the urine

Urinary Infections

Cystitis (an infection of the bladder and urinary tubules) can be a serious problem if it spreads to the kidneys. Mild cystitis and other urinary infections can be cured with a mixture of antiseptic herbs such as buchu and soothing herbs such as marshmallow. Taking echinacea or garlic at the same time improves the body's resistance to infection. Bilberry or cranberry, which are from the same genus, are excellent for urinary infections.

General cautions Seek immediate professional help if cystitis is severe or recurrent, there is blood in the urine, or pain around the kidneys or small of the back.

General Remedies

Herbs Buchu (*Barosma betulina*, p. 71), cornsilk (*Zea mays*, p. 154), marshmallow (*Althaea officinalis*, p. 165)
Remedy Make an infusion with 5 g of each herb to 750 ml of water. Divide into 4 doses and drink throughout the day.
Option Substitute juniper (*Juniperus communis*, p. 224) or goldenrod (*Solidago virgaurea*, p. 271) for buchu.

Caution Do not take juniper or buchu during pregnancy.

Herb Bilberry (*Vaccinium myrtillus*, p. 147)
Remedy Make a decoction of the berries and drink 450–600 ml a day.

Tip Cranberry juice may be substituted for bilberry decoction.

Herbs Garlic (*Allium sativum*, p. 59), echinacea (*Echinacea* spp., p. 92)
Remedy Take either or both herbs in capsule or tablet form.

Note Take in addition to other remedies.

Fungal Infections

Fungal infections are common and can be hard to treat. Vaginal thrush is increasingly found as a side-effect of conventional antibiotic treatment. Marigold is helpful for treating this troublesome condition. Candidiasis (accelerated growth of *Candida albicans*, a yeast-like organism within the gut) can cause considerable problems, but mild cases may be helped with antiseptic and antifungal herbs, such as garlic. All types of fungal infections can be helped with herbs that boost the immune system, such as echinacea, as well as by applying an external remedy to the affected area.

Diet

Diet is an important factor when treating fungal problems. Cut out or reduce intake of bread, alcohol and other foods containing yeast or sugar.

Self-help

Candidiasis sufferers can take probiotic capsules or live yoghurt to help the growth of beneficial bacteria in the intestines. For thrush, live yoghurt can be inserted into the vagina.

General caution Seek professional advice for candidiasis, as it is often a difficult condition to treat.

General Remedies

Herbs Echinacea (*Echinacea* spp., p. 92), thyme (*Thymus vulgaris,* p. 143)
Remedy Mix 2 parts echinacea tincture to 1 part thyme tincture and take 1 tsp twice a day with water.

Herb Garlic (*Allium sativum*, p. 59)
Remedy Take 1–2 garlic cloves a day, crushed and swallowed with water or mixed with food.

Vaginal Thrush

Herb Marigold (*Calendula officinalis*, p. 73)
Remedy Make an infusion and allow to cool. Strain and use as a douche or wash.
Option Add the infusion to a bath and soak for 20 minutes.

Herb Tea tree (*Melaleuca alternifolia*, p. 112)
Remedy Use pessaries or place 1–2 drops of essential oil diluted with 3 drops of olive oil on to a tampon and insert into the vagina (this may sting). Remove after 2–3 hours and only use once a day.

Caution During pregnancy, use these pessaries and tampons only with professional advice.

Oral Thrush

Herbs Liquorice (*Glycyrrhiza glabra*, p. 101), myrrh (*Commiphora molmol*, p. 85), echinacea (*Echinacea* spp., p. 92)
Remedy Mix equal parts of the tincture of each herb. Take 1 tsp as a mouthwash with water every 3–4 hours, as required.

Candidiasis

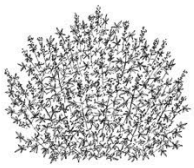
Herbs Elderflower (*Sambucus nigra*, p. 132), marigold (*Calendula officinalis*, p. 73), thyme (*Thymus vulgaris*, p. 143)
Remedy Make an infusion with 8 g of each herb to 750 ml water and drink 300–450 ml each day.

Herb Pau d'arco (*Tabebuia* spp., p. 139)
Remedy Make a decoction with 12 g bark to 750 ml of water. Divide into 3–4 doses and drink throughout the day. Alternatively, take capsules or ½ tsp of tincture with water up to 3 times a day.

Fungal Skin Infections, Including Athlete's foot

See p. 304.

Reproductive & Menstrual Problems



Chaste Tree
(Vitex agnus-castus)

Women have always tended to use herbal medicine more than men, traditionally in their role as healers in the home and now, in part, due to the proven effects of many herbs on the reproductive system. Herbs such as wild yam contain constituents similar to the female sex hormones, oestrogen and progesterone, which can help regulate the menstrual cycle, increase or decrease fertility, and support the body through the menopause. Common menstrual problems, such as cramps, pre-menstrual tension and heavy bleeding, respond well to self-treatment. However, chronic conditions or infertility in either women or men require professional attention.

Seek immediate professional advice for:

- Severe pain in the abdomen or pelvis
- Significant or sudden change in menstruation, such as prolonged, heavy or irregular periods

Important Note

For the best treatment, consult a herbalist. Seek professional advice before taking a remedy if you believe that you may be pregnant. See *Pregnancy*, p. 317.

Menstrual Problems

The menstrual cycle can be disturbed for many reasons, most of them relating to hormonal imbalances. Other causes include stress, too much or too little exercise, weight problems, food sensitivity or allergy, steroids, the contraceptive pill, chronic illness, vitamin and mineral deficiency and even excess caffeine, alcohol or smoking. To determine the underlying cause, it is important to consult a professional practitioner.

Taking remedies for menstrual problems. The remedies listed should all be taken at the appropriate point in the cycle for 2–3 cycles.

The normal menstrual cycle lasts about 28 days. If this cycle varies greatly from one period to another without reason, it could be termed irregular.

Pre-menstrual tension (PMT) and period pain have many causes and are experienced at some stage by most women. Breast tenderness, sore nipples and fluid retention are common symptoms.

Heavy periods can result in anaemia. If your period lasts longer than 5 days or if you have to change your protection every 2 hours, your periods may be too heavy. Nettle (*Urtica dioica*, p. 146) is an excellent tonic, especially for heavy bleeding, as it contains more iron than spinach and can be eaten as a nourishing vegetable.

Self-help

Combine herbal remedies with a diet high in fresh vegetables and fruit, and low in fatty foods, sugar and alcohol. Try not to smoke. Regular exercise, particularly of the waist and pelvis, is helpful, as is a relaxed attitude to life. All reproductive problems will benefit from this simple approach.

General caution For any chronic menstrual problem, it is wise to seek professional attention, especially if your periods are very heavy or painful.

Irregular Cycle

Herb Chaste tree (*Vitex agnus-castus*, p. 151)
Remedy Take tablets, or take 1.5–2 ml of tincture with water each morning on waking for at least 2 months.

Herb Motherwort (*Leonurus cardiaca*, p. 227)
Remedy Make an infusion and take 150– 300 ml a day for up to 3 monthly cycles.

Caution Do not take if menstrual bleeding is heavy.

Pre-menstrual Tension

Herbs Vervain (*Verbena officinalis*, p. 149), lime (*Tilia* spp., p. 277)
Remedy (Internal) Make an infusion using either herb (or an equal mix of both) and drink up to 750 ml throughout the day.

Herb Valerian (*Valeriana officinalis*, p. 148)
Remedy (Internal) Take tablets containing valerian, or take 20–40 drops of tincture with water up to 5 times a day.

Herb Rosemary (*Rosmarinus officinalis*, p. 128)
Remedy (External) Make an infusion with 1 tbsp of dried or 2 tbsp of fresh leaves to 1 litre of water and strain into a warm bath each morning. Alternatively, add 5–10 drops of essential oil to a bath.

Note Also try the chaste tree remedy under Irregular Cycle above.

Breast Tenderness & Sore Nipples

Herb German chamomile (*Chamomilla recutita*, p. 77)
Remedy Make a compress with an infusion of 50 g of herb and 250 ml of water. Place gently over the breasts. Repeat as often as required to achieve relief.

Herb Marigold (*Calendula officinalis*, p. 73)
Remedy Apply ointment to the nipples. If breast-feeding, wipe off the ointment before feeding.

Fluid Retention

Herb Dandelion (*Taraxacum officinale*, p. 141)
Remedy Make an infusion with the leaves and drink up to 450 ml a day.

Heavy Menstrual Bleeding

Herb Chuang xiong (*Ligusticum wallachii*), white peony (*Paeonia lactiflora*, p. 117), Chinese angelica (*Angelica sinensis*, p. 63), rehmannia (*Rehmannia glutinosa*, p. 125)
Remedy Mix equal parts of each root and make a decoction using 15 g of the mixture to 750 ml of water. Drink in 3 equal doses throughout the day.
Note Any of these herbs will help, but they are best together, in which form they are known as *Four Things Soup*.

Herb Shepherd's purse (*Capsella bursa-pastoris*, p. 183), nettle (*Urtica dioica*, p. 146)
Remedy Make an infusion using 7.5 g of each herb (or 15 g of shepherd's purse only) to 750 ml of water. Divide into 3–4 doses and drink throughout the day.

Period Pain

Flavour the decoctions with 1 heaped tsp of caraway seeds (*Carum carvi*, p. 184). Mix before decocting.
Herbs Wild yam (*Dioscorea villosa*, p. 91), cramp bark (*Viburnum opulus*, p. 150), black haw (*Viburnum prunifolium*, p. 281)
Remedy Make a decoction using 15 g of herb to 750 ml of water. Sip small amounts during the day; or take 2 tsp of tincture with water 3–4 times a day for up to 3 days, then reduce the dose to 1 tsp a day for 5 days, or take tablets.

Herb White peony (*Paeonia lactiflora*, p. 117)
Remedy Make a decoction using 20 g of root to 750 ml of water. Sip this throughout the day.

Before taking any herbal remedies, see pages 290 & 298–299

Fertility Problems in Women

Although much more research is needed, herbal medicine does appear to increase fertility in women who are trying to conceive, especially if the problem is related to hormonal imbalances, age or the amount of mucus produced by the cervix. Where there appears to be no physical problem preventing conception, for example a blocked fallopian tube, ovarian cysts or internal scarring, herbal medicines are well worth trying. Diet, exercise and lifestyle may also play a significant role in improving fertility.

Aiding Conception

Herb Chaste tree (*Vitex agnus-castus*, p. 151)
Remedy Take tablets or take 20–40 drops of tincture with water each morning for a maximum of 3 months at a time.

Herb Chinese angelica (*Angelica sinensis*, p. 63)
Remedy Take tablets or make a decoction using 12 g of root to 750 ml of water and drink each day for up to 3 months.

Caution Discontinue if you become pregnant.

Low Sex Drive

Herb Schisandra (*Schisandra chinensis*, p. 133)
Remedy Soak 5 g (a small handful) of berries in water overnight. Strain the berries and make a decoction with 250 ml of water. Brew for 15 minutes and take the dose each day.

Herb Shatavari (*Asparagus racemosus*, p. 174)
Remedy Take 1 tsp of tincture twice a day with water.

Fertility Problems in Men

Impotence in men is a common problem and herbal medicine has been used throughout history to help restore healthy sexual function. A low sperm count, which is a common cause of infertility, is often related to lifestyle and general state of health.

Saw palmetto is a tonic herb that increases stamina. It benefits the male sexual organs and is reputed to increase potency.

Withania is an all-round tonic that is not as stimulating as ginseng, but is nonetheless helpful in restoring normal vitality after a long-term illness or stress.

General Vitality

Herb Ashwagandha (*Withania somnifera*, p. 152)
Remedy Take 2 g of the dried root a day, either by chewing it, or taking it in powder form mixed with honey and, if required, water. Take for up to 6 weeks.

Impotence & Premature Ejaculation

Herb Ginseng (*Panax ginseng*, p. 118)
Remedy Take 0.5–1 g up to 3 times a day for 6 weeks at a time, either by chewing the root, cooking it in a soup or stew, or taking it in tablet form.

Note Ginseng is the best-known remedy for this condition. However, schisandra (*Schisandra chinensis*, p. 133) berries also benefit male sexuality. Take as listed above in *Fertility Problems in Women* under *Low Sex Drive* for up to 6 weeks.

Caution Do not take caffeine while taking ginseng.

Herb Saw palmetto (*Serenoa repens*, p. 136)
Remedy Take ½ tsp of tincture with water up to 3 times a day for up to 6 weeks.

Note Saw palmetto is also an excellent remedy for symptoms associated with an enlarged prostate.

Menopausal Problems

The menopause is defined as the cessation of menstruation. It usually takes place between the ages of 45 and 55. After two years without having a period, you can be sure that the "change of life" has occurred.

Both oestrogen and progesterone levels decline during the menopause despite opinion to the contrary. Herbs such as chaste tree, that have a progesterogenic effect, are as important as those that support oestrogen levels, since both hormones appear to help maintain bone density, reducing the risk of osteoporosis.

Maintaining vitality is important during the menopause, since many problems result as much from being run-down and tired, as from hormonal changes. If you feel low and exhausted, some of these remedies may help to raise vitality and spirits. St John's wort is an excellent medicine for depression.

Hot flushes and night sweats are principally caused by hormonal changes. However, nervous exhaustion increases the occurrence of these conditions.

General caution Seek professional advice if there is prolonged or irregular menstrual bleeding.

Decreased Oestrogen & Progesterone Levels

Herb Chaste tree (*Vitex agnus-castus*, p. 151)
Remedy Take tablets, or 20–40 drops of tincture with water each morning.

Herb Shatavari (*Asparagus racemosus*, p. 174)
Remedy Take ½ tsp of tincture 2–3 times daily with water.

Herb Black cohosh (*Cimicifuga racemosa*, p. 79)
Remedy Take tablets, or take 25 drops of tincture with water 3 times a day.
Option Black cohosh combines well with sage. Mix equal parts of each tincture and take 1.5–2 ml with water 3 times a day.

Depression & Decreased Vitality

Herb St John's wort (*Hypericum perforatum*, p. 106)
Remedy Take ½ tsp of tincture with water 3 times a day.

Herb Oats (*Avena sativa*, p. 175)
Remedy Eat 25–50 g of oats as a breakfast cereal, or with other food.
Option In addition, make an infusion with oat straw. Divide into 3 doses and drink throughout the day.

Hot Flushes & Night Sweats

Herb Sage (*Salvia officinalis*, p. 131)
Remedy Make an infusion and drink 450 ml, either during the day, or mainly at night, if this is when the problem chiefly occurs.

Herbs White willow (*Salix alba*, p. 129), black cohosh (*Cimicifuga racemosa*, p. 79)
Remedy Take one of the above herbs, either in tablet form, or take 1 tsp of tincture with water at night.

Herb White peony (*Paeonia lactiflora*, p. 117)
Remedy Make a decoction with 20 g root to 750 ml of water. Sip throughout the day.

Pregnancy

Chamomile
(Chamomilla recutita)

Although in many cultures herbs have traditionally been taken throughout pregnancy, it is wise to take herbs medicinally only when essential. Some herbs such as German chamomile (*Chamomilla recutita*, p. 77), lime (*Tilia* spp., p. 277) and cornsilk (*Zea mays*, p. 154) are very useful and can be taken safely for 2–3 weeks at a time during pregnancy. Other herbs should be avoided altogether, as they have constituents that stimulate the muscles of the uterus and, in large doses, could cause a miscarriage. It is safe to continue using herbs in cooking throughout pregnancy.

Seek immediate professional advice for:

- Prolonged nausea causing an inability to eat properly and frequent vomiting leading to dehydration
- Frequent urination lasting for more than 3 days (or with pain after 2 days)
- Breast pain with swollen glands under the arms or fever
- Fluid retention that has not reduced after 3 days

Maintaining Vitality

Pregnancy is a time of great change for the body. Many minor ailments can be relieved by homemade herbal remedies.

Morning sickness (sensations of nausea) need not be restricted to the morning. Generally starting in the 4th–6th week and lasting until the 14th–16th week, morning sickness has many causes, including hormone fluctuations, low blood pressure, low sugar levels, food allergies, poor diet and stress.

Oedema (fluid retention and bloating) is extremely common during pregnancy. Water seeps from the blood vessels into the surrounding tissue, causing puffiness. The ankles and calves are mostly affected.

Constipation often occurs as pregnancy develops. Pressure increases on the lower bowel, impeding circulation.

Heartburn (pain in the centre of the chest) may also be caused by increased pressure within the body.

Stretch marks sometimes appear as the body swells. They can be minimized by rubbing aloe vera gel or olive oil into the skin to maintain its elasticity.

Childbirth can be helped by drinking raspberry leaf tea, a traditional remedy that prepares the uterine muscles for labour and giving birth.

Herbs During Pregnancy

- For the first 3 months avoid all herbal remedies, including essential oils, unless professionally prescribed.
- The following herbs are particularly dangerous and should on no account be taken during pregnancy: blue cohosh (*Caulophyllum thalictroides*, p. 185), goldenseal (*Hydrastis canadensis*, p. 105), juniper (*Juniperus communis*, p. 224), pennyroyal (*Mentha pulegium*, p. 235), yarrow (*Achillea millefolium*, p. 56) and therapeutic doses of sage (*Salvia officinalis*, p. 131).

Morning Sickness & Nausea

The following remedies are an exception and can be taken during the first 3 months of pregnancy.

Herb German chamomile (*Chamomilla recutita*, p. 77)
Remedy Make an infusion in a covered container. Sip small quantities during the day. Do not drink more than 750 ml a day.

Herb Ginger (*Zingiber officinale*, p. 155)
Remedy Make an infusion with ½–1 tsp of grated fresh ginger per 150 ml of water. Sip small amounts frequently throughout the day, rather than drinking 150 ml at a time. Take a maximum of 450 ml a day.

Herb Fennel (*Foeniculum vulgare*, p. 212)
Remedy Make an infusion with ½ tsp of seeds per 150 ml of water and then drink up to 450 ml a day.

Oedema

Herb Cornsilk (*Zea mays*, p. 154)
Remedy Make an infusion and drink up to 750 ml a day.

Constipation

Herbs Psyllium (*Plantago* spp., p. 123), flaxseed (*Linum usitatissimum*, p. 109)
Remedy Take 1–2 tsp of either of the seeds with a large glass of water each day or soak them in cold water overnight before taking.
Note Eat more dried fruit, especially figs.

Heartburn

Herb Meadowsweet (*Filipendula ulmaria*, p. 98)
Remedy Make an infusion and drink 150–300 ml a day.

Headache & Nervous Tension

Herb Lime (*Tilia* spp., p. 277)
Remedy Make an infusion and drink 450–600 ml a day.

Preparing for Childbirth

Herb Raspberry (*Rubus idaeus*, p. 264)
Remedy Make an infusion using 1 tsp of the chopped fresh or dried leaf per 150 ml of water. Brew for 5–6 minutes and drink 150–300 ml a day during the last 10 weeks of pregnancy.
Cautions Do not leave the infusion to brew for more than 5–6 minutes. Do not take until the last 10 weeks of pregnancy.

Stretch Marks

Herbs Aloe vera (*Aloe vera*, p. 60), olive (*Olea europaea*, p. 241)
Remedy Rub aloe vera gel over the affected areas or massage olive oil firmly into the skin 1–2 times a day.

Poor Sleep

See *Insomnia* (the German chamomile, lime, lavender and passion flower remedy under *General Remedies*), p. 309.

Anaemia & High Blood Pressure

See *Circulatory Problems*, p. 301.

Haemorrhoids

See *Varicose Veins & Haemorrhoids*, p. 302 and *Constipation & Diarrhoea*, p. 307.

Backache

See *Back Pain*, p. 313.

Varicose veins

See *Varicose Veins & Haemorrhoids*, p. 302.

Vaginal thrush

See *Fungal Infections*, p. 314.

Bladder & Kidney Infections

See *Oedema*, left.

Healing After Childbirth

See *Cleansing Wounds & Healing Wounds*, p. 304.

Before taking any herbal remedies, see pages 290 & 298–299

Infants & Children

Slippery Elm
(Ulmus rubra)

The following herbs are considered particularly suitable for children, easing symptoms and speeding recovery. Most of the remedies are best given as infusions, and can be given in a bottle. Infusions can be flavoured with honey (see *Cautions* right) or maple syrup if necessary, but they are better given unsweetened. The dosages given are for 1–6-year-olds, but they can be adjusted to suit other age groups (see below). Many of the remedies listed in other sections are also suitable for babies and children; herbs that are not appropriate are clearly identified (see p. 299 for dosage requirements before administering any adult remedies).

Seek immediate professional advice for:

- Severe diarrhoea or vomiting; a temperature of 39°C (102°F); fever with convulsions; breathing difficulties; unusual drowsiness; high-pitched crying

Cautions Do not give babies under 6 months any medicine without professional advice. Do not give honey to children under 1 year as in rare cases it can cause food poisoning.

General Ailments

Infants and children are susceptible to a wide array of ailments.

Digestive upsets that result in diarrhoea and constipation can be the result of food intolerance or allergy in infants, especially when foods such as dairy produce are being introduced into the diet. Other minor digestive upsets due to infection or inflammation can cause loss of appetite.

Colic is a spasm of the gut causing cramping pain in the abdomen. It usually occurs during the first 3 months of life, particularly after feeding in the evening, when the digestion may not be working so well.

Nappy rash occurs when urine, moisture and irritants in the nappy cause the baby's skin to become red, sore and damp. It is essential to clean the baby thoroughly at each nappy change. Ensure that cloth nappies are thoroughly rinsed, avoid leaving a wet, chafing nappy on the baby and remove the nappy completely whenever possible.

Cradle cap is a thick yellow-brown encrustation on the baby's scalp, caused by over-activity of the sebum oil glands.

Headaches, colds, catarrh and chesty coughs are common problems in childhood and often respond well to herbal treatment.

Insomnia is a common childhood problem even though children require more sleep than adults and should sleep with ease. Over-excitement, teething, a wet nappy, or being too hot or cold may interfere with sleep patterns. Herbs such as lime will encourage a relaxed night's sleep.

Dosage

The dosages on this page are for 1–6-year-olds. For other ages, adapt the doses as follows:

6–12 months old – ⅓ dose
7–12 years old – 1½ dose
To adapt remedies from elsewhere in the book for children see p. 299.

Digestive Upsets, Wind & Colic

The following infusions are suitable for infants over 6 months. For those under 6 months, the infusions can be taken by breast-feeding mothers.

Herb Ginger (*Zingiber officinale*, p. 155)
Remedy Give ¼ level tsp of powder with 75 ml of hot water 1–2 times a day.

Herb German chamomile (*Chamomilla recutita*, p. 77)
Remedy Make an infusion with 1 level tsp to 150 ml of water. Give up to 450 ml a day.

Herbs Anise (*Pimpinella anisum*, p. 248), fennel (*Foeniculum vulgare*, p. 212)
Remedy Make an infusion with 1 level tsp of either of the seeds to 150 ml of water. Give up to 300 ml a day.

Herb Slippery elm (*Ulmus rubra*, p. 145)
Remedy Mix 1 tsp of powder with hot water to make a paste, then blend with cold or warm water as required and flavour with honey, cinnamon or maple syrup. Give up to 50 g powder in doses during the day.

Constipation

Herbs Flaxseed (*Linum usitatissimum*, p. 109), slippery elm (*Ulmus rubra*, p. 145)
Remedy Give 1 tsp of flaxseed or slippery elm with a large glass of water each day.

Diarrhoea

Herbs Agrimony (*Agrimonia eupatoria*, p. 162), common plantain (*Plantago major*, p. 251)
Remedy Make an infusion using 15 g of either herb to ½ litre of water and give up to 300 ml each day.

Nappy Rash & Inflamed Skin Rashes

Herb Chickweed (*Stellaria media*, p. 272)
Remedy Apply ointment 1–2 times a day.

Herb Marigold (*Calendula officinalis*, p. 73)
Remedy Apply ointment or cream to clean, dry skin at each nappy change.

Note For nappy rash, the ointment is best.
Herbs Marigold (*Calendula officinalis*, p. 73), nettle (*Urtica dioica*, p. 146)
Remedy Make an infusion with 1 level tsp of each herb to 150 ml of water. Give 150–300 ml a day.

Cradle Cap

Herb Olive (*Olea europaea*, p. 241)
Remedy Apply olive oil to the affected area 1–2 times a day.

Colds, Catarrh & Chesty Coughs

Herb Thyme (*Thymus vulgaris*, p. 143)
Remedy Make an infusion with 1 level tsp herb to 150 ml of water. Give 150–300 ml a day.

Herbs Elderberry (*Sambucus nigra*, p. 132), pelargonium (*Pelargonium sidoides*, p. 120), thyme (*Thymus vulgaris*, p. 143)
Remedy Make an infusion with 1 level tsp thyme leaves to 150 ml of water. Give 150–300 ml a day.
Remedy Give elderberry or pelargonium extract, as recommended by practitioner or supplier.

Earache

Herb Garlic (*Allium sativum*, p. 59)
Remedy Break open a garlic oil capsule, put 1 drop on to cotton wool and plug into the ear.

Teething

Herbs German chamomile (*Chamomilla recutita*, p. 77), slippery elm (*Ulmus rubra*, p. 145)
Remedy Give German chamomile infusion (see *Digestive Upsets*) or make a paste from slippery elm powder and the infusion, and rub on the gums.

Difficulty In Sleeping

Herbs German chamomile (*Chamomilla recutita*, p. 77), lime (*Tilia* spp., p. 277)
Remedy Make an infusion using either herb and give 150–300 ml before bedtime.

Older Adults

Ginseng
(Panax ginseng)

Traditionally, as we age, the "fire" or *qi* within us glows less brightly and our vitality slowly weakens. Many herbal medicines are ideally suited to treating the health problems that begin when people reach their late fifties, such as circulatory problems, weak digestion and poor memory. The herbs recommended here can help to maintain good health, preventing or reducing the severity of symptoms that are often accepted as an inevitable consequence of ageing. Self-treatment for other problems often experienced later in life, such as arthritis, is suggested in earlier sections.

Important Note

- If taking conventional medication tell your doctor if you intend to take a herbal remedy. This is especially important for the elderly.
- All remedies on this page need to be taken continuously for up to 3 months.
- If you are aged over 70, take ¾ of the stated dose for remedies given on other pages in this book.

Maintaining Vitality

Many herbs help to maintain vitality.
Thyme is a much underrated herb. Recent research has discovered that it has anti-ageing and tonic properties which maintain vitality, and reduce the chance of catching colds, flu and other respiratory infections.
Ashwagandha is a tonic, calming herb that may slow the ageing process. It is particularly suited to aid recovery from long-term illness.
Ginseng is well known as a remedy that supports vitality, and resistance to stress and infection, in older people.
Rhodiola has similar tonic, restorative properties to ashwagandha and ginseng, but enhances mental performance and has a mild antidepressant activity.

General Remedy

Herb Thyme (*Thymus vulgaris*, p. 143)
Remedy Make a standard infusion. Take 300–450 ml a day.

Stress or Convalescence

Herb Ashwagandha (*Withania somnifera*, p. 152)
Remedy Take 1 g of the root 2–3 times a day, either by chewing it or chopping it and mixing with a little water.

Herb Ginseng (*Panax ginseng*, p. 118)
Remedy Take 1 g 1–2 times a day for up to 3 months. Chew the fresh or dried root, cook it in a soup, or take in tablet form.
Caution Do not take caffeine while taking ginseng.

Option If ginseng is too stimulating, take 3 g of codonopsis (*Codonopsis pilosula*, p. 83) a day in the same way as ginseng. This has a milder, but nonetheless tonic and strengthening, effect.

Nervous Exhaustion & Stress

Herb Oats (*Avena sativa*, p. 175)
Remedy Eat 25 g of oats each day (for example, in porridge). Alternatively, take ½ tsp of the tincture twice a day.

Herb Rhodiola (*Rhodiola rosea*, p. 127)
Remedy Take 2.5 ml of tincture 2–3 times a day or as recommended by supplier.

General Conditions

Conditions that arise through ageing need patient, long-term treatment.
Ginkgo is the oldest tree on the planet. Its leaves maintain good circulation to the head and brain, improving memory, concentration and energy levels. Evidence suggests it may reduce the risk of a stroke.
Gotu kola has significant anti-inflammatory activity, for example in arthritis, but is also a tonic that helps to protect the nervous system and to maintain memory and cognition.
Garlic has great value as a long-term dietary supplement, helping to maintain healthy circulation, balance blood sugar levels, reduce high blood pressure and fat levels in the blood, and improve resistance to infection, especially bronchitis.
Rehmannia, a Chinese tonic herb with strengthening and mildly stimulant properties, appears to lower blood pressure and blood fat levels. It is suitable for people who have a weak liver and metabolism.
Gentian, a bitter herb, helps the absorption of food by maintaining digestive secretions, which diminish with age.

Failing Memory & Concentration

Herb Ginkgo (*Ginkgo biloba*, p. 100)
Remedy Take ginkgo tablets. These need to be taken regularly for at least 3 months.

Herb Gotu kola (*Centella asiatica*, p. 76)
Remedy Take tablets or ½ tsp tincture twice a day.

Poor Circulation & High Blood Pressure

Herb Garlic (*Allium sativum*, p. 59)
Remedy Take 1–2 raw cloves a day with food, or take garlic tablets or capsules on a regular basis.

Herb Buckwheat (*Fagopyrum esculentum*, p. 210)
Remedy Make a standard infusion and drink up to 300 ml a day.

Chronic Infections

Herbs Garlic (*Allium sativum*, p. 59), echinacea (*Echinacea* spp., p. 92)
Remedy Take 1–2 raw cloves of garlic each day with food, or take either herb in tablet or capsule form on a regular basis.

Weakened Liver & Metabolism

Herb Rehmannia (*Rehmannia glutinosa*, p. 125)
Remedy Chew 5 g of root 1–3 times a day, or make a decoction with 5 g of root to 250 ml of water and take 1–3 times a day.

Weakened Digestion

Herb Gentian (*Gentiana lutea*, p. 99)
Remedy Take 5–10 drops of tincture with water about 30 minutes before eating, 3 times a day.
Caution Do not take gentian if you suffer from acid indigestion or a peptic ulcer.

Arthritic Pain & Rheumatism

See *Joint Pain & Stiffness, Including Arthritis & Gout*, p. 313.
Note Take one of the remedies for a maximum of 2–3 weeks. If there is no improvement, consult a herbal practitioner.

Before taking any herbal remedies, see pages 290 & 298–299

Consulting a Herbal Practitioner

Many common health problems, such as colds and indigestion, do not require a professional consultation and can be successfully treated using herbs at home. However, persistent or more serious ailments, such as stomach ulcers and shingles, can be difficult or dangerous to treat on one's own and need the advice and treatment of a qualified herbal practitioner or naturopath.

What Does Herbal Medicine Treat Best?

It is difficult to state exactly which ailments best respond to herbal medicine, since almost no research has been undertaken with this question in mind. Nevertheless, the experience of herbal practitioners and their patients suggests that many chronic and some acute illnesses readily improve with herbal medicine. Conditions that are commonly treated by herbalists include allergies, arthritis, chronic or frequent infections, circulatory problems, liver disease, menstrual and gynaecological problems, skin disorders, and stress-related complaints such as headaches, insomnia and palpitations.

Choosing a Practitioner

Herbal practitioners tend to treat ill health more effectively as they gain greater experience. Anyone with a serious illness, such as rheumatoid arthritis or cancer, should seek an experienced practitioner. Nevertheless, herbalists newly launched into practice often bring a more flexible approach to treatment, having the time and enthusiasm for patients that may be lacking in their more senior counterparts. That said, a trusting relationship is as important as the treatment itself – always find a practitioner in whom you feel confident. The best way to find a herbalist is by recommendation, or by looking on the websites of the herbal organizations listed on this page.

The Consultation

On visiting a herbalist you should be made to feel welcome, receiving an attentive and sympathetic ear. The first consultation takes about an hour, so there is ample time for the practitioner to gain a rounded view of your health problems and life as a whole.

You will probably be asked about family traits, diet, lifestyle, levels of stress and any particular anxieties that you may have. If appropriate, a physical examination will take place, and the practitioner will explain as far as possible what is wrong and how much improvement can be expected. Clinical tests may include urine analysis or measuring haemoglobin levels from a drop of blood. The herbalist will then recommend appropriate treatment, usually involving a herbal prescription, dietary advice and a suggested exercise regime. If you are already undergoing conventional treatment, the herbalist will advise you on its compatibility with herbal medicine and, if necessary, devise a programme to discontinue pharmaceutical medicines gradually.

Subsequent consultations generally last about 30 minutes and are likely to take place every 4 to 6 weeks for a period of 3 months. This, of course, may vary, depending on the nature of the treatment.

Safety of Herbs

Although herbal medicine is extremely safe, the fact that it is natural does not necessarily mean it is harmless. The best guarantee against poor treatment is to consult a well-trained practitioner who belongs to a recognized professional association and prescribes high quality herbal medicines.

Professional Training

Traditionally, herbalists learned their craft by apprenticeship. Nicholas Culpeper (1616–1654), for example, was apprenticed to an apothecary for 10 years. Today, herbal practitioners are generally trained at college or university, acquiring their clinical skills in herbal and, in some cases, hospital clinics. The curriculum typically includes an in-depth study of medical sciences, such as physiology, pathology, pharmacology and botany, as well as what can be called the herbal sciences, *materia medica*, nutrition and therapeutics. Modern training attempts to honour and retain the best of traditional herbal medicine, while incorporating the insights of contemporary medical science and research.

Herbalism Worldwide

Western medical herbalism is the traditional form of herbal medicine practised in Britain. However, the Chinese and Ayurvedic traditions, among others, are becoming more popular and are raising their standards of training. If you wish to consult a Chinese or Ayurvedic herbalist, it is strongly recommended that you select a member of the associations listed on this page.

The regulation of medical herbalism varies considerably around the world. In the Far East, practitioners and hospitals routinely offer herbal medicine, acupuncture and other traditional healing practices side-by-side with Western conventional medicine. In the US, the leading practitioner organization is the American Herbalists Guild.

Herbal practitioners in continental Europe are known as phytotherapists, and are usually conventional medical practitioners who have studied plant medicine at post-graduate level.

In Australia, the National Herbalists' Association of Australia (NHAA) is the leading professional body of herbal practitioners.

In many parts of the world, herbal medicine is unregulated. In this situation, it is wise to be cautious and, as far as possible, to find a practitioner based on personal recommendation.

Herbal Practitioner Organizations

This list is made up of recommended herbal practitioner organizations active in the UK and Ireland.

UK

Association of Master Herbalists
www.associationofmasterherbalists.co.uk

Ayurvedic Practitioners Association
www.apa.uk.com

College of Practitioners of Phytotherapy
www.phytotherapists.org

National Institute of Medical Herbalists
www.nimh.org.uk

Register of Chinese Herbal Medicine
www.rchm.co.uk

IRELAND

Irish Association of Master Medical Herbalists
www.iammh.com

Irish Institute of Medical Herbalists
www.iimh.org

Irish Register of Chinese Medical Herbalism
www.ircmh.com

Irish Register of Herbalists
www.irh.ie

Glossary

Many plant constituents and their actions are explained in *How Medicinal Plants Work*, pp. 10–16.

Medical

Abortifacient Causes abortion

Adaptogenic Helps the body adapt to stress and supports normal function

Anabolic Promotes tissue growth

Anaesthetic Numbs perception of external sensations

Analgesic Reduces pain

Anaphrodisiac Inhibits libido and sexual activity

Anorexia Lack of appetite

Anthelmintic Expels or destroys parasitic worms

Anthraquinones Irritate the intestinal wall causing a bowel movement

Antibiotic Destroys or inhibits micro-organisms

Anticoagulant Prevents blood clotting

Antifungal Combats fungal infections

Anti-inflammatory Reduces inflammation

Antimicrobial Destroys or inhibits micro-organisms

Antioxidant Prevents oxidation and breakdown of tissues

Antiseptic Destroys or inhibits micro-organisms that cause infection

Antispasmodic Relieves muscle spasm, or reduces muscle tone

Antitussive Soothes and relieves coughing

Aperient Mild laxative

Aphrodisiac Excites libido and sexual activity

Aseptic Free from contamination by harmful bacteria, viruses or other micro-organisms

Astringent Tightens mucous membranes and skin, reducing secretions and bleeding from abrasions

Autonomic nervous system Part of the nervous system responsible for the control of bodily functions that are not consciously directed, e.g. sweating, beating of the heart

Ayurveda Traditional Indian system of medicine, (see pp. 36–39)

Bitter Stimulates secretions of saliva and digestive juices, increasing appetite

Carcinogenic Causes cancer

Cardiotonic Improves heart function

Carminative Relieves digestive gas and indigestion

Carrier oil Oil such as wheatgerm, to which essential oils are added in order to dilute them for use

Cathartic A drastic purgative

Circulatory stimulant Increases blood flow, usually to a given area, e.g. hands and feet

Colic Abdominal pain produced by strong contractions of intestines or bladder

Compress A cloth pad soaked in a hot or cold herbal extract and applied to the skin

Counter-irritant Superficial irritant used to relieve more deep-seated pain or discomfort

Cream A mixture of water and fat or oil that blends with the skin

Decoction Water-based preparation of bark, roots, berries or seeds simmered in boiling water

Demulcent Coats, soothes and protects body surfaces such as the gastric mucous membranes

Depurative Detoxifying agent

Detoxification The process of aiding removal of toxins and waste products from the body

Diaphoretic Induces sweating

Diuretic Stimulates urine flow

Doctrine of Signatures Theory that the appearance of a plant reveals its medicinal properties

Eclectic Popular system of herbal medicine in 19th- and early 20th-century North America

Elixir A liquid herbal preparation with a pleasant taste, due to the addition of honey or sugar

Emetic Causes vomiting

Emmenagogue Stimulates menstrual flow

Emollient Softens or soothes the skin

Essential oil Distillation of volatile oils derived from aromatic plants

Expectorant Stimulates coughing and helps clear phlegm from the throat and chest

Febrifuge Reduces fever

Fixed oil A non-volatile oil (plant constituent). An oil produced by hot or cold infusion (preparation)

Galenical A medicine, in a standard formula, prepared from plants

Haemostatic Stops or reduces bleeding

Hallucinogenic Causes visions or hallucinations

Hepatic Affects the liver

Hepatoprotective Protects the liver

Humour An important body fluid in traditional European or Indian medicine, (see p. 32)

Hypertension High blood pressure

Hypnotic Induces sleep

Hypoglycaemic Lowers blood glucose levels

Hypotension Low blood pressure

Immune stimulant Stimulates the body's immune defences to counter infection

Infusion Water-based preparation in which flowers, leaves or stems are brewed in a similar way to tea

Inhalation Breathing of medicinally infused steam or liquid through the nasal passages

Intermittent fever A fever that recurs regularly, e.g. malaria

Laxative Promotes evacuation of the bowels

Liniment External medication applied by rubbing

Mydriatic Dilates the pupil of the eye

Narcotic Causes drowsiness or stupor and relieves pain

Nervine Restores the nerves; relaxes the nervous system

Neuralgia Pain resulting from irritation or inflammation of a nerve

Oedema Fluid retention

Oestrogenic With a similar action to oestrogen in the body, supporting and maintaining the female reproductive organs

Ointment A blend of fats or oils that form a protective layer over the skin

Oxytocic Induces contractions of the uterus

Parasiticide Kills parasites

Parasympathetic nervous system Part of the nervous system involved in vegetative functions, especially digestion

Pectoral Acts on the lungs

Photosensitive Heightened sensitivity to sunlight

Physiomedicalism 19th- and 20th-century American and British system of herbal medicine

Poultice Herbal preparation usually applied hot to affected area to alleviate pain and reduce swelling

Prostaglandins Chemicals in plants and the human body that have a hormonal action affecting a wide range of conditions including pain and inflammation

Purgative A very strong laxative

Qi Vital energy force in Chinese philosophy, (see pp. 24–25)

Rubefacient Stimulates blood flow to skin, causing reddening and warming

Sedative Reduces activity and nervous excitement

Simple A herb used on its own

Spasmolytic Relaxes muscles

Steroids Active chemicals, of animal and plant origin, with powerful hormonal actions

Stimulant Increases rate of activity and nervous excitement

Stomachic Eases stomach pain or increases stomach activity

Styptic Stops bleeding when applied topically

Sympathetic nervous system Part of the nervous system involved in maintaining arousal, alertness and muscle tone

Systemic Affecting the body as a whole rather than individual organs

Terpenes Molecules that form the base of most constituents of volatile oils

Tincture Plant medicine prepared by macerating herb in water and alcohol

Tonic Exerts a restorative or nourishing action on the body

Tonify Strengthens and restores body systems

Topical Application of herbal remedy to body surface

Vasoconstrictor Contracts and narrows blood vessels

Vasodilator Relaxes and widens blood vessels

Vermifuge Expels intestinal worms

Volatile oil Plant constituent distilled to produce essential oil

Vulnerary Heals wounds

Yin and yang Complementary opposites in Chinese philosophy, (see pp. 40–42)

Botanical

Aerial parts Parts of plant growing above ground

Annual Plant that completes its life cycle in a year

Aril Secondary covering over the seed in certain plants

Aromatic Plant with high levels of volatile oil

Axil Upper angle formed by leaf stem and supporting stem or branch

Basal leaves Leaves growing from the base of the stem

Biennial Plant that completes its life cycle in 2 years, generally flowering in the second year

Capsule Dry fruit that splits open when ripe to scatter seeds

Composite flowers Flowers made up of usually 2 types of tiny florets, disc and ray; some have disc florets only

Compound Leaves or flowers made up of many individual small flowers or leaflets

Cordate Having heart-shaped leaves

Corm Bulb-like, underground storage organ formed by a swollen stem base

Corolla Collective term for the petals of a flower

Deciduous Plant that sheds leaves each year

Dioecious Species with male and female parts on separate plants

Herbaceous Plant that dies down at the end of the growing season

Insectivorous Plant that traps and digests insects and other small animals

Lanceolate Lance-shaped

Latex Milky fluid found in various plants and trees

Panicle A branched cluster of flowers on stalks in a pyramid-shaped arrangement

Perennial Plant that lives for at least 3 seasons

Pinnate A compound leaf with leaflets growing in 2 rows on each side of its mid-rib

Rhizome Underground storage stem

Stamen Male fertilizing organ of a flowering plant

Stigma Female organ of a flower

Succulent Plant with thick, fleshy leaves and/or stems

Trifoliate Plant with 3 leaves or leaflets

Tuber Thickened part of underground stem

Umbel Umbrella-like arrangement of flowers with all flower stems arising from the same point

Whorl Ring of leaves or flowers radiating out horizontally from a central point

Wildcrafting Harvesting herbs from the wild

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Bold page numbers refer to main plant entries in Key Medicinal Plants and Other Medicinal Plants. Ailments for which there is a self-help treatment are in bold.

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Useful Websites

Herbalist organizations
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Herbal Interest Groups

Herbal Scotland
Community interest company set up to bring people together through the use of plants for health and well-being.
www.herbalscotland.org

The Herb Society
Encourages the appreciation and use of herbs in cooking, gardening, cosmetic, historical and medicinal uses for professionals or amateurs.
www.herbsociety.org.uk

Living Medicine
Herbal project aiming to reskill us all in using food and herbs for our everyday healthcare, sharing knowledge across cultures.
www.livingmedicine.org

Training Courses

Self-help

New Vitality Tuition
A recommended one-year distance learning course with a summer school.
www.newvitality.org.uk

Ecole de Plantes Medicinal
Lyon, France-based school that provides courses in herbal medicine (in English).
www.ecoledeplantesmedicinales.com

Professional

Three British universities offer a BSc (Hons) or an MSc in Herbal Medicine for professional training as a medical herbalist:

Lincoln College
www.lincolncollege.ac.uk

Middlesex University
www.mdx.ac.uk

Westminster University
www.westminster.ac.uk

Middlesex University and Westminster University also provide BSc (Hons) or MSc in Traditional Chinese Herbal Medicine.

Herbal Medicine Representative Organizations

British Herbal Medicine Association
www.bhma.info

European Herbal & Traditional Medicine Practitioners Association
www.ehtpa.eu

European Scientific Co-operative on Phytotherapy
www.escop.com

Herbal Suppliers

Dispensing herbalists

Baldwin G & Co
www.baldwins.co.uk

Neal's Yard Remedies Ltd
www.nealsyardremedies.com

Napiers & Sons
www.napiers.net

Woodland Herbs
www.woodlandherbs.co.uk

Herbal suppliers

Avicenna
www.avicennaherbs.co.uk

Balance Healthcare Ltd
www.balancehealthcare.co.uk

Bio-Health Ltd
www.bio-health.co.uk

Herbs in a Bottle
www.herbsinabottle.com

The Organic Herb Trading Co.
www.organicherbtrading.com

Potter's Herbal Remedies
www.pottersherbals.co.uk

Rutland Organics
www.rutlandbio.com

Chinese Herbal Medicine

Acumedic
www.acumedic.com

Balance Healthcare Ltd
www.jcm.co.uk/balance-healthcare-ltd-new-online-shop

Ayurveda

Pukka Herbs
www.pukkaherbs.com

Essential Oil suppliers

Butterbur & Sage Ltd
www.butterburandsage.com

Naturally Thinking
www.naturallythinking.com

Neal's Yard Remedies Ltd
www.nealsyardremedies.com

Rosa Medica
www.rosamedica.com

Shirley Price Aromatherapy Ltd
www.shirleyprice.com

Equipment suppliers

(*See also Dispensing Herbalists*)

Baldwin G & Co
Supplies range of bottles, jars and skin care ingredients. Also vegan capsules and capsule making machine.
www.baldwins.co.uk

Naturally Thinking
Supplies range of bottles, jars, and skin care ingredients.
www.naturallythinking.com

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