Growing Flowers

Contents

Chapter 1. Introduction

With just a little bit of care and preparation, any flower garden can be a vibrantly colored environment.

With just a little bit of care and preparation, any flower garden can be a vibrantly colored environment.
Flowers can be selected for specific blooming seasons, colors and shapes. Both annual and perennial *(on page 18)* flower gardens can be planted depending on climate and specific needs.

Chapter 2. Care and Preparation

When caring for your flower garden you want to feed your plants properly, control pests and weeds.

When caring for your flower garden you want to feed your plants properly, control pests and weeds. Good soil is a must to successful gardening, landscaping, and healthy flowers. You have to balance the soil structure with nutrients and regulate the pH to cover your plants' needs. And above all, remember that many flower gardens fail because they just don't get enough of your attention.

Table 1. Flowers

Flower	Type	Soil
Chrysanthemum	perennial	well drained
Gardenia	perennial	acidic
Gerbera	annual	sandy, well-drained
Iris	perennial	slightly acidic
Lilac	perennial	alkaline
Salvia	perennial	average
Snowdrop	perennial	humus-rich (rich in CO_2)

Pruning

Pruning is the process of removing certain above-ground elements from a plant; in landscaping this process usually involves removal of diseased, non-productive, or otherwise unwanted portions from a plant. In nature, certain meteorological conditions such as wind, snow or seawater mist can conduct a when for natural pruning process. The purpose of anthropomorphic pruning is to shape the plant by controlling or directing plant growth, to maintain the health of the plant, or to increase the yield or quality of flowers and fruits.

In general the smaller the wound (smaller the branch that is cut) the less harm to the tree. It is therefore typically better to formative prune the tree when juvenile than try to cut off large branches on a mature tree.

Follow these simple steps:

1. Begin by cutting out all the dead branches.
2. Remove all tangled or crossed over branches. This allows air to circulate and reduces bug and fungi infestation.

3. Take your time! Work comfortably and do not make shortcuts when cutting stems. Use good quality, sharp tools.
4. Clean up the area. Burn all pest infested branches.

Garden Preparation

An appreciation of the conditions under which bulbs grow in nature is of considerable help in understanding their needs in cultivation, but is by no means all-sufficient. When plants are grown away from their native homes-and perhaps are accommodated in pots indoors-they may respond to quite different soils, temperatures, moisture conditions, etc., than those to which they are subjected in the wild.

1. Handle bulbs carefully. Any scarred or punctured bulb is more susceptible to decay or infestation.
2. Make sure that the **soil** is the *proper* one. This might be hard to achieve, but generally an earth midway between sand and clay and containing a generous measure of organic matter is what most plants want.
3. All plants need **watering**, but you should also provide good drainage. An overabundance of water around bulbs during the dormant period is particularly harmful.
4. Plants respond to fertile soil, but **fertilizers** must not be used carelessly. Improper dosage can do more harm than good.
5. When dealing with **insects** and **diseases**, proper diagnosis of the trouble is of primary importance.

Chapter 3. Flowers by Season

Flowers and seasons are intimately bound to each other. Most of the flowers are season-specific.

The various climatic changes that occur in cyclic pattern are termed as 'Seasons'. There are four general seasons occurring on Earth - Spring, Summer, Autumn and Winter.

Flowers and seasons are intimately bound to each other. Most of the flowers are season-specific. However, some flowers are found throughout the year, not particularly affected by changing seasons.

Spring Flowers

Spring Time, the time of growth and renewal of new plant and animal life. Spring comes at different times in the North and South Hemispheres. Spring time in the Northern hemisphere is between March - May, and between September - November in the Southern hemisphere. Most flowering plants bloom during spring time. Therefore, flowers that bloom only during spring, Spring Flowers, bloom at different times in the two hemispheres.

Some of the flowers blooming in Spring are: Agapanthus, Amaryllis, Anemone, Apple blossom, Bird of Paradise, Brodea, Calla lily, Cherry Blossom, Corn flower, Cosmose, Dahlia, Delphinium, Delwood, Forsythia, Freesia, Gardenia, Heather, Helleborus, Hollyhock, Hyacinth, Larkspur, Casa Blanca Lily, Gloriosa Lily, Stargazer, Liatrus, Lilac, Lisianthus, Narcissus, Orchid, Peach blossom, Peony, Phlox, Poppy, Protea, Pussy willow, Ranunculus, Rose, Seeded Eucalyptus, Solidago, Statice, Stephanotis, Stock, Sweet Pea, Tulip, Viburnum, Wax flower, Zinnia.

Iris

From Wikipedia, the free encyclopedia.

Iris is a genus *(on page 17)* of between 200-300 species of flowering plants with showy flowers. It takes its name from the Greek word for a *rainbow*, referring to the wide variety of flower colors found among the many species. As well as being the scientific name, iris is also very widely used as a common name; for one thing, it refers to all **Iris** species, but some plants called thus belong to closely related genera. In North America, a common name for irises is **flags**, while the subgenus **Scorpiris** is widely known as **junos**, particularly in horticulture.

The genus *(on page 17)* is widely distributed throughout the north temperate zone. Their habitats are considerably varied, ranging from cold and mountain regions to the grassy slopes, meadowlands and riverbanks of Europe, the Middle East and northern Africa, Asia and across North America.

The inflorescences are fan-shaped and contain one or more symmetrical six-lobed flowers. These grow on a pedicel or lack a footstalk. The three sepals *(on page 17)*, which are spreading or droop downwards, are referred to as "falls". They expand from their narrow base, which in some of the rhizomatous irises has a "beard" (a tuft of short upright extensions growing in its midline), into a broader expanded portion ("limb"), often adorned with veining, lines or dots. The three, sometimes reduced, petals stand upright, partly behind the sepal bases. They are called "standards". Some smaller iris species have all six lobes pointing straight outwards, but generally, limb and standards differ markedly in appearance. They are united at their base into a floral tube that lies above the ovary. The styles divide towards the apex into petaloid branches; this is significant in pollination *(on page 17)*.

The iris flower is of special interest as an example of the relation between flowering plants and pollinating insects. The shape of the flower and the position of the pollen-receiving and stigmatic surfaces on the outer petals form a landing-stage for a flying insect, which in probing the perianth for nectar, will first come in contact of perianth, then with the stigmatic stamens in one whorled surface which is borne on an ovary formed of three carpels. The shelf-like transverse projection on the inner whorled underside of the stamens is beneath the over-arching style arm below the stigma, so that the insect comes in contact with its pollen-covered surface only after passing the stigma; in backing out of the flower it will come in contact only with the non-receptive lower face of the stigma. Thus, an insect bearing pollen from one flower will, in entering a second, deposit the pollen on the stigma; in backing out of a flower, the pollen which it bears will not be rubbed off on the stigma of the same flower.

Use

Irises are extensively grown as ornamental plants in home and botanical gardens. *Presby Memorial Iris Gardens* in New Jersey, for example, is a living iris museum with over 10,000 plants, while in Europe the most famous iris garden is arguably the *Giardino dell'Iris* in Florence (Italy) which every year hosts one of the most famous iris breeders' competitions in the world.

Some rhizomes *(on page 17)* are traded as orris root and are used in perfume and medicine, though more common in ancient times than today. Today **Iris** essential oil (absolute) from flowers are sometimes used in aromatherapy as sedative medicines. The dried rhizomes are also given whole to babies to help in teething. Some gin brands use orris root and sometimes iris flowers for flavor and color.

Related information

Snowdrop *(on page 9)*

Gardenia *(on page 10)*

Lilac *(on page 11)*

Snowdrop

From Wikipedia, the free encyclopedia.

Snowdrop is the common name for members of the genus *(on page 17)* **Galanthus**, a small genus of about 20 species in the family **Amaryllidaceae**; snowdrops are among the first bulbs *(on page 17)* to bloom in spring, although certain species flower in late autumn and winter.

Galanthus nivalis is the best-known and most widespread representative of the genus **Galanthus**. It is native to a large area of Europe, stretching from the Pyrenees in the west, through France and Germany to Poland in the north, Italy, Northern Greece and European Turkey. It has been introduced and is widely naturalised elsewhere. Although it is often thought of as a British native wild flower, or to have been brought to the British Isles by the Romans, it was probably introduced around the early sixteenth century.

All species of **Galanthus** are perennial *(on page 18)*, herbaceous plants which grow from bulbs. The flower has no petals: it consists of six tepals, the outer three being larger and more convex than the inner series. An important feature which helps to distinguish between species (and to help to determine the parentage of hybrids) is their "*vernation*" (the arrangement of the emerging leaves relative to each other). This can be "*applanate*", "*supervolute*" or "*explicative*". In *applanate vernation* the two leaf blades are pressed flat to each other within the bud and as they emerge; explicative leaves are also pressed flat against each other, but the edges of the leaves are folded back or sometimes rolled; in *supervolute* plants

one leaf is tightly clasped around the other within the bud and generally remains at the point where the leaves emerge from the soil.

Related information

Iris *(on page 7)*

Summer Flowers

Summer is the time of hot and warm weather. Floral growth is the best in the summer season. The Northern hemisphere experiences summer during June, July, August, while in Southern hemisphere during December - February.

Some of the flowers blooming in summer are: Alchemilla, Allium, Alstromeria, Amaranthus, Baby's Breath, Bird of Paradise, Calla lily, Campanula, Carnation, Chrysanthemum, Cockscomb, Cosmos, Dahlia, Delphinium, Dianthus, Didiscus, Euphorbia, Foxglove, Freesia, Gardenia, Genista, Ginger, Gladiolus, Hallaconia, Heather, Hydrangea, Hypericum, Iris, Kangaroo paw, Liatrus, Lilac, Casa Blanca Lily, Gloriosa Lily, Star Gazer, Lisianthus.

Gardenia

From Wikipedia, the free encyclopedia.

Gardenia is a genus *(on page 17)* of about 250 species of flowering plants in the coffee family, **Rubiaceae**, native to the tropical and subtropical regions of Africa, southern Asia, Australasia and Oceania. Several species occur on Hawaii, where gardenias are known as *na'u* or *nanu*.

The genus was named by Carl Linnaeus after Dr. Alexander Garden (1730-1791), a Scottish-born American naturalist.

They are evergreen shrubs and small trees growing to 1–15 metres (3.3–49 ft) tall. The leaves are opposite or in whorls of three or four, 5–50 centimetres (2.0–20 in) long and 3–25 centimetres (1.2–9.8 in) broad, dark green and glossy with a leathery texture. The flowers are solitary or in small clusters, white,

or pale yellow, with a tubular-based corolla with 5-12 lobes (petals) from 5–12 centimetres (2.0–4.7 in) diameter. Flowering is from about mid-spring to mid-summer and many species are strongly scented.

Gardenia plants are prized for the strong sweet scent of their flowers, which can be very large in some species.

Gardenias have a reputation for being difficult to grow. Because they originated in warm humid tropical areas, they demand high humidity to thrive. They flourish in acidic soils with good drainage and thrive on [68-74 F temperatures (20-23 C)] during the day and 60 F (15-16 C) in the evening. Potting soils developed especially for gardenias are available.

In Japan and China, **Gardenia jasminoides** is called *Kuchinashi* (Japanese) and *Zhi zi* (Chinese); the bloom is used as a yellow dye, which is used for clothes and food (including the Korean mung bean jelly called hwangpomuk).

Related information

Lilac *(on page 11)*

Lilac

From Wikipedia, the free encyclopedia.

Lilac (**Syringa**) is a genus *(on page 17)* of about 20–25 species of flowering plants in the olive family (**Oleaceae**), native to Europe and Asia.

They are deciduous shrubs or small trees, ranging in size from 2–10 m tall, with stems up to 20–30 cm diameter. The leaves are opposite (occasionally in whorls of three) in arrangement, and their shape is simple and heart-shaped to broad lanceolate in most species, but pinnate in a few species (e.g. **S. protolaciniata**, **S. pinnatifolia**). The flowers are produced in spring, each flower being 5–10 mm in diameter with a four-lobed corolla, the corolla tube narrow, 5–20 mm long. The usual flower colour is a shade of purple (often a light purple or lilac), but white and pale pink are also found. The flowers grow in large panicle *(on page 18)*, and in several species have a strong fragrance. Flowering varies between mid spring to early summer, depending on the species. The fruit is a dry, brown capsule, splitting in two at maturity to release the two winged seeds.

Lilacs are popular shrubs in parks and gardens throughout the temperate zone. In addition to the species listed above, several hybrids and numerous cultivars *(on page 18)* have been developed. The term **French lilac** is often used to refer to modern double-flowered cultivars, thanks to the work of prolific breeder Victor Lemoine.

Lilacs flower on old wood, and produce more flowers if unpruned. If pruned, the plant responds by producing fast-growing young vegetative growth with no flowers, in an attempt to restore the removed branches; a pruned lilac often produces few or no flowers for one to five or more years, before the new growth matures sufficiently to start flowering. Unpruned lilacs flower reliably every year. Despite this, a common fallacy holds that lilacs should be pruned regularly. If pruning is required, it should be done right after flowering is finished, before next year's flower buds are formed. Lilacs generally grow better in slightly alkaline soil. The wood of lilac is close-grained, diffuse-porous, extremely hard and one of the densest in Europe. The sapwood is typically cream-coloured and the heartwood has various shades of brown and purple. Lilac wood has traditionally been used for engraving, musical instruments, knife handles etc. When drying, the wood has a tendency to be encurved as a twisted material, and to split into narrow sticks.

Related information

Gardenia *(on page 10)*

Autumn Flowers

Autumn is the season of the primary harvest. Autumn falls during September - November in the Northern hemisphere, and during March - June in the Southern hemisphere. Crops are harvested during Autumn. Leaves change color are at their beautiful best.

Some of the flowers blooming in autumn are: Acashia, Allium, Alstromeria, Amaranthus, Anemone, Baby's Breath, Bittersweet, Carnation, China berry, Chrysanthemum, Cockscomb, Cosmos, Echinops, Freesia, Gerbera Daisy, Gladiolus, Hypericum, Iris, Juniper, Kangaroo paw, Kalancheo, Liatrus, Lily, Asiatic, Lily, Gloriosa, Misty Blue, Orchid, Pepper berry, Protea, Queen Ann's Lace, Quince, Rover, Roses, Rowen berry, Salvia, Solidago, Statice, Star of Bethlehem, Sunflower, Yarrow, Zinnia.

Chrysanthemum

From Wikipedia, the free encyclopedia.

Chrysanthemums, often called 'mums', are a genus *(on page 17)* (**Chrysanthemum**) of about 30 species of perennial *(on page 18)* flowering plants in the family Asteraceae, native to Asia and northeastern Europe.

The genus once included many more species, but was split several decades ago into several genera; the naming of the genera has been contentious, but a ruling of the International Code of Botanical Nomenclature in 1999 resulted in the defining species of the genus being changed to **Chrysanthemum indicum**, thereby restoring the economically important florist's chrysanthemum to the genus **Chrysanthemum**. These species were, after the splitting of the genus but before the ICBN ruling, commonly treated under the genus name **Dendranthema**.

Chrysanthemums were cultivated in China as a flowering herb as far back as the 15th century BC. An ancient Chinese city was named Ju-Xian, meaning "*chrysanthemum city*". The plant is particularly significant during the Double Ninth Festival. The flower was introduced into Japan probably in the 8th century AD, and the Emperor adopted the flower as his official seal. There is a "*Festival of Happiness*" in Japan that celebrates the flower.

The flower was brought to Europe in the 17th century. Linnaeus named it from the Greek word *chrysous*, golden (the colour of the original flowers), and *-anthemon*, meaning flower.

Chrysanthemums are broken into two basic groups, Garden Hardy and Exhibition. Garden hardy mums are perennials capable of being wintered over in the ground in most northern latitudes. Exhibition varieties are not usually as sturdy. Garden hardies are defined by their ability to produce an abundance of small blooms with little if any mechanical assistance (ie. staking) and withstanding wind and rain. Exhibition varieties on the other hand require staking, over-wintering in a relatively dry cool environment, sometimes with the addition of night lights.

Related information

Salvia *(on page 14)*

Salvia

From Wikipedia, the free encyclopedia.

Salvia is the largest genus *(on page 17)* of plants in the mint family, **Lamiaceae**, with approximately 900 species of shrubs, herbaceous perennials, and annuals. It is one of three genera commonly referred to as sage. When used without modifiers, sage generally refers to **Salvia officinalis** ("common sage"); however, it can be used with modifiers to refer to any member of the genus. The ornamental species are commonly referred to by their scientific name **Salvia**. The genus is distributed throughout the world, with the center of diversity and origin appearing to be Central and South Western Asia, while nearly 500 species are native to Mexico and Central and South America.

The name is derived from the Latin *salvere* ("to save"), referring to the long-believed healing properties of salvia. The Latin was corrupted to '*sauja*', to the French '*sauge*', and to the old English '*sawge*', and eventually became the modern day '*sage*'. Pliny the Elder was the first to use the Latin name salvia.

Salvia species include annual, biennial, or perennial herbs, along with woody based sub-shrubs. The stems are typically angled like other members in **Lamiaceae**. The flowers are produced in spikes, racemes, or panicles, and generally produce a showy display with flower colors ranging from blue to red, with white and yellow less common. The calyx is normally tubular or bell shaped, without bearded throats, and divided into two parts or lips, the upper lip entire or three-toothed, the lower two-cleft. The corollas are often claw shaped and are two-lipped with the upper lip entire or notched and spreading. The lower lip typically has three lobes with the middle lobe longest. The stamens are reduced to two short structures with anthers two-celled, the upper cell fertile, and the lower imperfect. The flower styles are two-cleft. The fruits are smooth nutlets and many species have a mucilaginous coating. Salvia species are used as food plants by the larvae of some **Lepidoptera** (butterfly and moth) species including the bucculatricid leaf-miner **Bucculatrix taeniola** which feeds exclusively on the genus and the **Coleophora** case-bearers

C. aegyptiacae, **C. salviella** (both feed exclusively on **S. aegyptiaca**), **C. ornatipennella** and **C. virgatella** (both recorded on **S. pratensis**).

The defining characteristic of the genus **Salvia** is the unusual pollination *(on page 17)* mechanism, which consists of two stamens (instead of the typical four found in other members of the tribe **Mentheae**) and the way the two stamens are connected to form a lever. When a pollinator enters the flower for nectar, the lever activates causing the stamens to move and the pollen to be deposited on the pollinator. When the pollinator withdraws from the flower, the lever returns the stamens to their original position. As the pollinator enters another flower of the same species, the stigma is placed in a general location that corresponds to where the pollen was deposited on the pollinator's body. It is believed that this is a key factor in the speciation of this large group of diverse plants. However, it now appears that somewhat different versions of this lever mechanism have evolved in the tribe Mentheae, and that **Salvia** is not monophyletic.

Related information

Chrysanthemum *(on page 12)*

Winter Flowers

Winter is the season of cold weather. The season occurs during December - February in Northern hemisphere. In the Southern hemisphere winter occurs during June - August.

Some of the flowers blooming in winter are: Acashia, Alstromeria, Amaryllis, Carnation, Chrysanthemums, Cyclamen, Evergreens, Gerbera Daisy, Ginger, Helleborus, Holly berry, Lily, Asiatic Lily, Casa Blanca Lily, Narcissus, Orchid, Pansy, Pepperberry, Phlox, Protea, Queen Ann's Lace, Roses, Star of Bethlehem, Statice.

Gerbera

From Wikipedia, the free encyclopedia.

Gerbera is a genus of ornamental plants from the sunflower family (**Asteraceae**). It was named in honor of the German naturalist Traugott Gerber.

It has approximately 30 species in the wild, extending to South America, Africa and tropical Asia. The first scientific description of a **Gerbera** was made by J.D. Hooker in Curtis's Botanical Magazine in 1889 when he described **Gerbera jamesonii**, a South African species also known as **Transvaal daisy** or **Barberton Daisy**.

Gerbera species bear a large capitulum with striking, two-lipped ray florets in yellow, orange, white, pink or red colors. The capitulum, which has the appearance of a single flower, is actually composed of hundreds of individual flowers. The morphology of the flowers varies depending on their position in the capitulum. The flowers can be as small as 7 cm (**Gerbera mini 'Harley'**) in diameter or up to 12 cm (**Gerbera 'Golden Serena'**).

Gerbera is very popular and widely used as a decorative garden plant or as cut flowers. The domesticated cultivars *(on page 18)* are mostly a result of a cross between **Gerbera jamesonii** and another South African species **Gerbera viridifolia**. The cross is known as **Gerbera hybrida**. Thousands of cultivars exist. They vary greatly in shape and size. Colors include white, yellow, orange, red, and pink. The center of the flower is sometimes black. Often the same flower can have petals of several different colors.

Gerbera is also important commercially. It is the fifth most used cut flower in the world (after rose, carnation, chrysanthemum, and tulip. It is also used as a model organism in studying flower formation. **Gerbera** contains naturally occurring coumarin derivatives.

Chapter 4. Glossary

Genus

A low-level taxonomic rank used in the classification of living and fossil organisms. Other well-known taxonomic ranks are domain, kingdom, phylum, class, order, family, and species, with *genus* fitting between family and species. The scientific name of a genus may be called the generic name: it is always capitalized.

Pollination

Pollination is the process by which pollen is transferred in plants, thereby enabling fertilisation and sexual reproduction. Pollination is a necessary step in the reproduction of flowering plants, resulting in the production of offsprings that are genetically diverse.

Sepal

A *sepal* (from Latin *separatus* "separate" + *petalum* "petal") is a part of the flower of flowering plants. *Sepals* in a "typical" flower are green and lie under the more conspicuous petals. As a collective unit the sepals are called the *calyx*, and the collection of petals is called the *corolla*. Together, these two structures are known as the *perianth* of the flower. The petals and sepals are usually differentiated into colorful petals and green sepals. The term *tepal* is usually applied when the petals and sepals are not differentiated and look similar or the petals are absent and the sepals are colorful. When the flower is in bud, the sepals enclose and protect the more delicate floral parts within. Morphologically they are modified leaves.

Rhizome

A *rhizome* is a characteristically horizontal stem of a plant that is usually found underground, often sending out roots and shoots from its nodes. Some plants have rhizomes that grow above ground or that lie at the soil surface, including some Iris species, and ferns, whose spreading stems are rhizomes. Rhizomes may also be referred to as creeping rootstalks, or rootstocks.

Bulb

A *bulb* is an underground vertical shoot that has modified leaves (or thickened leaf bases) that are used as food storage organs by a dormant plant.

Cultivar

A *cultivar* is a cultivated plant that has been selected and given a unique name because of its decorative or useful characteristics; it is usually distinct from similar plants and when propagated it retains those characteristics. The word *cultivar* is generally regarded as a portmanteau of "**culti**vated" and "**var**iety", but could also be derived from "**culti**gen" "**var**iety".

Perennial

A *perennial plant* or *perennial* is a plant that lives for more than two years. When used by gardeners or horticulturists, this term applies specifically to perennial herbaceous plants. Scientifically, woody plants like shrubs and trees are also perennial in their habit.

Panicle

A *panicle* is a compound raceme, a loose, much-branched indeterminate inflorescence with pedicellate flowers (and fruit) attached along the secondary branches (in other words, a branched cluster of flowers in which the branches are racemes).

Chapter 5. Copyright

Legal-related information.

Most of the information was taken from Wikipedia, the free encyclopedia.

Chapter 6. sample

Table 2.

"Parkinson's

Disease"

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Index