

Plant Series, No. 9. Manuscript MS408. Portfolio 6. Left (JPEG 012).

Abstract.

The plants individually described in Manuscript MS408 have all been identified as species from the environs of the Mediterranean Basin, in accordance with the location of origin for the manuscript. This series of papers presents each plant species separately with a translation of its accompanying text and any relevant cross-reference information. In addition to the linguistic value, there is plenty of historical, cultural and scientific knowledge to be gleaned from each of these manuscript pages, so they will be of interest to scholars from various disciplines.

Manuscript MS408 originates from Castello Aragonese, Ischia. It was written as an *aide-memoire* for Maria of Castile, Queen of the Crown of Aragon, c. 1444, whilst her husband, Alfonso V, was conquering the City of Naples. The manuscript remained in the castle library until 1912 when the citadel was sold into private hands by the Italian government and its contents were removed and traded off. Two years later the document found its way out of Italy and the nation unknowingly lost an important part of its heritage.

Within the manuscript there is a series of illustrations of medicinal herbal plants with accompanying text. This project identifies the plant species and translates the text to reveal the information imparted by the author and artist of each entry. The algorithmic method, of priority array queuing, was used to translate and identify the words in the text, as described in the following paper: <https://ling.auf.net/lingbuzz/004653> The method takes Latin as the principal source, with Old and Modern Romance as the secondary and tertiary sources. We can see that the language is placed somewhere between Latin and Romance in linguistic evolutionary terms: i.e. it is a vestigial form of prototype Romance.

Palaeography from historic languages and writing systems is never an exact science, especially when both are unfamiliar, but the subsequent transliterations into English phrasing provide adequately legible intention of meaning. In addition, many of the words are unambiguous in their Latin root and the text cross-references with botanical and medicinal information about the plants described in the images, so serving to verify the methodology.

The plant images are naïvely and inaccurately drawn and coloured, as the artist was untrained and should be viewed as simplified cartoon representations rather than anatomical illustrations. The images also focus on the relevant medicinal or culinary parts of the plants, so that the specimens are often incomplete, disproportionate, unscaled and shown in varying stages of development from young seedlings to mature plants in seed. A few of the images also contain additional pictorial information or annotations to highlight particular points for identification.

Some of the plants would have been grown in the physic and vegetable gardens of Castello Aragonese or else collected from Ischia island. Others would have been purchased from herbal plant suppliers travelling from mainland Europe, as dead specimens collected in the field and preserved by desiccation. Tinctures and essential oils would also have been available for purchase. It is apparent that the illustrations essentially function in substitution for the plant names, simply because scientific names were not yet conceived, and common names would have varied regionally. So the combination of visual and written information was intended to enable the reader to identify the species and use them for medicine or food accordingly.

Plant Species.

Mallow-leaved Heronsbill (*Erodium malacoides*).

The word *éos* is used five times in the six lines of text from this manuscript page. It is the name of the goddess of dawn: Éos (Greek: ἙΩΣ, "Εως, Héōs). In the Medieval era Éos was strongly associated with pink colours, in allusion to the dawns early light. The plant on this page is a species of erodium with deep pink flowers, which is why the connection to Éos was made by the Medieval mind.

Homer described Éos as having *rosea digitos* (rose-pink fingers: Latin) from the Greek (ρόδοδάκτυλος) rose-pink fingers, as the phrase ‘the pink fingers of dawn’ was commonly used as a metaphor to describe the morning sunrise. In Homer’s *The Odyssey* he repeats the same Greek phrase many times to mark a new day in the story: “*Emos d’erigeneia phane rhododaktulos Éos.*” (Εμος δ’ηγρενεια φανη ροδοδακτυλος Εως). It translates as “Éos/Dawn begins resembling rose-pink fingers to me”. Thus the five pink flower petals were seen to represent the four fingers and thumb of the hand of Éos (Figure. 8). Ancient images of Éos (Aurora) typically portray her

tinged with pink (See. Figure 1). Medieval and Renaissance images typically show her with pink flowers (Figures 4—7) Also known as Ausōs and Aýōs, the goddess Éos is the sister of the sun god Helios, who features in Plant Series, No. 10, and the moon goddess Silene.

The species of erodium illustrated in the manuscript is the Mallow-leaved Heronsbill (*Erodium malacoides*), also known as the Mediterranean Heronsbill and the Oval Heronsbill, alluding to the shape of the petals. Its natural distribution is in-and-around the Mediterranean basin. It is a rather variable biennial species, due to this wide distribution, with a number of subspecies. Individual specimens also vary depending on their stage of growth and the exact habitat in which they have taken root. When growing alone the plant tends to ramble horizontally, but it grows vertically when competing with other plants. Added to this, there are several similar wild species and hybrids occur where their populations overlap.

The genus name *Erodium* derives from the Greek *erodios* (heron) in allusion to the seed capsule (stylar beak, schizocarp) having the shape of a heron's bill. Similarly, *Pelargonium* derives from the Greek *pelargos* (stork) and *Geranium* derives from the Greek *geranos* (crane). All three belong to the plant family Geraniaceae. *Erodium malacoides* was originally named *Geranium malacoides*, before the taxonomic schism was made.

The species name *malacoides* (mallow-like) derives from the Greek μαλαχή malakhē (mallow) due to the similarity in leaf form. Both have lobed palmate leaves with serrated edges, peltate stalk attachments and textured veining, which results in a green tonal patterning similar to the mineral malachite. The species name is sometimes erroneously thought to be derived from the Greek μαλακός: malakós (soft), which is why the plant is occasionally named the 'Soft Geranium' by the ill-informed. An easy mistake to make.

The allusion to malachite had significance in the Medieval, as the semiprecious stone was believed to bring health, happiness and restful sleep. Malachite amulets were inscribed with the image of the sun, for warding off the evil eye of darkness. It was also the zodiac stone for springtime (Taurus) and associated with the annual resurrection of plants due to its green colour. The manuscript makes reference to astrology elsewhere.

The manuscript image provides a number of telling details. Flowers: Five lanceolate uncleft petals with no overlap and deep pink, magenta, colour. Actinomorphic (radially symmetrical). Dark green sepal stars. Bulbous receptacles. Borne in varying numbers on relatively long, pale coloured stems. Stems: Fairly rambling and pale green in colour, with leaves attached closely along secondary stems and on main stem. Leaves: Varying shades of green, silvery beneath, palmate and divided into lobes (not separate leaflets) with serrated edges, peltate attachments, distinctive vein creases along the centres of lobes indicating three dimensional corrugations. Rootstock: Distinctive sheath band (stipule) marking transition from stem to root (petiole). Brown coloured asymmetrical rhizome, with waist arch and covered with hair roots and with six larger roots sending out left and right. Note: The seedpods that resemble heron bills are not seen, as the plant is in flower (Figure 8.)

The detail provided in the manuscript flowers enables us to eliminate Herb Robert (*Geraniuum robertianum*), which has similar pink petals and might be erroneously identified due to its ubiquity and familiarity. Also, in Spain *Erodium malacoides* is sometimes known by the vernacular name Hierba de San Roberto (Herb of St. Robert), as if to confuse matters. In the case of *G. robertianum*, the flower forms a pink petal tube to the rear, so that the sepals and receptacle are reduced and hidden. In the case of *E. malacoides*, the green sepals are large and held immediately behind the petals, with a green sepal tube and receptacle, which is what we see in the illustration. In addition, the illustrated stems have no reddish pigmentation. Other pink flowered geraniums and erodiums can be dismissed for various anatomical and geographical reasons (Figures 9 & 10).

Diagnostics indicate that the illustration is an *Erodium malacoides* subspecies, appropriately known as *Erodium malacoides aragonense*. (Also known as *E. aragonense*. *E. neuradifolium*). It is naturally found in the southwest Mediterranean – Iberia, Sicily, Balearics, Morocco, Malta, etc. It is characterized by having a greyer (glaucous) colour to the foliage than other variants. It typically grows in uncultivated and dry Mediterranean scrub habitat, often known as erms or maquis. Its vernacular name is Filamaria d'Aragó or Filamaria de Aragón, which translates as 'Slim Maria of Aragon'. The Maria alluded to is Santa Maria or Maria Regina – the Romance term for the Virgin Mary, Mother of the Christian god and Queen of Heaven.

The manuscript illustration has a revealing zoomorphism. The root portrays the stylized image of a brown cicada nymph, with its head to the left, thorax at the centre and abdomen to the right, and with six legs. We can see the characteristic arch beneath the thorax, and the abdomen is adorned with the backward pointing hairs seen on the real insect larva. According to the mythology, the lover of Éos, named Prince Tithonus, was given consent by Zeus to live forever with Éos, but Zeus neglected to make him ever youthful, so he still aged and

eventually shrivelled in size to become the first cicada. (Figure 2.) Cicada nymphs look rather like stooping old men with arched backs, and they walk very slowly when they emerge from the substrate, as if with the aid of a walking stick, as their forelegs each have a downward pointing claw for holding roots, called the protibia-protarsus. Also, when the insects undergo ecdysis it is as if the adult insect is reborn from an ageing husk and then flies away to begin a new life. Hence the mythological association with decrepitude. Tithonus kept his strong voice however, which is why cicadas stridulate so noisily and he is often portrayed with a lyre harp to symbolize his musicality. Homer says that Éos laid the shrivelled body of Tithonus in a room with shining doors and wrapped him in her robe, thus the shimmering wings of the adult cicada represent the doors. In addition, Éos is described by Homer as being *krokopeplos* (saffron-robed), which enables us to identify the species of cicada as the Red Vineyard Cicada (*Tibicina haematodes*), because it has the symbolic saffron (deep orange) colouring to the veins of its wings (Figure 3). The nymph exuvia (shed exoskeleton) is a similar colour too. It would have been a very familiar cicada species on Ischia, as the place was historically famous for its wine, which was made from grapes grown in vineyards on the precipitous volcanic slopes of the island. It is also widespread in Iberia, as it is distributed over much of the southern Mediterranean.

Cicadas are also associated with longevity because their larvae feed as nymphs below ground on plant roots for several years, before eventually emerging and transforming into adults. In addition, they only sing during the daytime, when the dawn has come and gone, so Éos never got to make love with Tithonus ever again. Thus, the cicada became a symbol of the Éos & Tithonus mythology, which is why the artist implies its form with the rootstock. Cicadas were generally believed to represent immortal love, because the adults have red eyes, as well as wings, and they were thought to sing whilst feeding only on dew until they perished. Also, they survived being buried underground without dying, only to emerge (resurrect) and sing. It was also noted that cicadas did no harm to any crops or people, so they were viewed as the benevolent souls of past people. In fact, cicadas do feed by sucking the nutritious sap of trees and they mate and produce eggs to provide the next generation before they die. Thus, the magenta flowers of the plant were seen to symbolise Éos and the nymph-like root was seen to symbolise Tithonus. The whole plant was accordingly believed to symbolize the protection afforded by eternal love.



Fig. 1. Four Ancient Greek pottery images of the goddess Éos with her lover Prince Tithonus. We can see that Éos has been intentionally tinged pinkish-orange to symbolise her mythological role as goddess of the sunrise.

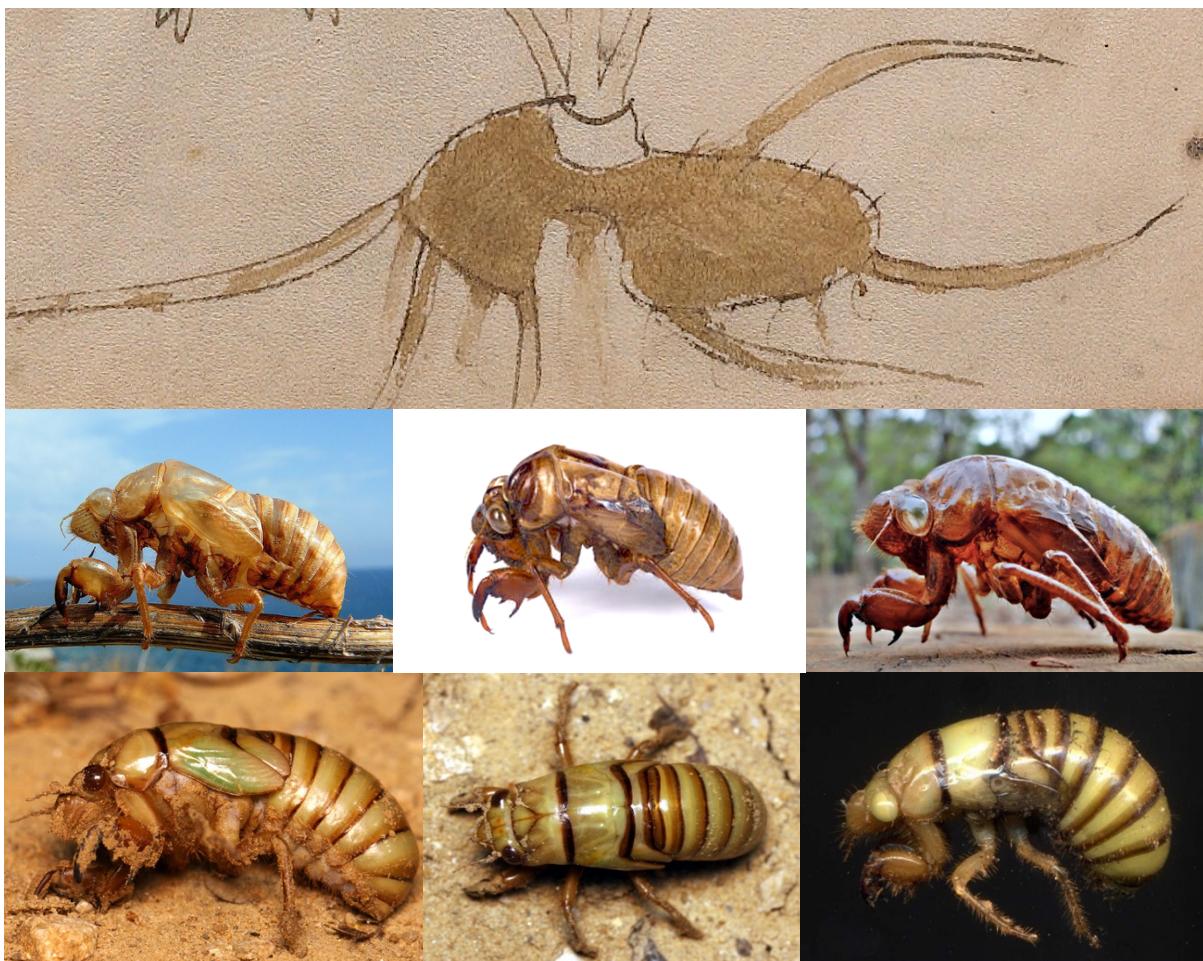


Fig. 2. Top: Detail of the manuscript image, showing the root system portraying the image of a cicada nymph. Middle: Three images of brown exuviae (sloughed husk or exoskeleton) of the Red Vineyard Cicada (*Tibicina haematodes*) from which the artist modelled the illustration. Bottom: Three images of the *T. haematodes* nymphs in different stages of development, which takes 4—6 years below ground. According to the mythology becoming a cicada was the fate of Prince Tithonus. It is also worth noting that the plant stem grows from the point where the adult cicada emerges from the exuvia, thus symbolizing the resurrection, rebirth and regrowth of life and love.

A second revealing zoomorphic detail is seen in the stem of the illustrated plant. There is a symmetrical lozenge shaped loop in the upper part of the stem. This is not an error in draughtsmanship by the artist, but the intentional representation of the outline of the adult mythological cicada, having emerged above ground and undergone ecdysis. (Figure 3). Thus, we have the lifecycle of the cicada - nymph and adult – symbolized by the root and stem of the plant, respectively. Furthermore, the adult form of the cicada has arisen to be with the pink flowers, to represent the eternal love between Tithonus and Éos. The two nearest flowers, symbolizing the hands of Éos, are reaching towards the cicada, attracted by love, but they can never touch.

We can see then, that the manuscript plant images and their texts are steeped in mythological reference with regard to the therapeutic and healing properties they were believed to possess, and sometime did possess. In this case, *Erodium malacoides* was clearly believed to provide protection from illness through the power of love, which was believed to be a substantive phenomenon and hold genuine potency in the Medieval. The text states that Éos was beloved by Paeon, the god of medicine, and the cicadas and flowers symbolize the undying love between Éos and Tithonus. So, the plant was mythologically endowed with medicinal love, from root to leaf tip. The effect of this belief must have afforded a certain level of placebo comfort and contentment regardless of whether the plant actually had any real efficacy as a medicine. In the absence of scientific knowledge, or indeed the knowledge of science principle and discipline, then supernatural causes and supernatural solutions to health problems were intuitively paired in the Medieval mindset.



Fig. 3. Showing the symmetrical lozenge shaped loop in the illustrated plant stem (top-left), symbolizing the outline of the adult Red Vineyard Cicada, shown with wings folded (top-right) and wings in flight (bottom). The manuscript image has lateral stems representing the wings. More specifically, the adult cicada represents the emergent Tithonus, mythological lover of Éos. We can also see the two flowers, representing her hands, reaching towards the cicada outline but unable to touch.



Fig. 4. Fresco painting by Giovanni Da San Giovanni, 1634, titled *Aurora and Tithonus*. We see Aurora with her characteristic pink fingers and flowers, and saffron robe. We see Tithonus descending to earth as an old man, where he will become the first cicada.

Erodium malacoides once had the curious English vernacular name ‘Bastard Candie Cranesbill’ (Figure 11) and the flowers were described as ‘murrey’ coloured, which is magenta red. John Gerard, in his *Herbal* (1597) explains that it was a bastard (lesser) version of the blue flowered ‘Candie Cranesbill’ (Meadow Cranesbill: *G. pratense*). He also says ‘*These are strangers in England, except in the gardens of home herbalists*’ indicating that the plants were acquired from the European continent. John Gerard also states that the plants were used for ‘wound drinke’. This is because erodiums and geraniums often have reddish pigmentation to their stems and leaves, which was associated with blood according to Medieval logic. Therefore they were meant to heal wounds as determined by divine providence.

The text also mentions the sun god Paeon/Paean (Apollo, Helios, Asklepios) who was physician to the gods and responsible for healing wounds. Paeon adored Éos for her healing abilities and her association with the rising sun: i.e. bringing a new day of life. There are various Italian renaissance paintings of Apollo (Paeon) consorting with Aurora (Éos), his occasional companion, passing the sun to him each morning. (Figures 4—7).



Fig: 5. Painting by Gerard de Lairesse, titled *Apollo and Aurora*, 1671. Éos (Aurora) is shown slightly below Apollo (Paeon) signifying that he takes charge of the movement of the sun across the sky in his ‘sun chariot’. She is raising her right hand to show here pink fingers and her left arm holds a basket of symbolic pink flowers. Also, her robe is the colour of saffron.



Fig. 6. A painting titled *Aurora* (Éos) by Annibale Carracci, 1605. Aurora is seen holding pink flowers in her right hand and a torch of pink flames, symbolising dawn, in her left hand. She also wears pink flowers in her hair, she has pink cheeks and the sky in pink behind her. Again, her robe is saffron coloured.



Fig. 7. Painting titled Aurora Triumphing Over Night (Nyx), by Jean-Honoré Fragonard, 1755. We see Aurora scattering pink flowers as she pulls the sun above the skyline. Her fingers are pink, as are her cheeks, and her robe is saffron. Éos (Aurora) became a symbol of the Enlightenment as she was seen to symbolize the advancement of European society from the darkness of naïvety into the illumination of scientific knowledge.

In Portuguese *Erodium malacoides* is known as ‘Maria-fina’ (Slim Maria), ‘Maria-fia (Spindle Maria), ‘Marioila’ (Little Maria: Greek μαριούλα), ‘Planta-de-Garfos’ (Plant of Forks) and ‘Erva-garfo’ (Herb-fork). In Italian it is ‘Becco di gru malvaceo’ (Bill of the Crane, Mallow); in Spanish it is ‘Cigueña malva’ (Stork Mallow), Alfileres (Pins), Alfilerillos (Small Pins), Aguja de Pastor (Shepherd Needles) Malva de África (African Mallow), Relojes (Clocks), Relojitos (Small Clocks), Espetones (Skewers, Spits); in French it is ‘Érodium fausse-mauve’ (False-purple heronsbill); in German it is ‘Malvenblättriger reiherschnabel’ (Mallow-leaved heronbill). In Basque it is Moko-belharra (Beak-weed). Note: The seeds of *E. malacoides* disseminate by having filamanets that rotate into spring-like structures when touched, which attach to animal fur or feathers; hence the allusion to clocks.

Looking at Figure 12, we can see a white stork to the bottom left of each image, grasping an animal with the body of a frog and the head of a baby. Storks have long been associated with the delivery of babies in European folklore, and some people thought that frogs were turned into babies by storks, as they knew that babies were born in a pool of fluid (the amniotic sac) rather like a pond. Thus Medieval logic connected babies and fertility with storks, because they eat frogs, and the erodium and geranium plants with fertility because they have seed capsules that resemble stork bills.

Curiously though, storks were originally associated with the stealing of babies in Greek mythology. The mythological tale of Hera is the root of this, as she turned her rival into a stork, who then promptly attempted to take Hera’s infant son in revenge. The story may have its origin in the fact that storks will swallow their dead chicks in order to conserve valuable resources, which would have seemed brutal to those lacking ecological understanding. Storks can swallow prey as large as rabbits, so it is also feasible that they might have occasionally attempted to take new-born babies when left unguarded, whilst mothers were tending crops, for example.

Somehow, the human component of the allegory switched from malevolence to benevolence in storks. This is because storks are migratory, so their arrival symbolized the birth of a new year. Also, storks form faithful pairings and their behaviour appears affectionate to the human eye. In addition, they are very conspicuous in their habit of nesting on rooftops and large trees, so their parenting progress was always on view. In Egyptian mythology, the lifeforce, soul or personality of a person – the ‘ba’ - was often represented as a stork with a human head. Thus the ‘ba’ was delivered (flown in) at birth and retrieved (flown out) at death.

Due to the doctrine of signatures, in Medieval times the aforementioned reddish tinge of erodium and geranium plant stems made them suitable for ailments relating to blood, as the stems looked similar to veins and arteries.

As well as healing wounds, the plants were used for reducing blood pressure, remedying blood in faeces, herpes ruptures, nosebleeds and tooth abscesses. The plants were sometimes known as bloodworts for this reason. They were also considered appropriate for treating abdominal complaints, such as liver and kidney pains, cancers and alimentary problems. The plants are also edible and were included as a leaf in salads and dried as a form of tea. Dioscorides used the name Sideritis (ironwort, after the Greek σιδηρίτις: made of iron) for erodiums and geraniums, alluding to their ability to heal wounds inflicted by iron weapons.

Erodiums and geraniums vary in stem and leaf pigmentation according to the habitat in which they are growing, from no pink pigment (as seen in the manuscript) to pinkish, and from pale red to dark red. The more barren and exposed the habitat, the redder the colour due to increasing light levels. The plants also tend to turn reddish at the end of the season, when growth is no longer required. Chlorophyll oxidizes and breaks down with too much sunlight, so the plants produce the red pigment as a way of regulating the amount of ultraviolet light (UV-B radiation) reaching the photosynthetic cells. This enables the plants to survive in different environments, ranging from shaded woodland to meadow, and from open ground to rock crevices. The pigments are called anthocyanins and are seen in other plants for the same reason. Medicinally they are known to have an astringent effect on body cells, which means that they constrict or shrink cells, which can genuinely assist in healing bleeding lesions, ruptures, cuts and grazes.

In the Medieval era people believed that the human body was governed by ‘four humours’. These were blood, yellow bile, black bile and phlegm. It was a theory expounded by the Greek Philosopher Hippocrates. With an absence of scientific understanding the theory persisted for over two thousand years, until the modern era when bloodletting was no longer practiced. This is why emphasis on matters of ‘blood’ were made in the Medieval, because it was believed to be a mystical substance. In effect, supernatural remedies were contrived for illnesses attributed to supernatural causes. Thus, the ‘light of love’ was believed to remedy the ‘darkness of evil’ and therefore protect from complications during childbirth.

The active medicinal ingredient in erodiums and geraniums is actually a polyphenol compound known as geraniin. This brings about apoptosis in bacteria and cancer cells, which means that the cells die off. Therefore, the plants have genuine curative properties and would have been effective in treating bacterial infections such as toothache, diarrhoea and septic wounds and cancerous tumours. The plants also contain tannins, which alter the protein structure of skin and flesh so that it becomes more resistant to bacterial decomposition^{1 & 2}.

Other very similar species or subspecies from the Mediterranean erodium tribe include: *E. chium*, *E. cicutarium*, *E. glaucofolium*, *E. hesperium*, *E. laciniatum*, *E. moschatum*, *E. neuradifolium*, *E. ribifolium*, *E. salzmannii*, *E. touchyanum*. They differ only slightly from one another, and they are all variable in themselves, so a distinction would not have been made in Medieval times. For example: *E. ribifolium*, *E. neuradifolium* and *E. chium* are considered subspecies or varieties of *E. malacoides* by some botanists and separate species by others. Yet further subspecies, and synonyms, include *E. m. brevirostre*, *E. m. floribundum*, *E. m. malacoides*, *E. m. malachoideum*, *E. m. subangulum*, *E. m. subtrilobatum*, *E. althaeoides*, *E. glabellum*, *E. aragonense*^{3 & 4}.

Translations:

- 1 o [libertas orta: freedom arisen. Latin] é'eos [from them. Portuguese, Latin] éos [Éos goddess of the dawn (Aurora). Latin from Greek] amé'ea [loved is. Latin] pæon [physician of the gods: παῖον (Paiōn, Paiēon) Greek: healer of wounds] éor t [sister testament. Latin] éo'naus [it's the food. Portuguese, V. Latin] amoius naus [caring, loving food. Latin, Vulgar Latin].

libertas orta é'eos Éos amé'ea Pæon éor testamento é'o'naus amoius naus

Freedom is arisen from them, Éos is loved by Pæon as testament to sister for the food. Loving food -

Note: The Latin phrase ‘libertas orta’ (freedom arisen) is a standard phrase, here with the feminine participle – ‘ortus’ is the masculine, ‘ortum’ is the neutral. It may alternatively mean ‘libens orta’ (gladness arisen), which amounts to the same thing.

Note: Pæon is an alternative name for the sun god Helios or Apollo, who was also the god of healing. The goddess of dawn Éos, was also known as Aurora. In Greek mythology Pæon (Helios) is the brother of Éos, so his affection is sibling love. However, in Roman mythology Pæon (Apollo) is not a brother and falls hopelessly

in amorous love with Éos (Aurora) as a mortal, but his love is unrequited and Aurora eventually becomes the goddess of the dawn, never to be caught by Apollo as he rises to chase her each morning. Éos instead falls in love with Tithonus, Prince of Troy. Thus, there is Pæon (Helios) & Éos from Greek mythology, and Pæon (Apollo) & Aurora from Roman mythology, with somewhat different relationships. Here in the manuscript though, the Greek sibling names are used. Pæon (Helios, Apollo) was an oracular god, and was thus believed to determine whether or not someone died from injury or illness, so Éos (Aurora) was seen as the balancing force, as she would bring a new day of life with the arriving dawn.

Note: Although this line of text uses the word éor (sister) it likely refers to the female patient, rather than Éos in relation to Pæon, as the word is frequently used elsewhere – on this page and others.

2. nèor [to conjure, intergrate. Latin] æ (i) [the. Latin from Greek η] éor [εօρ: sister. Latin from Greek] o'mauz [the protection. Latin from Hebrew] naus (mothers. Galician] emeos [**acquiring**. Latin, Portuguese] é'o'mt (motivar) [it's to cause. Latin] a éo [and it's to. Portuguese] 'pos'nta (ab. aposentar) [to lodge, contain. Portuguese].

- nèor i éor o'mauz naus eme'os é'o'motivar a éo aposentar

- conjures sister the protection of mothers, measure it out to cause it to be contained.

Note: The word mauz is Latin from Hebrew, meaning protection, stronghold, safe – the root of mausoleum.

Note: The Latin word ‘neor’ means ‘to be spun, woven, integrated, knitted, conjured’.

Note: The Portuguese term ‘pos’nta is an abbreviation of aposentar (to house, lodge, shelter, contain).

3. doméo [v. domé'o: the taming. Latin] a mo (m.o) [a modus operandi: method of working, Latin] s [sacrum: holy. Latin] naus naus [food, food] o m [omni mane: every morning] éos naus [Éos food] do na [give here. Latin] s [sacrum. located, found. Latin] éos [holy Éos] no [in the. Portuguese, Galician]

doméo a modus sacrum naus, naus omni mane Éos naus do na sita Éos no

The method is sacred taming with Éos' food every morning given here, Éos is located in the food.

4. domos [roof. Latin] æe'et (i.e. et) [that is though. Latin] o'mor [of love. Portuguese] alous [territory. Catalan] æ (i) or [the golden. Galician, Latin] naus [food. V Latin] emeos [**acquiring, getting** Latin] olé a mauz [triumph of protection. Old Portuguese, Latin from Hebrew]

domos id'est'et o'mor a'lous i or naus eme'os olé a mauz

The territory of the golden food is triumphant roof built of love as though it were stone.

Note: The word ‘mor’ is a colloquial Portuguese abbreviation for ‘amor’ (love).

Note: The Iberian term olé is a triumphal gestural remark that equates to ‘so there’, ‘take that’, ‘ta-da’.

5. æo (aio, ayo) [watch. Vernacular Latin] lèor [ab. lègor. to see. Latin] éos [Éos] é eo [is and. Portuguese] mor (love. Portuguese) o.m. (omni mane) é or [every morning is golden. Portuguese] naus [food] nar éos [fire of Éos. Galician, Latin] é o mauz [it's for protection. Portuguese, Latin from Hebrew].

aio lèor Éos é eo mor omni mane é or naus nar Éos é o mauz –

Watch to see the love of Éos is golden every morning, the food is the fire of Éos, it is for protection –

Note: The term æo (watch, observe, to eye) is discussed at length in Plant Paper 8.

6. o'mor [of love. Portuguese] éor [sister. Latin] naionsa [v. naixença, naissença, nascense: birthing, giving birth. Catalan, Occitan, Galician, Old Portuguese: from Latin nāscēns. sa]

- o'mor éor naionsa

- of love for sister's healthy birthing.

Note: The term naionsa (naixença) specifically means 'healthy birthing' as the suffix 'sa' or 'ça' derives from the Latin 'sanus' (healthy, sound, trouble free, safe) in the Catalan tongue of the erstwhile Crown of Aragon region in Iberia.

Text in summary:

Freedom is arisen from them, Éos is loved by Paeon as testament to sister for the food. Loving food - conjures sister the protection of mothers, measure it out to cause it to be contained.

The method is sacred taming with Éos' food every morning given here, Éos is located in the food.

The golden food measures out triumphant protection built of love as though it were stone.

Watch to see the love of Éos is golden every morning, the food is the fire of Éos, it is for protection of love for sister's healthy birthing.

The language of the manuscript is clearly a form of Iberian Vernacular Latin (proto-Romance), which is closest to Portuguese, Galician, Occitan, Aragonese, Catalan and Castilian. This is because northern and western Iberia remained relatively free from meme flow following the Medieval due to its isolation from the Mediterranean linguistic hub, so that the lingua franca evolved relatively little and therefore preserved the Medieval lexicon. The manuscript is associated with the kingdoms of Castile and Aragon, as it was written for Maria of Castile, Queen of the Crown of Aragon.

Clearly, the cultural belief system underlying the manuscript was still heavily influenced by Greek and Roman mythology at a time when Christianity was beginning to deal the heavy hand on Pagan heresy. This doesn't necessarily mean that the author was not a devout Catholic however, as the references to Éos, Paeon and Tithonus relate only to long established folkloric beliefs about the medicinal properties of the plant. In fact, those same beliefs persisted until the enlightenment, when scientific understanding began to shift opinion away from the doctrine of signatures and mythology towards allopathic science. The curious human habit of passing on information and beliefs without supportive evidence is known as ipsedixitism and often relies on communal reinforcement: i.e. if many others believe something then it must be true, despite the lack of evidence.

Nor does it mean that the writing system is an intentional code. In fact, it cannot have been a code because it is phonetically based, with a number of standard consonants absent, either because they were silent in the dialect (f, g, h, j, w, y) or because they shared a symbol (c, k, x, z). In addition, there are a few consonant symbols for specific application (ç, qu, v). Thus, we can presume that the writing system was devised with rudimentary knowledge of other contemporaneous Italic writing systems and an incomplete Vernacular Latin vocabulary.

Above all else, the botanical detail provided by the manuscript illustration is seen to be remarkably accurate and intuitive once the correct plant species has been identified. In this case it was a familiar medicinal herb historically (Figures 13 & 14). The artist also had admirable creative imagination in providing mythological symbolism to augment the information provided by the text. It demonstrates the adage 'say what you see', which one can only achieve by entering the Medieval mindset with open eyes and an open mind. "*Quod equus apud oculus-operimenta potes non semoto ad lucem, etiamsi eam decurrit ipsum celer.*"



Fig. 8. Manuscript illustration, showing *Erodium malacoides aragonense*. We can see the form of the cicada nymph in the root and the cicada adult in the stem – both symbolizing the fate of Tithonus resulting from the love shared with Éos, symbolized by the two pink flowers reaching downwards in vain.



Fig. 9. Various photographs of *Eridium malacoides*, showing the flowers, sepals, leaves, stems and stipule above the rootstock.



Fig. 10. Left: An image of the whole *Erodium malacoides* plant, including the root in its natural shape. Note also, that the colour is orange-brown, like the cicada. Top Right: A closeup image of the new leaves of *Erodium malacoides* emerging from the stipules. We can see where the allusion to the mineral malachite originated, due to the patterns of contrasting dark and pale greens. Bottom Right: The seed capsules of *Erodium malacoides* after flowering, which have reminded botanists of heron bills.

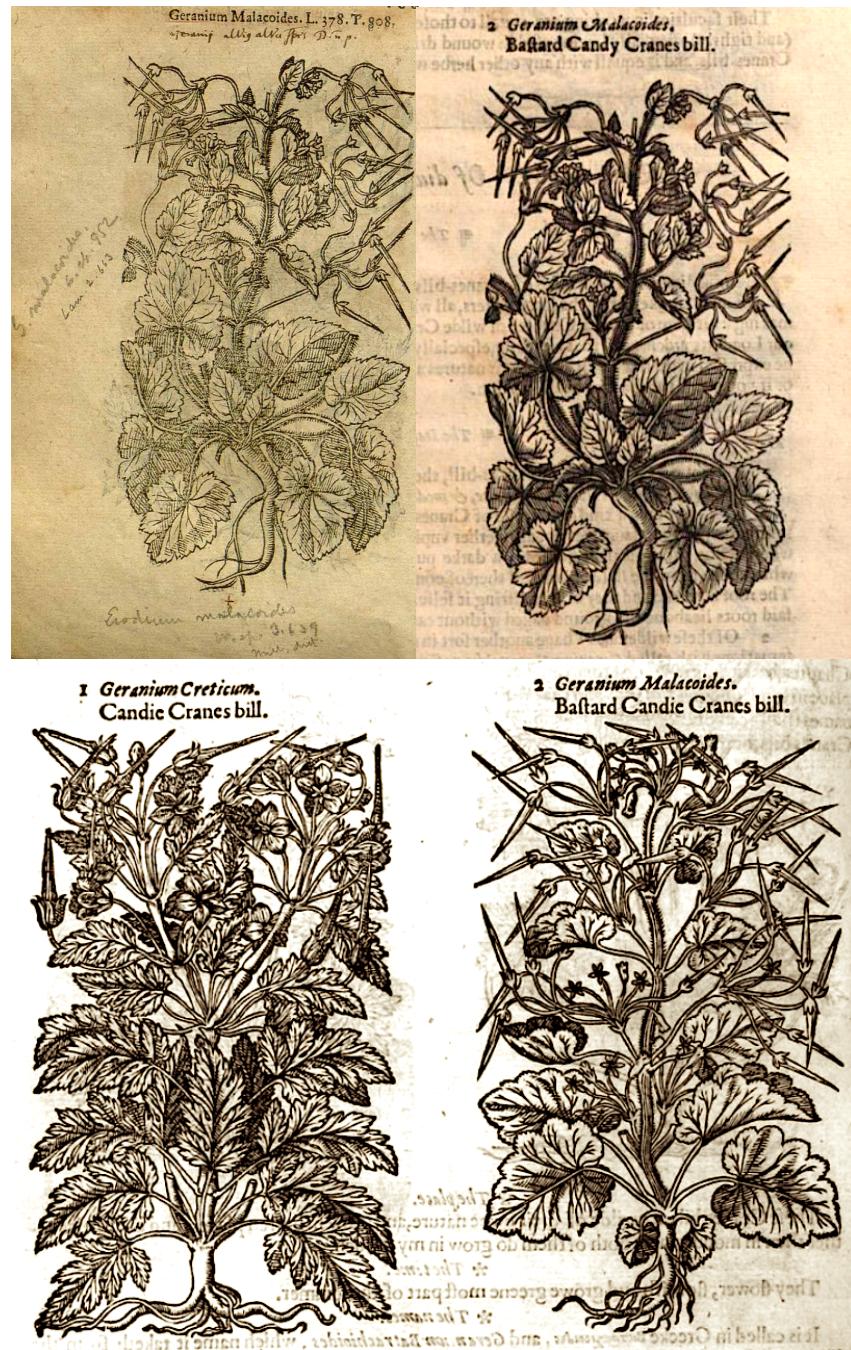


Fig. 11. Top: Two similar engravings of *Erodium malacoides* (as *Geranium malacoides*). Left: Mathias de l'Obel, 1581. Right: John Gerard, 1597, which includes the vernacular name 'Bastard Candy Cranesbill'. Bottom: Slightly different drawing of *Erodium malacoides* (as *Geranium malacoides*), by John Gerard, 1597 (Right), alongside *Geranium creticum* (*G. pratense*). They are named Candie Cranesbill and Bastard Candie Cranesbill.

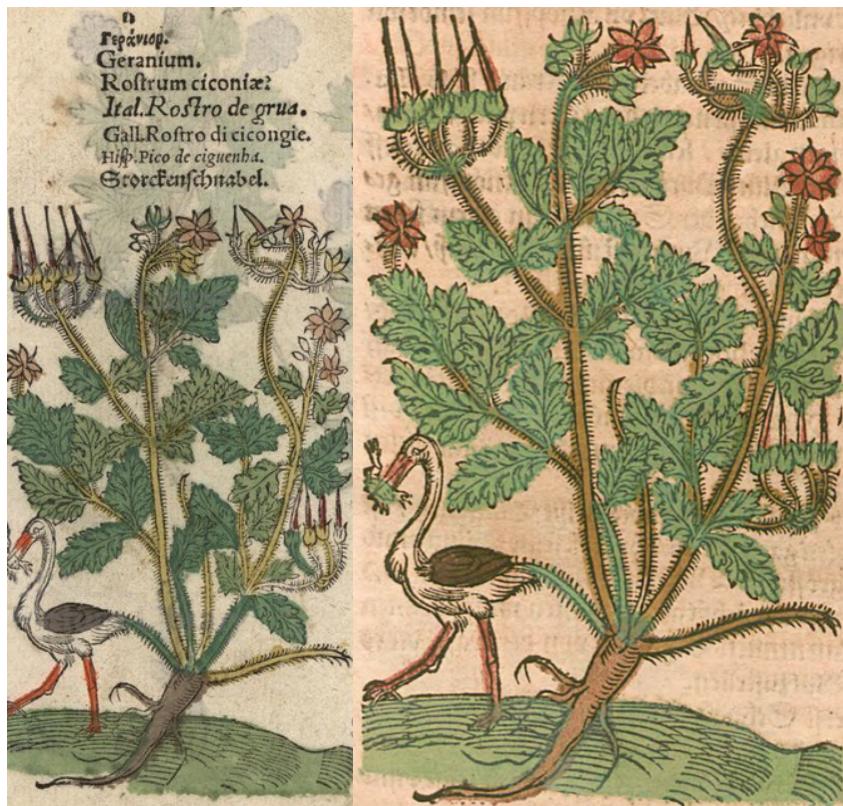


Fig. 12. Two engravings of *Erodium malacoides*, by Adam Lonicer, 1557 & 1578, including a white stork with a ‘frog-baby’ in its beak, believed in the Medieval to be the source of babies delivered to mothers by storks.



Fig. 13. A pre-Medieval image of *Erodium malacoides*, c. AD. 550. Leiden Manuscript MSVQ9.



Fig. 14. A print of *Erodium malacoides* by Paolo Boccone, 1697. This is a specimen from Sicily, only a short distance south from Ischia.

Given the cross-reference between text and image, we are provided with a remarkable insight into the Medieval mind. In the modern era it is easy to be dismissive of mythology, astrology and religion, but it is important to apprehend that the author and artist lived among a community of people who genuinely believed in the supernatural phenomena described in the manuscript. In their day such ideas would have been entirely taken for granted as truth, because there was an absence of alternative scientific explanation, so dissenting individuals were ignored. In fact, those supernatural ideas were so pervasive that they caused memetic-genetic coevolution in humanity to such an extent that people persist in believing them today even though we now have scientific explanations: i.e. humans have become intrinsically predisposed to believing in supernatural ideas as a legacy of their ancestors' belief systems.

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Further reading:

1. Plant Series, No. 1. *Atropa baetica*. <https://ling.auf.net/lingbuzz/004797>
2. Plant Series, No. 2. *Serratula erucifolia*. <https://ling.auf.net/lingbuzz/004845>
3. Plant Series, No. 3. *Nymphaea alba*. <https://ling.auf.net/lingbuzz/004864>
4. Plant Series, No. 4. *Euphorbia myrsinoides*. <https://ling.auf.net/lingbuzz/004880>
5. Plant Series, No. 5. *Hesperocodon hederaceus*. <https://ling.auf.net/lingbuzz/004917>
6. Plant Series, No. 6. *Andromeda polifolia*. <https://ling.auf.net/lingbuzz/004971>
7. Plant Series, No. 7. *Campanula rapunculus*. <https://ling.auf.net/lingbuzz/005069>
8. Plant Series, No. 8. *Paris quadrifolia*. <https://ling.auf.net/lingbuzz/005139>
9. The Language and Writing System of MS408 (Voynich) Explained.
<https://www.tandfonline.com/doi/full/10.1080/02639904.2019.1599566>
10. Linguistic Missing Links. <https://ling.auf.net/lingbuzz/003737>
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12. Consonants & Vowels, Castles and Volcanoes. <https://ling.auf.net/lingbuzz/004381>
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Symbol key for Manuscript MS408. Gerard Edward Cheshire. University of Bristol. www.sciencesurvey.ink

| Symbol-Italic key for MS 408. | | | |
|-------------------------------|--------------------|--------|---------------------|
| Symbol | Italic | Symbol | Italic |
| α | a (trapped) | ⁊ | a (free) |
| ƿ | ais | ƿ | aus |
| ꝑ | æ (ae, a, e, i) | ꝑ | d |
| ꝑ | e (short) | ꝑ | e'e (intonation) |
| ꝑ | é (long) | ꝑ | i |
| ꝑ | l (ll) | ꝑ | ele (elle) |
| ꝑ | m (mm) | ꝑ | eme (emme) |
| ꝑ | n (nn) | ꝑ | o |
| ꝑ | p (pp) | ꝑ | epe (eppe) |
| ꝑ | qu | ꝑ | eque |
| ꝑ | r (rr) | ꝑ | s/z (ss, zz) |
| ꝑ | s/z (ss, zz) | ꝑ | sa/za |
| ꝑ | t (tt) | ꝑ | ta |
| ꝑ | u | ꝑ | v, f, fv, ph, pv |