

*Back to the
Roots*



BOOKLET

"Back to the Herbs"

Made by the participants of the project

*Youth
Exchange*





Samobor,
Croatia
23th April - 2nd May '16



Introduction

This handbook is gathered by 24 people who participated in Outward Bound Croatia's Erasmus+ youth exchange "Back to the roots". The goal of the project was to raise awareness of the importance of physical activities and healthy diet by making use of biological floral diversity that surrounds us. During the project participants had different workshops related to project's topic and trips around nearby area to explore local flora and meet the locals who produce them.

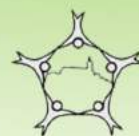
One of the workshops consisted of participants presentations of the most popular herbs in Europe, including the main description and usage of them. In order to remind and encourage participants to use different herbs introduced during the project, we created this handbook by combining information gathered by participants. The handbook can also be informative to other people interested in healthy lifestyle and usage of different herbs in their daily life, as it contains the description, visual images of the plants, preparation tips, usage in daily life and some recipies.

Please use this handbook responsibly and be aware of your knowledge and skills considering the context of recognizing the herbs. The authors of this handbook are not responsible of incorrect use of them. We do not hold any credit for the ways of usage and recipies which are gathered here.

Enjoy it responsibly!



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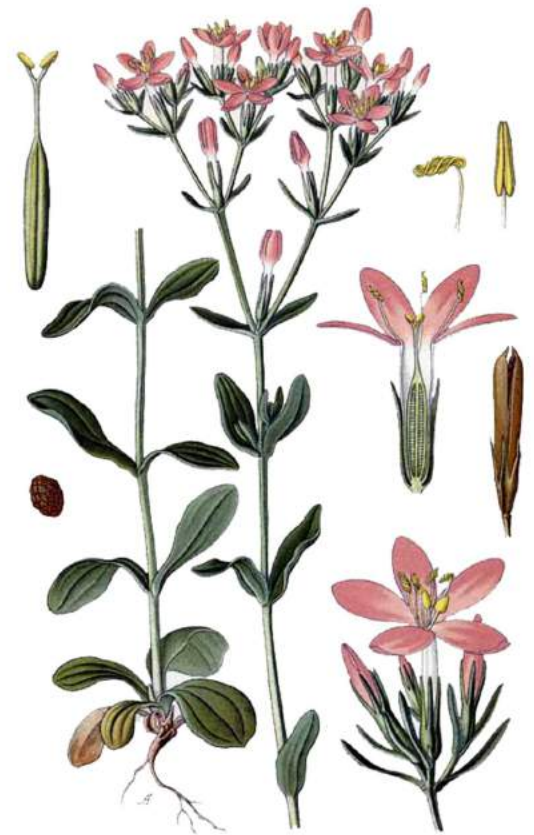
Erythraea Centaurium Rafu

** Centaurium erythraea is a species of flowering plant in the gentian family known by the common names common centaury and European centaury.*

- Description -

This is an erect biennial herb which reaches half a meter in height. It grows from a small basal rosette and bolts a leafy, erect stem which may branch. The triangular leaves are arranged oppositely on the stem and the erect inflorescences emerge from the stem and grow parallel to it, sometimes tangling with the foliage. Each inflorescence may contain many flowers. The petite flower is pinkish-lavender and about a centimeter across, flat-faced with yellow anthers. The fruit is a cylindrical capsule.

** It flowers from June until September.*



- Distribution -

This centaury is a widespread plant of Europe (including Scotland, Sweden and Mediterranean countries) and parts of western Asia and northern Africa. It has also naturalised in parts of North America and throughout eastern Australia, where it is an introduced species.

- Uses -

The European centaury is used as a medical herb in many parts of Europe. The herb, mainly prepared as tea, is thought to possess medical properties beneficial for patients with gastric and liver diseases. [medical citation needed] Brought to Europe from Peru in c. 1639 by Jesuit priest Bernabé Cobo, it was used in the treatment of malaria long before the widespread use of quinine. [medical citation needed]. Spanish missionaries in South America also brought back Cinchona calisaya as a remedy for various related sicknesses, including



Calendula Officinalis

- Description -

Calendula officinalis is a short-lived aromatic herbaceous perennial, growing to 80 cm (31 in) tall, with sparsely branched lax or erect stems. The leaves are oblong-lanceolate, 5–17 cm (2–7 in) long, hairy on both sides, and with margins entire or occasionally waved or weakly toothed. The inflorescences are yellow, comprising a thick capitulum or flowerhead 4–7 cm diameter surrounded by two rows of hairy bracts; in the wild plant they have a single ring of ray florets surrounding the central disc florets. The disc florets are tubular and hermaphrodite, and generally of a more intense orange-yellow colour than the female, tridentate, peripheral ray florets. The flowers may appear all year long where conditions are suitable. The fruit is a thorny curved achene



* *Calendula officinalis* (pot marigold, ruddles, common marigold, garden marigold, English marigold, or Scottish marigold) is a plant in the genus *Calendula* of the family *Asteraceae*. It is probably native to southern Europe, though its long history of cultivation makes its precise origin unknown, and it may possibly be of garden origin.



- Uses -

Pot marigold florets are edible. They are often used to add color to salads or added to dishes as a garnish and in lieu of saffron. The leaves are edible but are often not palatable. They have a history of use as a potherb and in salads.

Flowers were used in ancient Greek, Roman, Middle Eastern, and Indian cultures as a medicinal herb as well as a dye for fabrics, foods, and cosmetics. Many of these uses persist today. They are also used to make oil that protects the skin.

Sambucus Nigra

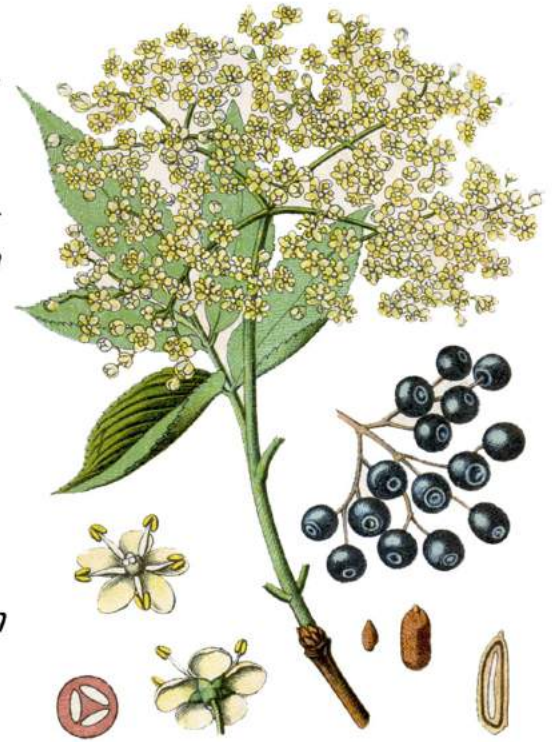
* *Sambucus nigra* is a species complex of flowering plants in the family Adoxaceae native to most of Europe. Common names include elder, elderberry, black elder, European elder, European elderberry and European black elderberry. It grows in a variety of conditions including both wet and dry fertile soils, primarily in sunny locations.

- Description -

It is a deciduous shrub or small tree growing to 6 m (20 ft) tall and wide[4] (rarely 10m tall). The bark, light grey when young, changes to a coarse grey outer bark with lengthwise furrowing. The leaves are arranged in opposite pairs, 10–30 cm long, pinnate with five to seven (rarely nine) leaflets, the leaflets 5–12 cm long and 3–5 cm broad, with a serrated margin.

The hermaphrodite flowers are borne in large, flat corymbs 10–25 cm diameter in late spring to mid summer, the individual flowers ivory white, 5–6 mm diameter, with five petals; they are pollinated by flies.

The fruit is a glossy dark purple to black berry 3–5 mm diameter, produced in drooping clusters in late autumn; they are an important food for many fruit-eating birds, notably blackcaps.



- Traditional medicine -

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Aloe-Barbadensis

** Aloe vera (/ˈælouɪ:/ or /ˈælou/) is a succulent plant species of the genus Aloe. It grows wild in tropical climates around the world and is cultivated for agricultural and medicinal uses. Aloe also is used for decorative purposes and grows successfully*

- Description -

Aloe vera is a stemless or very short-stemmed succulent plant growing to 60–100 cm (24–39 in) tall, spreading by offsets. The leaves are thick and fleshy, green to grey-green, with some varieties showing white flecks on their upper and lower stem surfaces. The margin of the leaf is serrated and has small white teeth. The flowers are produced in summer on a spike up to 90 cm (35 in) tall, each flower being pendulous, with a yellow tubular corolla 2–3 cm (0.8–1.2 in) long. Like other Aloe species, Aloe vera forms arbuscular mycorrhiza, a symbiosis that allows the plant better access to mineral nutrients in soil.

Aloe vera leaves contain phytochemicals under study for possible bioactivity, such as acetylated mannans, polymannans, anthraquinone C-glycosides, anthrones, other anthraquinones, such as emodin, and various lectins.

- Uses -

Under the guidelines of California Proposition 65, orally ingested non-decolorized aloe vera leaf extract has been listed by the OEHHA, along with goldenseal, among "chemicals known to the state to cause cancer or reproductive toxicity.

- Traditional medicine -

Aloe vera is used in traditional medicine as a multipurpose skin treatment. In Ayurvedic medicine it is called kathalai, as are extracts from agave.

- Research -

There is little scientific evidence of the effectiveness or safety of Aloe vera extracts for either cosmetic or medicinal purposes. A research study finding positive evidence is frequently contradicted by other studies.

Despite this, the cosmetic and alternative medicine industries regularly make claims regarding the soothing, moisturizing, and healing properties of aloe vera.



Matricaria Chamomilla

* *Matricaria chamomilla* (synonym: *Matricaria recutita*), commonly known as chamomile is an annual plant of the composite family Asteraceae. *M. chamomilla* is the most popular source of the herbal product chamomile, although other species are also used as chamomile.

- Description -

M. chamomilla has a branched, erect and smooth stem, which grows to a height of 15–60 cm (6-24 inches). The long and narrow leaves are bipinnate or tripinnate.

The flowers are borne in paniculate flower heads (capitula). The white ray florets are furnished with a ligule, while the disc florets are yellow. The hollow receptacle is swollen and lacks scales. This property distinguishes German chamomile from corn chamomile (*Anthemis arvensis*), which has a receptacle with scales. The flowers bloom in early to midsummer, and have a strong, aromatic smell.



- Distribution -

M. chamomilla can be found near populated areas all over Europe and temperate Asia, and it has been widely introduced in temperate North America and Australia. It often grows near roads, around landfills, and in cultivated fields as a weed, because the seeds require open soil to survive.

- Herbalism -

German chamomile is used in herbal medicine for a sore stomach, irritable bowel syndrome, and as a gentle sleep aid. It is also used as a mild laxative and is anti-inflammatory and bactericidal. It can be taken as an herbal tea, two teaspoons of dried flower per cup of tea, which should be steeped for 10 to 15 minutes while covered to avoid evaporation of the volatile oils.



The marc should be pressed because of the formation of a new active principle inside the cells, which can then be released by rupturing the cell walls, though this substance only forms very close to boiling point. For a sore stomach, some recommend taking a cup every morning without food for two to three months. It has been studied as a mouthwash against oral mucositis and may have acaricidal properties against certain mites, such as *Psoroptes cuniculi*. [citation needed] One of the active ingredients of its essential oil is the terpene bisabolol. Other active ingredients include farnesene, chamazulene, flavonoids (including apigenin, quercetin, patuletin and luteolin) and coumarin. Dried chamomile has a reputation (among herbalists) for being incorrectly prepared because it is dried at a temperature above the boiling point of the volatile components of the plant.

Thymus Serpyllum

* *Thymus serpyllum*, known by the common names of Breckland thyme, wild thyme or creeping thyme, is a species of flowering plant in the mint family Lamiaceae, native to most of Europe and North Africa. It is a low, usually prostrate subshrub growing to 2 cm (1 in) tall with creeping stems up to 10 cm (4 in) long.

The oval evergreen leaves are 3–8 mm long. The strongly scented flowers are either lilac, pink-purple, magenta, or a rare white, all 4–6 mm long and produced in clusters. The hardy plant tolerates some pedestrian traffic and produces odors ranging from heavily herbal to lightly lemon, depending on the variety.



- Description -

Wild thyme is a creeping dwarf evergreen shrub with woody stems and a taproot. It forms matlike plants that root from the nodes of the squarish, limp stems. The leaves are in opposite pairs, nearly stalkless, with linear elliptic round-tipped blades and untoothed margins. The plant sends up erect flowering shoots in summer. The usually pink or mauve flowers have a tube-like calyx and an irregular straight-tubed, hairy corolla. The upper petal is notched and the lower one is larger than the two lateral petals and has three flattened lobes which form a lip. Each flower has four projecting stamens and two fused carpels. The fruit is a dry, four-chambered schizocarp.

- Distribution -

Wild thyme is native to the palearctic zone of Europe and Asia. It is a plant of thin soils and can be found growing on sandy-soiled heaths, rocky outcrops, hills, banks, roadsides and riverside sand banks. Wild thyme is one of the plants on which both the Common blue butterfly and large blue butterfly larvae feed and it is also attractive to bees.



- Cultivation -

Creeping and mounding variants of *T. serpyllum* are used as border plants and ground cover around gardens and stone paths. It may also be used to replace a bluegrass lawn to xeriscape low to moderate foot traffic areas due to its tolerance for low water and poor soils.

Numerous cultivars have been produced, of which 'Pink Chintz' has gained the Royal Horticultural Society's Award of Garden Merit. A miniature creeping form is 'Elfin

Ocimum Basilicum (basil)

**Ocimum basilicum, commonly known as basil, is an aromatic annual herb and an important economic crop*

- Description -

Ocimum basilicum is an aromatic, annual herb, 0.3-0.5 metres tall, but some cultivars can reach up to 1 m. The plant is almost hairless. Some cultivars, such as the 'Dark Opal', have leaves and stems deep purple in colour. The leaves are ovate, often puckered, flowers white or pink, and fruits have four small nutlets, which are mucilaginous when wet.

*Ocimum basilicum is closely related to and frequently confused with *Ocimum africanum* and *Ocimum americanum*, but they can be identified on the basis of indumentum (hair distribution) and flower size. Lemon-scented cultivars are usually the result of crosses between *O. basilicum* and *O. africanum*.*

- Uses -

Basil is used to flavour soups and sauces and is the main ingredient of pesto sauce. The leaves can be eaten as a salad. Basil is also used in perfumery, soap-making, and to flavour liqueurs. The seeds are edible, and when soaked in water become mucilaginous. In parts of the Mediterranean they are made into a refreshing drink known as cherbet tokhum.



Basil is widely used in systems of traditional medicine, including Ayurveda and traditional Chinese medicine. It is used for treating digestive system disorders, such as stomach ache and diarrhoea, kidney complaints, and infections. In Africa, for example, it is used for treating whooping cough and various types of fever. The leaves are pulped in water to make ear- and eye-drops in parts of west Africa, and a leaf decoction is used for treating coughs. The leaves are used to make an insecticide that can protect stored crops from beetle damage.

Nigella Sativa - Black Cumin

* In English, *Nigella sativa* and its seed are variously called black-caraway, black-cumin, fennel-flower, nigella, nutmeg-flower, Roman-coriander, and kalonji (from Hindi). Blackseed and black caraway may also refer to *Bunium persicum*

- Description -

Nigella sativa (black-caraway, also known as nigella or kalonji), often called black cumin, is an annual flowering plant in the family Ranunculaceae, native to south and southwest Asia.

Nigella sativa grows to 20–30 cm (7.9–11.8 in) tall, with finely divided, linear (but not thread-like) leaves. The flowers are delicate, and usually colored pale blue and white, with five to ten petals.

The black caraway fruit is a large and inflated capsule composed of three to seven united follicles, each containing numerous seeds which are used as spice, sometimes as a replacement for black cumin (*Bunium bulbocastanum*).

- Uses -

The seeds of *Nigella sativa* are used as a spice in Indian and Middle Eastern cuisines. The black seeds taste like a combination of onions, black pepper and oregano. They have a pungent bitter taste and smell.



The dry-roasted nigella seeds flavor curries, vegetables and pulses. It can be used as a "pepper" in recipes with pod fruit, vegetables, salads and poultry. In some cultures, the black seeds are used to flavor bread products. It is also used as part of the spice mixture panch phoron (meaning a mixture of five spices) and by itself in many recipes in Bengali cuisine and most recognizably in naan bread. *Nigella* is also used in Armenian string cheese, a braided string cheese called majdouleh or majdouli in the Middle East.



Arctium Lappa

* *Arctium lappa*, commonly called greater burdock, gobō, edible burdock, lappa, beggar's buttons, thorny burr, or happy major is a Eurasian species of plants in the sunflower family, cultivated in gardens for its root used as a vegetable. It has become an invasive weed of high-nitrogen soils in North America, Australia, and other regions.

- Description -

Greater Burdock is a biennial plant, rather tall, reaching as much as 3 m (10 ft). It has large, alternating, cordiform leaves that have a long petiole and are pubescent on the underside.

The flowers are purple and grouped in globular capitula, united in clusters. They appear in mid-summer, from July to September. The capitula are surrounded by an involucre made out of many bracts, each curving to form a hook, allowing them to be carried long distances on the fur of animals. The fruits are achenes; they are long, compressed, with short pappuses.

The fleshy tap-root can grow up to 1 m (3 ft 3 in) deep.

- Chemical constituents -

Burdock roots contain mucilage, sulfurous acetylene compounds, polyacetylenes and bitter guaianolide-type constituents.[citation needed] Seeds contain arctigenin, arctiin, and butyrolactone lignans.

- Uses -

Dried burdock roots (*Bardanae radix*) are used in folk medicine as a diuretic, diaphoretic, and a blood purifying agent. Anecdotal reports from the 19th century suggest that this medicinal plant has also been used by the Ojibwa tribe, and today, in form of an ingredient in Essiac tea for the alternative treatment of some cancers. As an oily macerate, it is a component of some cosmetics, shampoos and hair care products. The seeds of greater burdock are employed in traditional Chinese medicine particularly for skin conditions and in cold/flu formulas, under the name niubangzi



Mentha Piperita (peppermint)

* Peppermint (*Mentha × piperita*, also known as *M. balsamea* Willd.) is a hybrid mint, a cross between watermint and spearmint. The plant, indigenous to Europe and the Middle East, is now widespread in cultivation in many regions of the world. It is found wild occasionally with its parent species.

- Description -

PEPPERMINT (*Mentha piperita*) is a popular herb that can be used in numerous forms (ie, oil, leaf, leaf extract, and leaf water).

Peppermint oil has the most uses, and use data on the oil are considered relevant to the leaf extract formulations as well. This herbal preparation is used in cosmeceuticals, personal hygiene products, foods, and pharmaceutical products for both its flavoring and fragrance properties.

* Peppermint oil possesses a fresh sharp menthol odor and a pungent taste followed by a cooling sensation. It also has a variety of therapeutic properties and is used in aromatherapy, bath preparations, mouthwashes, toothpastes, and topical preparations. Topical preparations of peppermint oil have been used to calm pruritus and relieve irritation and inflammation.

Their frequent application to impaired skin could contribute to the sensitization rates seen. Numerous allergic contact dermatitis reactions to peppermint oil have been described, many of which are linked to both perioral and intraoral disorders.

Although peppermint oil is known for its many properties, its role as a sensitizer should be recognized so as to aid in the diagnosis of both dermatitis and oral conditions and to allow the initiation of proper avoidance measures.



- Uses -

Peppermint is the oldest and most popular flavour of mint-flavoured confectionery [citation needed] and is often used in tea and for flavouring ice cream, confectionery, chewing gum, and toothpaste.

Peppermint can also be found in some shampoos, soaps and skin care products. Menthol activates cold-sensitive TRPM8 receptors in the skin and mucosal tissues, and is the primary source of the cooling sensation that follows the topical application of peppermint oil. Peppermint flowers are large nectar producers and honey bees, as well as other nectar harvesting organisms, forage them heavily. A mild, pleasant varietal honey can be produced if there is a sufficient area of plants.

Rubus Fruticosus - Blackberry

* The blackberry is an edible fruit produced by many species in the Rubus genus in the Rosaceae family, hybrids among these species within the Rubus subgenus, and hybrids between the Rubus and Idaeobatus subgenera. The taxonomy of the blackberries has historically been confused because of hybridization and apomixis, so that species have often been grouped together and called species aggregates. For example, the entire subgenus Rubus has been called the Rubus fruticosus aggregate, although the species R. fruticosus is considered a synonym of R. plicatus.

- Description -

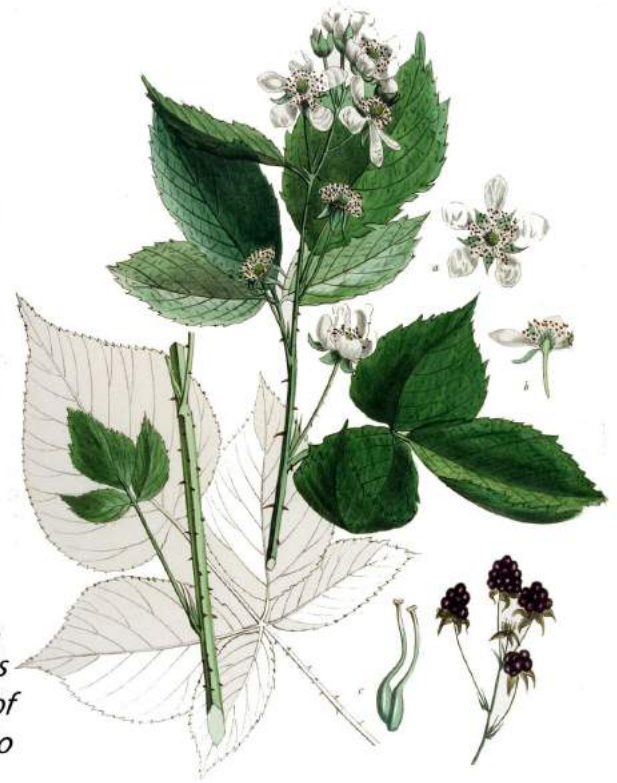
What distinguishes the blackberry from its raspberry relatives is whether or not the torus (receptacle or stem) 'picks-with' (i.e. stays with) the fruit. When picking a blackberry fruit, the torus does stay with the fruit. With a raspberry, the torus remains on the plant, leaving a hollow core in the raspberry fruit.

The term 'bramble,' a word meaning any impenetrable thicket, has traditionally been applied specifically to the blackberry or its products, though in the United States it applies to all members of the Rubus genus. In the western US, the term caneberry is used to refer to blackberries and raspberries as a group rather than the term bramble.

The usually black fruit is not a berry in the botanical sense of the word. Botanically it is termed an aggregate fruit, composed of small drupelets. It is a widespread and well-known group of over 375 species, many of which are closely related apomictic microspecies native throughout Europe, northwestern Africa, temperate western and central Asia and North and South America

- Uses -

As a result of blackberries belonging to the same genus as raspberries, they share the same diseases including anthracnose which can cause the berry to have uneven ripening and sap flow may also be slowed. They also share the same remedies including the Bordeaux mixture, a combination of lime, water and Copper(II) sulfate.



The rows between blackberry plants must be free of weeds, blackberry suckers and grasses which may lead to pests or diseases. Fruit growers are selective when planting blackberry bushes as wild blackberries may be infected and gardeners are recommended to purchase only certified disease-free plants.

The spotted-wing drosophila, *Drosophila suzukii* is a serious pest of blackberries. Unlike its vinegar fly relatives which are primarily attracted to rotting or fermented fruit, *D. suzukii* attacks fresh, ripe fruit by laying eggs under the soft skin.

The larvae hatch and grow in the fruit, destroying the fruit's commercial value.

Another pest is *Amphorophora rubi*, known as the Blackberry Aphid, which not only eats blackberries but raspberries as well. *Byturus tomentosus* (Raspberry beetle), *Lampronia corticella* (Raspberry Moth) and *Anthonomus rubi* (Strawberry blossom weevil) are also known to infest blackberries.

Althaea Officinalis

* *Althaea officinalis* (marsh-mallow, marsh mallow, or common marshmallow) is a perennial species indigenous to Europe, Western Asia, and North Africa, which is used as a medicinal plant and ornamental plant.

A confection made from the root since ancient Egyptian time evolved into today's marshmallow treat.

- Description -

The stems, which die down in the autumn, are erect, 3 to 4 ft (0.91 to 1.22 m), simple, or putting out only a few lateral branches. The leaves, shortly petioled, are roundish, ovate-cordate, 2 to 3 in (51 to 76 mm) long, and about 1 1/4 inch broad, entire or three to five lobed, irregularly toothed at the margin, and thick. They are soft and velvety on both sides, due to a dense covering of stellate hairs. The flowers are shaped like those of the common mallow, but are smaller and of a pale colour, and are either axillary, or in panicles, more often the latter.

The stamens are united into a tube, the anthers, kidney-shaped and one-celled. The flowers are in bloom during August and September, and are followed, as in other species of this order, by the flat, round fruit which are popularly called "cheeses".



The common mallow is frequently called "marsh mallow" by country people, but the true marsh mallow is distinguished from all the other mallows growing in Great Britain by the numerous divisions of the outer calyx (six to nine cleft), by the hoary down which thickly clothes the stems and foliage, and by the numerous panicles of bluish-coloured flowers, paler than the common mallow. The roots are perennial, thick, long and tapering, very tough and pliant, whitish yellow outside, white and fibrous within.

The entire plant, particularly the root, abounds with a mild mucilage, which is emollient to a much greater degree than the common mallow.[citation needed] The generic name, *Althaea*, is derived from the Greek (to cure), from its healing properties. The name of the family, *Malvaceae*, is derived from the Greek (soft; Latin "mollis"), from the special qualities of the mallows in softening and healing.



- Uses -

The leaves, flowers and the root of *A. officinalis* (marshmallow) have been used in traditional herbal medicine. This use reflected in the name of the genus, which comes from the Greek (althein), meaning "to heal".

Marshmallow is traditionally used for irritation of mucous membranes, including use as a gargle for mouth and throat ulcers and gastric ulcers. The root was used in the Middle Ages for sore throat

Urtica Dioica (common nettle)

* *Urtica dioica*, often called common nettle or stinging nettle (although not all plants of this species sting), is a herbaceous perennial flowering plant in the family *Urticaceae*. It is native to Europe, Asia, northern Africa, and western North America, and introduced elsewhere. It is the best-known member of the nettle genus *Urtica*. The species is divided into six subspecies, five of which have many hollow stinging hairs called trichomes on the leaves and stems, which act like hypodermic needles, injecting histamine and other chemicals that produce a stinging sensation when contacted by humans and other animals. The plant has a long history of use as a source of medicine, food, and fibre.



- Description -

Urtica dioica is a dioecious, herbaceous, perennial plant, 1 to 2 m (3 to 7 ft) tall in the summer and dying down to the ground in winter. It has widely spreading rhizomes and stolons, which are bright yellow, as are the roots. The soft, green leaves are 3 to 15 cm (1 to 6 in) long and are borne oppositely on an erect, wiry, green stem. The leaves have a strongly serrated margin, a cordate base, and an acuminate tip with a terminal leaf tooth longer than adjacent laterals. It bears small, greenish or brownish, numerous flowers in dense axillary inflorescences.

The leaves and stems are very hairy with nonstinging hairs, and in most subspecies, also bear many stinging hairs (trichomes), whose tips come off when touched, transforming the hair into a needle that can inject several chemicals: acetylcholine, histamine, 5-HT (serotonin), moroidin, leukotrienes, and possibly formic acid. This mixture of chemical compounds causes a painful sting or paresthesia from which the species derives one of its common names, stinging nettle, as well as the colloquial names burn nettle, burn weed, and burn hazel



- Uses -

Nettles have been used for a variety of medicinal purposes. A tonic prepared from the leaves is still among the most popular plant remedies used today.

One traditional remedy for rheumatism involves deliberately stinging the afflicted area with nettle leaves! While this may seem strange, research has shown that nettle stings have anti-inflammatory properties that disrupt the NF- κ B pathway and inhibit other inflammatory responses.

Extracts of the root are used to treat benign prostate hyperplasia. Scientists have identified a variety of biochemical properties in extracts of nettles that support their uses in herbal medicine.

Atropa Belladonna

- Description -

Belladonna, more commonly known as *deadly night-shade*, *Atropa belladonna*, *devil's cherries*, *devil's herb*, *divale*, *dwale*, *dwayberry*, *great morel*, *naughty man's cherries*, and *poison black cherry*, is a perennial herb that has been valued for its medicinal properties for over five centuries.

Belladonna is a member of the *Solanaceae* (nightshade) family and can be identified by its bell-shaped, purple flowers and cherry-sized green berries that mature to a dark purple or black color.

The tall, branching plant can grow to a height of at least 5 ft (1.5 m), and is native to Europe, North Africa, and Asia and cultivated in North America and the United Kingdom. *Belladonna* has also been introduced to a number of places, including the United States and Ireland and now grows wild.



Belladonna leaves are large (up to 10 in [25.4 cm] in length) and grow in pairs on either side of the plant stem. Near the flowers or blossoms, one of each leaf pair is noticeably smaller in size. Both the leaves and root have a sharp, unpleasant odor and bitter taste. As the name *deadly nightshade* suggests, the herb is highly toxic if taken even when taken in extremely low concentrations.

- Uses -

Belladonna has a long history of medicinal applications in healthcare. *Belladonna* alkaloids are anticholinergic, which means that it works by blocking the certain nerve impulses involved in the parasympathetic nervous system, which regulates certain involuntary bodily functions or reflexes, including pupil dilation, heart rate, secretion of glands and organs, and the constriction of the bronchioles in the lungs and the alimentary canal (digestive tract). *Belladonna* relaxes the smooth muscles of the internal organs and inhibits or dries up secretions (e.g., perspiration, mucous, breast milk, and saliva).

Belladonna alkaloids, the active ingredients of the plant, include atropine and scopolamine. These alkaloids are extracted from the leaves and root of the plant and administered either alone or in combination with other herbal remedies or prescription medications. However even tiny doses are toxic and should only be taken by prescription.

Belladonna alkaloids are used to treat a variety of symptoms and conditions, including:

* *Gastrointestinal disorders*. Because the alkaloids relax the smooth muscles of the gastrointestinal tract and reduces stomach acid secretions, it is useful in treating colitis, diverticulitis, irritable bowel syndrome, colic, diarrhea, and peptic ulcer.

* *Asthma*. By relaxing the bronchioles, belladonna alleviates the wheezing symptoms of an asthma attack.

* *Excessive sweating*. *Belladonna* slows gland and organ secretion, which makes it useful in controlling conditions that cause excessive sweating.



* *Nighttime incontinence*. *Belladonna* acts as a diuretic, and can be helpful in treating excessive nighttime urination and incontinence.

* *Headaches and migraines*. The pain-relieving properties of atropine, a belladonna alkaloid, are useful in treating headaches.

* *Muscle pains and spasms*. *Belladonna* is frequently prescribed to ease severe menstrual cramps.

* *Motion sickness*. *Scopolamine*, an alkaloid of belladonna, is helpful in treating motion sickness and vertigo.

* *Parkinson's disease*. *Belladonna* can alleviate the excessive sweating and salivation associated with the disease, as well as controlling tremors and muscle rigidity.

* *Biliary colic*. Muscle spasm, or colic, of the gallbladder and liver can be relieved through the muscle relaxing properties of belladonna.

Orchis Morio

* *Orchis mascula*, the early-purple orchid, is a species of flowering plant in the orchid family, Orchidaceae.

- Description -

Orchis mascula is a perennial herbaceous plant with stems up to 50–60 centimetres (20–24 in) of height, green at the base and purple on the apex. The root system consists of two tubers, rounded or ellipsoid. The leaves, grouped at the base of the stem, are oblong-lanceolate, pale green, sometimes with brownish-purple speckles.

The inflorescence is 7.5–12.5 centimetres (3–5 in) long and it is composed of 6 to 20 flowers gathered in dense cylindrical spikes. The flower size is about 2.5 centimetres (0.98 in) and the color varies from pink to violet. The lateral sepals are ovate-lanceolate and erect, the median one, together with the petals, is smaller and cover the gynostegium. The labellum is three-lobed and convex, with crenulated margins and the basal part clearer and dotted with purple-brown spots. The spur is cylindrical or clavate, horizontal or ascending. The gynostegium is short, with reddish-green anthers. It blooms from April to June.



- Cultivation -

Prefers a sunny position and a good loamy soil. Requires a deep rich soil. Grows well in a sunny dry border or on a scree. Orchids are, in general, shallow-rooting plants of well-drained low-fertility soils. Their symbiotic relationship with a fungus in the soil allows them to obtain sufficient nutrients and be able to compete successfully with other plants. They are very sensitive to the addition of fertilizers or fungicides since these can harm the symbiotic fungus and thus kill the orchid.

This symbiotic relationship makes them very difficult to cultivate, though they will sometimes appear uninvited in a garden and will then thrive. Transplanting can damage the relationship and plants might also thrive for a few years and then disappear, suggesting that they might be short-lived perennials.

Plants seem to be immune to the predations of rabbits. The flowers have a powerful scent that is not particularly pleasant. Those forms with lighter coloured flowers have a more pleasant scent. Cultivated plants are very susceptible to the predation of slugs and snails. Plants can occasionally appear in lawns where they will increase freely if allowed to set seed. The lawn should not be mown early in the year before or immediately after flowering. If you want to try establishing plants in a lawn then plant out the bulbs whilst the plant is dormant, preferably in the autumn.

Bulbs can also be transplanted with a large ball of soil around the roots when they are in leaf, they are impatient of root disturbance.



- Uses -

A flour called *salep* or *sachlav* is made of the ground tubers of this or some other species of orchids. It contains a nutritious starch-like polysaccharide called *glucomannan*. In some magical traditions, its root is called *Adam and Eve Root*. It is said that witches used tubers of this orchid in love potions.

Achillea Millefolium

**Achillea millefolium, commonly known as yarrow /'jærɒs/ or common yarrow, is a flowering plant in the family Asteraceae. It is native to temperate regions of the Northern Hemisphere in Asia, Europe, and North America. It has been introduced as a feed for live stock in places like New Zealand and Australia. However, it is a weed in those places and sometimes also in its native regions.*

- Description -

A. millefolium is an erect, herbaceous, perennial plant that produces one to several stems 0.2–1 m (0.66–3.28 ft) in height, and has a spreading rhizomatous growth form. Leaves are evenly distributed along the stem, with the leaves near the middle and bottom of the stem being the largest. The leaves have varying degrees of hairiness (pubescence). The leaves are 5–20 cm (2.0–7.9 in) long, bipinnate or tripinnate, almost feathery, and arranged spirally on the stems. The leaves are cauline, and more or less clasping.

The inflorescence has 4 to 9 phyllaries and contains ray and disk flowers which are white to pink. The generally 3 to 8 ray flowers are ovate to round. Disk flowers range from 15 to 40. The inflorescence is produced in a flat-topped capitulum cluster and the inflorescences are visited by many insects, featuring a generalized pollination system. The small achene-like fruits are called cypsela. The plant has a strong, sweet scent, similar to that of chrysanthemums

- Distribution -

Yarrow grows from sea level to 3,500 metres (11,500 ft) in elevation. The plant commonly flowers from May through June. Common yarrow is frequently found in the mildly disturbed soil of grasslands and open forests. Active growth occurs in the spring. The plant is native to Eurasia and is found widely from the UK to China.

- Cultivation -

Achillea millefolium is cultivated as an ornamental plant by many plant nurseries. It is planted in gardens and natural landscaping settings of diverse climates and styles.

They include native plant, drought-tolerant, and wildlife gardens.

The plant is a frequent component of butterfly gardens. The plant prefers well-drained soil in full sun, but can be grown in less ideal conditions



Galium Verum

**The frothy, yellow flowers of Lady's Bedstraw scent the air of our grasslands, chalk downlands, meadows, heaths and sand dunes with honey. The stems can be so dense with flowers that they carpet the grass with yellow from June to September. Dried, this flower has the scent of new-mown hay, and its name is probably derived from the tradition of stuffing straw mattresses with it, particularly those of women about to give birth*

- Description -

Lady's bedstraw has adapted very well to dry habitats as its taproot is stout, deep-reaching and abundantly branched, and it is also rhizomatous. Its needle-like leaves are also a typical adaptation for xerophytes (plants that survive in dry environments).

Lady's bedstraw is Finland's only yellow-flowered bedstraw – the others are more-or-less white.

Colourful lady's bedstraw has been one of Finland's most important wild dying plants: the root yields a splendid coral red colour and the flower turns things yellow. As a medicinal herb it has also been used to treat swelling, kidney and bladder troubles, and it has been administered both internally and topically.

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Its efficiency lies in its ability to contract membranous tissue and relieve cramps. If the patient is already in a place beyond hope, the sweet-smelling stems can be laid under the body in the coffin, for which reason it was earlier known in Finland as corpse-hay. According to an ancient and well-spread legend, lady's bedstraw received its exceptional yellow colour when it was used by the Virgin Mary to soften the baby Jesus's coffin. When dried, the species retains the scent of new mown hay. The name, lady's bedstraw dates back to a time when palliasses were stuffed with straw.



- Uses -

In the past, the dried plants were used to stuff mattresses, as the coumarin scent of the plants acts as a flea killer.

The flowers were also used to coagulate milk in cheese manufacture and, in Gloucestershire, to colour the cheese double Gloucester.

The plant is also used to make red madder-like and yellow dyes. In Demark, the plant (known locally as gul snerre) is traditionally used to infuse spirits, making the uniquely Danish drink bjæsk.

Melissa officinalis - Lemon Balm

**Lemon balm (Melissa officinalis), a member of the mint family, is considered a calming herb. It was used as far back as the Middle Ages to reduce stress and anxiety, promote sleep, improve appetite, and ease pain and discomfort from indigestion (including gas and bloating, as well as colic). Even before the Middle Ages, lemon balm was steeped in wine to lift the spirits, help heal wounds, and treat venomous insect bites and stings. Today, lemon balm is often combined with other calming, soothing herbs, such as valerian, chamomile, and hops, to promote relaxation. It is also used in creams to treat cold sores (oral herpes).*

- Description -

Native to Europe, lemon balm is grown all over the world. It is grown not only in herb gardens or to attract bees, but also in crops for medicine, cosmetics, and furniture polish manufacturing. The plant grows up to 2 feet high, sometimes higher if not maintained. In the spring and summer, clusters of small, light yellow flowers grow where the leaves meet the stem.

The leaves are very deeply wrinkled and range from dark green to yellowish green in color, depending on the soil and climate. If you rub the leaves, your fingers will smell tart and sweet, like lemons. The leaves are similar in shape to mint leaves, and come from the same plant family.

- Cultivation -

Balm grows freely in any soil and can be propagated by seeds, cuttings or division of roots in spring or autumn. If in autumn, preferably not later than October, so that the offsets may be established before the frosts come on. The roots may be divided into small pieces, with three or four buds to each, and planted 2 feet apart in ordinary garden soil. The only culture required is to keep them clean from weeds and to cut off the decayed stalks in autumn, and then to stir the ground between the roots.

- Uses -

Carminative, diaphoretic and febrifuge. It induces a mild perspiration and makes a pleasant and cooling tea for feverish patients in cases of catarrh and influenza. To make the tea, pour 1 pint of boiling water upon 1 oz. of herb, infuse 15 minutes, allow to cool, then strain and drink freely. If sugar and a little lemon peel or juice be added it makes a refreshing summer drink



Balm is a useful herb, either alone or in combination with others. It is excellent in colds attended with fever, as it promotes perspiration. Used with salt, it was formerly applied for the purpose of taking away wens, and had the reputation of cleansing sores and easing the pains of gout.

Lemon balm is often used as a flavouring in ice cream and herbal teas, both hot and iced, often in combination with other herbs such as spearmint. It is also frequently paired with fruit dishes or candies. It can be used in fish dishes and is the key ingredient in lemon balm pesto



Hypericum Perforatum

**Hypericum perforatum, known as perforate St John's-wort, common Saint John's wort and St John's wort (/ˈsɪndʒənzwɜːrt/ sin-jənz-wurt), is a flowering plant in the family Hypericaceae. The common name "St John's wort" may be used to refer to any species of the genus Hypericum.*

Therefore, Hypericum

perforatum is sometimes called "common St John's wort" or "perforate St John's wort" in order to differentiate it. It is a medicinal herb with antidepressant activity and potent anti-inflammatory properties as an arachidonate 5-lipoxygenase inhibitor and COX-1 inhibitor

- Description -

Hypericum perforatum is native to parts of Europe and Asia but has spread worldwide as a cosmopolitan invasive weed, including to temperate regions of India, China, Canada, Africa, and the United States.

The common name "St John's wort" comes from its traditional flowering and harvesting on St John's Day, 24 June. The genus name Hypericum is derived from the Greek words hyper (above) and eikon (picture), in reference to the tradition of hanging plants over religious icons in the home during St John's Day, to ward off evil.

Perforate St John's wort is a herbaceous perennial plant with extensive, creeping rhizomes. Its stems are erect, branched in the upper section, and can grow to 1 m high. It has opposite, stalkless, narrow, oblong leaves that are 1–2 cm long.

The leaves are yellow-green in color, with scattered translucent dots of glandular tissue. The dots are conspicuous when held up to the light, giving the leaves the 'perforated' appearance to which the plant's Latin name refers. The flowers measure up to 2.5 cm across, have five petals, and are colored bright yellow with conspicuous black dots. The flowers appear in broad cymes at the ends of the upper branches, between late spring and early to mid summer. The sepals are pointed, with black glandular dots. There are many stamens, which are united at the base into three bundles. The pollen grains are ellipsoidal.

When flower buds (not the flowers themselves) or seed pods are crushed, a reddish/purple liquid is produced.



- Uses -

A wide range of studies support Hypericum's place in the treatment of depression. Effectiveness is comparable with standard antidepressants, while adverse events are lower than with conventional antidepressants. Interactions with other drugs and quality control issues may limit use.

Other areas of therapeutic research for St. John's wort include smoking cessation, premenstrual symptoms, physical symptoms due to mental disorders, and attention deficit hyperactivity disorder, as well as its possible role in treating cancer and HIV.

Aronia Melanocarpa

- Description -

Aronia is a genus of deciduous shrubs, the chokeberries, in the family Rosaceae, native to eastern North America and most commonly found in wet woods and swamps. The genus is usually considered to contain two or three species, one of which is naturalized in Europe. A fourth form that has long been cultivated under the name Aronia is now considered to be an intergeneric hybrid, Sorbaronia mitschurinii.



Chokeberries are cultivated as ornamental plants and as food products. The sour berries can be eaten raw off the bush, but are more frequently processed. They can be found in wine, jam, syrup, juice, soft spreads, tea, salsa, chili starters, extracts, beer, ice cream, gummies and tinctures. The name "chokeberry" comes from the astringency of the fruits, which create a sensation making one's mouth pucker.

Chokeberries are often mistakenly called chokecherries, which is the common name for Prunus virginiana. Further adding to the ambiguity, a variety of Prunus virginiana is named melanocarpa, readily confused with black chokeberry, commonly referred to as "black chokeberry" or "aronia". Aronia berries and chokecherries are both high in polyphenolic compounds, such as anthocyanins, yet the two plants are distantly related within the Rosaceae family

- Products and Uses -

The chokeberries are attractive ornamental plants for gardens. They are naturally understory and woodland edge plants, and grow well when planted under trees. Chokeberries are resistant to drought, insects, pollution, and disease. A number of cultivars, including A. arbutifolia 'Brilliant' and A. melanocarpa 'Autumn magic,' have been selected for their striking fall leaf color.

Aronia berries, also known as black chokeberries, have been gaining popularity among health-conscious consumers looking to add more superfoods to their diets. The small dark berries of the Aronia melanocarpa plant are packed with nutrients and antioxidants, such as vitamin C and anthocyanins, and offer wonderful health benefits for those who want to improve their health through better nutrition.



Fresh aronia berries are commonly used to make juice, jam, syrup, and wine. Dried aronia berries, which are available in many health food stores, can be eaten as a healthy snack, added to muesli, or used in muffins and other baked goodies. In some countries, dried aronia berries are used to make antioxidant-rich herbal tea. If you haven't yet been convinced that you should throw a bag of organic dried aronia berries in your shopping cart next time you visit your favorite health food store, continue reading. In this article, we explain in detail why aronia berries are so good for you and how you can reap the nutritional and health benefits of this superfood.