The Physic Garden of
The Worshipful Company of Barbers
at Barber-Surgeons' Hall

Contents

GARDENS IN THE CITY OF LONDON

In the 13th and 14th centuries, the City of London had important royal, religious and lay residences and most of them had gardens, especially the religious fraternities. St Mary Spital was founded on the East side of Bishopsgate in 1197. The Franciscans at Greyfriars, the Dominicans at Blackfriars, the Crutched Friars near Tower Hill and the Augustinians in Old Broad Street were all established by 1253. These medieval gardens had a variety of fruit trees, vines and many herbs for healing, cooking and strewing. Vegetables were less important because this was an age of meat eating but lettuce, spinach, cucumber and cabbage were grown. Some gardens had beehives, because sugar was a rare commodity and sweetness was desired in puddings and cakes. There were lawns of camomile and thyme for leisure use and flowerbeds were planted with a variety of plants including violets, roses, lilies, irises and peonies.

By the early 1600s the City's population had rapidly increased to 200,000, and the demand for housing led to a considerable loss of gardens. John Stow wrote in 1598 that some streets such as Aldgate and Cheapside were now "fully replenished with buildings." The gardens surviving in the centre belonged to a few important people and to the City Livery Companies, some of which had acquired former religious institutions and their gardens, following the Dissolution of the Monasteries by King Henry VIII.

LIVERY COMPANY GARDENS

By 1500 there were 26 halls of Livery Companies and by 1600 there were 46 halls, of which 24 had gardens. The Tylers' and Bricklayers' Company had a Hall and garden off Leadenhall Street. The Pewterers' Hall stood in a garden with a fine bowling green and vinery. The Brewers' Company had a small enclosed garden and the Girdlers' Company had a fine walled garden with a mulberry and a vine. The Barbers' Company had a

Physic garden for medicinal herbs. The Bakers' Company purchased a mansion in Sigrymes Lane (now Harp Lane) in 1506 which had a garden running down to the river Thames with grapevines, herbs and a bowling green. The Drapers' Company had a garden open to the public which had previously been owned and greatly enlarged by Thomas Cromwell. The Grocers' Company had a large garden and orchard, whilst that of the Parish Clerks in Bishopsgate was of a more modest size.

Today, nine companies still have formal gardens in the City of London and although some are small, it is good to find that the tradition of Livery Company gardens survives. These companies are the Barbers, Drapers, Girdlers, Goldsmiths, Merchant Taylors, Plaisterers, Saddlers, Salters, and Stationers. Some other companies have delightful courtyards in which a variety of planters are used for floral displays, e.g. the Apothecaries and the Tallow Chandlers. The new Butchers' Hall which opened in September 2019 has a roof garden.

THE PHYSIC GARDEN AT BARBER-SURGEONS' HALL

The Barbers' Company, founded in 1308, has had a Hall on or very close to the current site since 1445 and it is possible that it had a garden as early as then. In 1540 the Company amalgamated with the Surgeons' Guild to form the Barber-Surgeons' Company, hence the name of the Hall today, but in 1745 the surgeons left to create what would become The Royal College of Surgeons, when the Company reverted to its original name, The Worshipful Company of Barbers of London.

John Gerard (1545-1612) was elected Master of the Company in 1607. He was a surgeon, a renowned plantsman, author and gardener. He wrote a famous and influential Herbal in 1597 describing about 1500 plants with their medicinal and domestic uses. In addition to supervising the garden at the Hall, he also had his own garden nearby at Holborn, in which he cultivated plants from all over the world. Twenty years earlier, in 1577, he was appointed superintendent to the gardens of William Cecil, Lord Burghley, the Queen's Lord High Treasurer, at his homes in the Strand and also at Theobalds, Hertfordshire, a position he held for more than 20 years, until Lord Burghley's death in 1598. In 1587, the College of Physicians established a physic garden in the City of London with Gerard as its curator, a position he held until 1604. He was appointed Herbarist to King James I in 1605, remaining in this position until his death in 1612 when he was buried at St. Andrews Church, Holborn.

There are few references to a garden in the Company Annals but it is known that in October 1555 the Clerk was given an allowance for "trimming, sweeping and weeding the garden." On 10th August 1587 it was recorded "that the garden on the backside of the hall shall be walled and bricked handsomely round about." The first specific reference to a herb garden as such was at a meeting of the Court on 16th July 1597 when it was proposed that a piece of ground be found "fit to make a garden for to plant all kind of herbes in root plants and such like as to the said Mr Gerard being a skilful Herbalist should think meet of for the Worship of this society." It is also recorded in the Annals that in 1630 the company bought 100 sweet briars (***Rosa rubiginosa***, Eglantine rose) to make a stout hedge around the Garden and also plants of rosemary, strawberry, violets and vines.

The site of the present garden is of great historical interest. In AD 120 the Roman Emperor Hadrian ordered the construction of a stone fortress in the NW corner of what was then the small trading port of Londinium. This formed the original sections of what was to become the Roman wall, later extended to enclose the City of London in an arc from the Tower to Blackfriars. Defensive bastions were added in later years and the Physic Garden is situated within the bay created by Bastion 13 on the western side of the site of the original fortress.

In 1666, the Hall was destroyed by the Great Fire but the garden prevented the flames from reaching the famous Anatomical Theatre, which had been designed and built by Inigo Jones in 1638. The second Hall, which opened in 1675 did not have a garden. It was destroyed in a massive bombing raid in December 1940, and the third Hall was built and reopened in 1969.

The Court room of the Hall that was destroyed in the Second World War extended up to and included the Roman wall in its structure. One of the conditions imposed by the Corporation of the City of London on the rebuilding after the war was that the footprint of the new Hall should be moved 30 feet to the east, thus releasing the Roman wall and vacating the space where the Physic Garden has been created, which thus replaces the original garden that existed before the Great Fire.

On the initiative of Past Master Sir John McNee, the Physic Garden was conceived in 1967 and laid out by Past Master Sir Francis Avery Jones in 1987. It was constructed on what had become a derelict bomb site

by Liveryman David Jones of the Open Spaces Department of the Corporation of the City of London, who supplied original Victorian tile edging to define the plots.

The way in which the plants have been selected for the Garden

It was decided to present as wide a selection of plants as possible which have been used from the earliest times to the present day, illustrating their use in medicine and surgery, as well as their use in domestic and civic environments. An emphasis has been put on growing plants described in Gerard's Herbal of 1597, and on varieties which will provide a succession of flowers for pollinators over the seasons. The partly shaded site of the Garden and its heavy clay soil also influence the selection of plants suitable for inclusion.

The four main categories of plants in the Garden

1. Gerard plants related to surgery, dentistry, wounds and burns.

   Parsley, Self Heal, Spurge, Comfrey, Bugle, Great Burnet, Yarrow, Lady's Mantle, St. John's Wort and Solomon's Seal

2. Plants used to create pleasant smells, for strewing on the floor, for nosegays, perfumery, insect repellents and for dyeing and washing fabric.

   Rose, Sweet Woodruff, Cotton Lavender, Winter Savory, Rue, Lemon Balm, Meadowsweet, Oregano, Iris, Lavender, Hyssop, Tansy, Dyer's Woodruff and Soapwort.

3. Medicinal plants, formerly in the official pharmacopoeia, but no longer used.

   Lily of the Valley, Lungwort, Rhubarb and Valerian.

4. Plants from which modern pharmaceutical medicines have been produced with proven efficacy.

Camellia, Meadowsweet, Mandrake, Foxglove, Liquorice, Yellow Sweet Clover, Meadow Saffron, Yew, and Goat's Rue.

MEDICINES FROM PLANTS

Plants are the origin of over 40 major medicines whose value has been proven by scientifically controlled clinical trials and which are used worldwide today.

How were they found?

Some of these plants were discovered entirely by folk medicine, as with the Mandrake. But in other cases, the folk remedy was just the starting point for the development of a better medicine by means of scientific investigation and this was done in two ways:

a. a new use was discovered for the plant compound e.g. Foxglove

b. an entirely new medicine was synthesised from the plant compound e.g. Meadowsweet

However, folk medicine is not the only way in which our modern medicines have been discovered from plants. Valuable discoveries have been made in academic chemistry, from veterinary medicine (Melilotus), by large scale screening programmes (Taxus), and by perceptive observations of people on themselves.

How is the medicine actually obtained from the plant?

a. It is extracted directly from the plant, e.g. Foxglove, Meadow Saffron.

b. The plant provides the basic material for a semi-synthetic process, e.g. Yew.

c. The plant itself is no longer used, but the compounds in it have provided the basis for the synthetic production of new medicines, e.g. the Biguanides in Goat's Rue and Galantamine in Snowdrops.

The practice of **Herbal Medicine** is very different from orthodox western medicine. It consists of prescribing the whole plant, or part of it, and neither a pure substance extracted from the plant, nor a synthetic medicine. Herbal preparations have not been authenticated by therapeutic double-blind clinical trials and most merely act as a placebo.

⚠ **Please be aware that almost all plants are poisonous in one form or another with very few exceptions. Out of 370,000 known plants, only 25 vegetables are usually available for purchase and safe consumption. Plant chemicals, even ones that can be**

made into medicines, have mainly evolved for defensive reasons to deter herbivorous, insectivorous and fungal predators from the time plants first evolved about 470 million years ago. **Please do not try to eat any parts of the plants in the Garden and some are risky even to touch without adequate protection.** ⚠

A DESCRIPTION OF PLANTS IN THE GARDEN

Quotations taken from the old herbals of Gerard and Culpeper have used the original spelling which shows much variation.

Rear Bed

Camellia sinensis (Theaceae), Tea formerly **Thea sinensis**

The generic name commemorates Georg Kamel (1661-1706), a Moravian Jesuit pharmacist who set up a pharmacy in the Philippines in 1688 and sent many plants, drawings and notes back to England, where they were published in 1704 by the famous botanist John Ray.

Tea has been drunk in China since at least the 3rd century BC. It was first brought to Europe by the Dutch in 1610 and by 1750 had become the British national drink. In 1641, Nicholas Tulp, a Dutch physician, wrote "nothing is comparable to this plant. Those who use it are exempt from all maladies and reach an extreme old age." Catherine of Braganza brought a chest of tea with her from Portugal in 1662 for her marriage to King Charles II and she made it a fashionable drink in the Royal Court. Samuel Pepys described drinking tea for the first time, "a China drink", in his diary of 25th September 1660.

Tea contains **Caffeine**, **polyphenols** and **Theophylline**, which has been a good drug for asthma and chronic obstructive pulmonary disease, but the amount in a cup of tea is very low. Originally, it was used as a diuretic to treat the oedema of heart failure after 1902, having been isolated and identified in 1888 by Albrecht Kossel, a German biologist.

The majority of the possible but unproven health benefits are associated with drinking green tea, which has antioxidant properties and may help to prevent cardiovascular disease.

Our plant was donated by the Tregothnan Estate, Cornwall, where it is grown for commercial tea production, on the occasion of a visit by members of The Barbers' Company in April 2015, with the then Master, Sir Roger Vickers.

Glycyrrhiza glabra (Fabaceae), Liquorice

This is an ancient herb, grown and used medicinally for millennia in China and throughout Europe. The name is derived from the Greek *Glykis* sweet, *and Rhiza* root. The root is the source of liquorice and the main ingredient, **Glycyrrhizin**, is 50 times sweeter than sugar, hence its use to flavour and sweeten confectionary, tobacco and several craft beers.

The Greek historian, Herodotus, wrote about how the Scythian warriors endured long periods of thirst by chewing liquorice root and drinking mare's milk. Roman soldiers used it in a similar way to combat thirst on their long marches.

Theophrastus recommended its use for asthma and lung disorders, and combined with honey, it was applied to wounds and ulcers. Dioscorides used it for chest and stomach complaints, mouth ulcers and haemorrhoids.

It probably came to England at the end of the Crusades after 1244 with the Cluniac Monks, who planted it in the garden of their Priory in Pontefract, West Yorkshire, where liquorice lozenges were made and dispensed for coughs. Following the Dissolution of the Monasteries in the 1530s, liquorice was widely cultivated in Yorkshire, creating an industry which lasted until the Second World War, producing confectionary and the famous Pontefract Cakes.

"Root of liquorice is good against the rough harshnesse of the throat, it openeth the pipes of the lungs, when they be stuffed, and ripeneth the cough and bringeth forth flegme. The juice of liquorice is profitable against the heate of the stomacke and of the mouth. Being melted under the tongue it quencheth the thirst." (Gerard)

In the 1960s a semi-synthetic derivative of Glycyrrhizin called **Carbenoxolone** was found to be an effective treatment for peptic users, acid reflux and mouth ulcers. Its use continued until the 1980s when it was superseded by more modern therapy.

Unfortunately, excess of liquorice and also of **Carbenoxolone,** raises blood cortisol levels, leading to dangerous side effects of high blood pressure, low potassium and oedema, which can be fatal. (Pseudoaldosteronism). Liquorice consumption in confectionary needs to be cautious and if raised blood pressure fails to respond to modern drugs, enquiry should be made into liquorice intake.

Cynara cardunculus var. scolymus, (Asteraceae), Globe Artichoke

Cultivated in Europe since ancient times, and introduced to England by the Romans, it is still widely used as an herbal supplement because of possible benefits from its active ingredient **Cynarin** to digestive, liver and biliary disorders and its lipid lowering effects.

Gerard states, "it is best to eat the artichoke boyled, and is accounted a dainty dish, being pleasant to the taste, and good to procure bodily lust." He also used it as a cure for body odour as "it sendeth forth plenty of stinking urine, whereby the rank and rammish savour of the whole body is much amended."

Convallaria majalis (Asparagaceae), Lily of the Valley

The generic name is taken from the Latin *convallis, a valley,* the late medieval name being *Lilium convallium*. This sweetly scented woodland plant is very poisonous and contains cardiac glycosides, like those in the foxglove. It is less potent than foxglove and is not used in the UK to treat heart disease. According to European folklore it originally grew from where the tears fell from either the Virgin Mary or from Mary Magdalen. The flowers are a traditional part of a bride's bouquet, representing modesty and purity.

Gerard states, "the flowers distilled with wine restoreth speech unto those that have the dumb palsy and that are fallen into the apoplexie, and is good against the gout and comforteth the heart."

Rheum palmatum (Polygonaceae), Chinese or **Chinghai Rhubarb**

Rhubarb was used medicinally in China from at least 2700 BC when it was an important medicine for gut, lung and liver problems and was described in the herbal of Dioscorides in AD 70.

Originally called Turkey or Russian rhubarb, depending on which itinerary the dried roots had taken from China across Asia, it eventually started arriving from the East by ship. John Parkinson was sent seeds from Padua by the King's Physician when he visited Venice and claimed to have the first rhubarb plants growing in England by 1630. John Evelyn recorded rhubarb growing in the Oxford Botanic garden during a visit on 12th July 1654. However, there is confusion in the literature over the varieties of rhubarb in cultivation and it is possible that the true medicinal Chinese rhubarb was only introduced by seed in 1761, when it was sent to Edinburgh by Dr James Mounsey from Russia.

The root contains purgative **Anthraquinones** and was used to purge and treat chronic constipation. Prior to antibiotics, it was undoubtedly of value in treating bacillary dysentery. Gerard wrote at length about the virtues of Rhubarb root, describing its use from the time of Dioscorides. "The purgation which is made with Rubarb is profitable and fit for all such as be troubled with choler, and for those that are sicke of sharpe and tertian fevers, or have the yellow jaundice, or bad livers." Rhubarb was highly valued in Europe and remained in use as a purgative until well into the twentieth century when it was replaced by more modern drugs. The stems are now more familiar as fillings for dessert pies and crumbles.

An infusion of the leaves, which contain poisonous oxalic acid, makes an effective organic insecticide and there is evidence that it can help to break down environmentally damaging chlorinated fluorocarbon gases (CFCs).

Hylotelephium spectabile (Crassulaceae), Stonecrop, formerly **Sedum spectabile**

This plant represents several species of *Sedum* which were used in herbal medicine. The biting stonecrop, *Sedum acre*, was in the famous worm expelling medicine, **therine**" (treacle). The white stonecrop, *Sedum album*, was used as a cooling plaster for painful haemorrhoids.

Gerard states, "the leaves held in the mouth do quench thirst in hot burning fevers." He also used the juice to

"cure the quartan ague (probably malaria) and other agues of long continuance."

Filipendula ulmaria (Rosaceae), Meadowsweet, formerly **Spiraea ulmaria**

One of the sacred herbs of the Druids, this is the plant from which salicylic acid was first isolated in 1839, leading to the development of the very valuable drug **Acetylsalicylic acid** in 1899 by Bayer in Germany, which has been an important anti-inflammatory, anti-thrombotic and fever-reducing medicine. It was given the name **Aspirin** from ***a*** for acetyl, ***spir*** from spiraea and ***in*** as a common ending in drug terminology.

Gerard said it was the best strewing herb, "for the smell thereof makes the heart merrie."

Queen Elizabeth I preferred it to all other herbs in her chambers for sweetening the air and its use for strewing in churches led to another folklore name, Bridewort.

Tanacetum balsamita (Asteraceae), Costmary, Alecost

Introduced into England before AD 1000 from the Mediterranean, the leaves were used to clear, preserve and add an astringent, spicy flavour to beer in the Middle Ages.

"A conserve made with the leaves of Costmarie and sugar doth warme and drie the braine, and openeth the stoppings of the same. The leaves of Costmarie boiled in wine and drunketh cureth the griping paine of the bellie, the guts and bowels and cureth the bloody flux. The seed expelleth all manner of wormes out of the belly." (Gerard)

Clinopodium nepeta (Lamiaceae), Lesser Calamint, formerly **Calamintha nepeta**

"The decoction thereof drunk provoketh urine, bringith down the monthly sickness and expelleth the childe. It helpeth those that are bruised, such as are troubled with crampes and convulsions. Being taken aforehand in wine, it keepeth a man from being poisoned. It cureth them that are bitten by serpents." (Gerard)

Smelling like a cross between mint and oregano, it is still used for flavouring in Italian cuisine (**Mentuccia, Nepitella** or **Nipitella**) and is one of the central herbs in Roman cooking, aiding good digestion.

Angelica archangelica (Apiaceae), Angelica

The great 17th century herbalist John Parkinson rated this plant the most important of all medicinal herbs and it was common practice to suck a piece of root as a protection against all ills, and protection from witches. It was generally considered to be an aphrodisiac too. Its old name, *Herba angelica* was derived from the belief that its medicinal qualities had been revealed by an angel and that it could cure any malady. All parts of the plant have been associated with the Archangels Michael and Gabriel.

"The roots are a singular remedy against poison and against the plague and all infections taken by evil and corrupt aire. It openeth the liver and spleen, draweth down the termes, driveth out or expelleth the secondine (afterbirth) …It cureth the bitings of mad dogs and all other venomous beasts." (Gerard)

The essential oil extracted from the roots is used in the food and drinks industry for flavouring vermouth, spirits and liqueurs, such as Benedictine. Its hollow stems are still candied and applied to cakes for decoration.

Origanum vulgare (Lamiaceae), Oregano, Wild Marjoram

One of the most important herbs used in Mediterranean cuisine, it has a fragrant odour which persists when the herb is dried. It was valued for strewing in rooms for its scent and has been an important ingredient in potpourri. It was used by the Greeks and Romans as a post bathing perfume and massage oil and also as a disinfectant and preservative. The Romans were probably responsible for spreading it around Europe and introducing it to the UK.

The great herbalist John Parkinson wrote that it was widely used to make "swete bags" and "swete powders." These were prized before the introduction of foreign perfumes and it was a favourite constituent of nosegays to mask bad odours. Marjoram oil was put into the cavity of a carious tooth to relieve the pain and Gerard said the leaf could be chewed to relieve toothache. The essential oil contains **Thymol**, which is a good oral antiseptic.

Rosa gallica var. officinalis (Rosaceae), The Apothecary's Rose, the Red Rose of Lancaster

The Red Rose of Lancaster. Believed to be the sacred rose of the Medes and Persians in the 12th century BC,

it can justifiably claim to be the oldest rose in cultivation. Commonly grown in medieval gardens, the fragrance of its flowers improves even when dried and powdered. This gave rise to an industry in perfumes, preserves, confections and potpourri by the Apothecaries of Provins, near Paris, from the 13th to the 19th century. It arrived there about 1240 having been brought back from the Crusades by Thibaut IV, King of Navarre and it was then taken to England in 1279 by Edmund of Lancaster whose wife was the widow of Thibaut's younger son.

Gerard gave a long account of the virtues of the rose describing its use in cooking, medicine and perfumery. "The rose doth deserve the chiefest and most principall place among all floures whatsoever; being not onely esteemed for his beautie, virtues and his fragrant and odoriferous smell; but also because it is the honour and ornament of our English Sceptre."

Rose water and distilled oil of roses are still very popular in perfumery and aromatherapy.

Artemisia abrotanum (Asteraceae), Southernwood

Named in honour of Artemis the Greek god of hunting and chastity, it was introduced into this country from Southern Europe in the 11th century. It has a pungent aromatic scent, like camphor, and was used to repel moths and protect clothes (known as garderobe in France), for nosegays to ward off infection in courtrooms, and by ladies to keep themselves awake in church during the sermon. The Romans believed that a sprig placed under the pillow acted as an aphrodisiac, and modern Italians still use it as a culinary herb.

"It killeth worms and driveth them out: if it be drunke with wine it is a remedy against deadly poysons. It helpeth against the stinging of scorpions and field spiders." (Gerard)

Culpeper recommended that its ashes dissolved in oil was a remedy for baldness!

Teucrium chamaedrys (Lamiaceae), Wall Germander

The generic name is derived from Teucer, first king of Troy (died c.1000 BC). It was listed by the Abbott of Cirencester before AD 1200 as a useful herb for wounds. Widely used as a herbal medicine from the 16th century for melancholy, digestive complaints, gout, headaches and coughs, but this long continued use did not reveal its toxicity until modern medical practice showed that it can cause serious liver damage. Twenty six cases of hepatitis were reported in France in 1992 after Germander was included in weight reducing supplements.

"Germander boiled in water and drunk delivereth the body from all obstructions and stoppings. It is good for them that have the cough and shortnesse of breath." (Gerard)

Polygonatum x hybridum (Asparagaceae), Solomon's Seal

The name derives from the latin *poly* and *gonu* meaning many knees, which refers to its many jointed rhizome. King Solomon approved its use as a poultice for wounds and broken limbs. Gerard wrote at length about its healing properties, "the root of Solomon's seale stamped while it is fresh and greene, and applied, taketh away in one night, or two at the most, any bruise, blacke or blew spots gotten by falls." He also recommended it as a drink to knit

broken bones, "common experience teacheth that in the world there is not to be found another herbe comparable to it for the purposes aforesaid."

It is toxic if taken internally, causing gastro-intestinal inflammation and it is also toxic to dogs.

Petroselinum crispum (Apiaceae), Parsley

Native to the Mediterranean, one of our best known herbs for garnishing, and rich in vitamins A, C and K. The Greeks decorated tombs with it. Hercules used it as a garland for victors at the Isthmian Games and the Romans, who introduced it to England, consumed it in quantity at banquets in the belief it prevented drunkenness. It is an excellent breath freshener.

Gerard wrote, "the leaves are pleasant in sauces and broth, they may be also singular good to take away stoppings and to provoke urine. Being chewed it helpeth the tooth ache."

A parsley tea was used for dysentery in the 1st World War. It was once believed that only a witch or a pregnant woman could grow it successfully and for good germination it should be sown on Good Friday.

Colchicum autumnale (Colchicaceae), Meadow Saffron, Naked Ladies

The generic name is derived from Colchis, an ancient land at the eastern end of the Black Sea. Colchicum is described in the Egyptian herbal, the Ebers Papyrus, which dates from about 1500 BC, as a treatment for rheumatism and joint swelling. Dioscorides recommended it for gout in the 1st century AD, but warned of its toxicity. Its use for acute gout was popularised by Baron Anton von Storck in Vienna in 1763.

It contains **Colchicine** which has been a good treatment for acute gout, Familial Mediterranean Fever, Behçet's disease and Pericarditis, but it is toxic above a small dose, and all parts of the plant are poisonous to humans and animals. This alkaloid is used in genetic and cancer research and in plant breeding for the development of new varieties of plants because of its ability to double the number of chromosomes and thus produce polyploid strains.

Gerard recognised its poisonous qualities, “Those which have eaten of the common meadow saffron must drink the milk of a cow, or else death presently ensueth.”

Euphorbia epithymoides (Euphorbiaceae), Cushion Spurge

The generic name Euphorbia is derived from Euphorbos (c.10BC-AD20), the Greek physician of the Berber King Juba II of Numidia (50BC-AD23). The common name, spurge, is derived from the old French *espurge,* due to the former use of the plant’s very irritating and toxic milky sap as a purgative.

Gerard wrote, "the juice or milke is good to stop hollow teeth being put into them warily so that you touch neither the gums nor any of the other teeth.” The poisonous latex probably destroyed the nerve endings in the roots of the teeth.

A related species, *E. peplus, the* common spurge, was used to produce a topical agent, **Ingenol mebutate gel**, launched in 2013, for treating early skin cancer. It was withdrawn from further use in 2020 due to harmful side effects. The corrosive white sap, common to all spurges, contains terpenes which are responsible for its damaging effects on skin.

Pulmonaria officinalis (Boraginaceae), Lungwort

Selected as a medicinal plant by the ancient Doctrine of Signatures (from 1st century AD), which decreed that all plants were made by God for mankind’s use and that their appearance indicated the illness for which they could be used to treat. The spotted leaves of lungwort resemble the cut surface of the lung and so it was used for respiratory diseases such as bronchitis and asthma. Lyte (1578) wrote that “it has no particular use in Physicke,” but Gerard continued the belief of previous authors, “the roots are thought to be good against the infirmities and ulcers of the lungs.”

Being a member of the Boraginaceae, whose species often contain **Pyrrolizidine** alkaloids that can cause liver toxicity and cancer, it is best avoided as it has no proven medicinal effects.

Mandragora officinarum (Solanaceae), Mandrake

Well known to the ancients, including Greeks, Romans, Arabs and Hebrews, it was regarded by all as having magical powers and was thought to be possessed by a Satanic spirit. The Hebrews believed the plant assisted with the procreation of children but the Greeks and Romans revered it for its narcotic and analgesic actions. Elaborate rituals were devised for the harvesting of its roots which involved the plant being pulled up by an animal, often a dog, and at night, because it was believed that the plant would let out a scream that could kill a man!

An extract of the root was used at the time of Christ to lessen the pain of amputation, and to relieve the agony of crucifixion. A soporific surgical sponge soaked in wine of mandrake and other herbs including opium was used in surgical operations in Tuscany by Hugo de Lucca as early as 1490.

Gerard ridiculed many of the old myths surrounding the plant but confirmed its effects, "the wine wherein the root has been boyled or infused provoketh sleepe and asswageth paine."

In Shakespeare's *Romeo and Juliet*, Juliet is given a mandrake sleeping potion to feign death.

The principal ingredient in the root is the alkaloid **Hyoscine (Scopolamine)** and this drug is still used as a premedication injection prior to anaesthesia and surgery, to reduce salivation and prevent post-operative nausea and vomiting, and also for motion sickness. It is exciting to find a plant derived medicine whose use has been unchanged for over two millennia.

Satureja montana (Lamiaceae), Winter Savory

A well-known Mediterranean plant used since ancient Roman times in vinegars and sauces to flavour food and also as a disinfectant strewing herb, owing to its content of **Carvacrol**, which it shares with Oregano and Thyme. Ancient Egyptians added it to love potions. Used as a poultice, it has been commonly used to relieve the discomfort of insect bites and stings.

Virgil mentioned it in his poem *The Georgics* in 29 BC and recommended planting it around bee hives. Gerard states that "it doth marvellously prevaile against winde: therefore, it is good with successe boiled and eaten with beanes, peas and other windie pulses."

Melissa officinalis (Lamiaceae), Lemon Balm

Used medicinally for over 2000 years and dedicated to the goddess Diana by the ancient Romans, it was mentioned by Theophrastus in 300 BC. Described by Paracelsus as the "elixir of life," he prescribed it "for all complaints supposed to proceed from a disordered state of the nervous system." Its essential oil is widely used in perfumery and aromatherapy for treating symptoms of stress and leaf extracts are used in food and teas for their strong lemon flavour and their beneficial effects on digestion.

"Drunke in wine is good against the bitings of venomous beasts, comforts the heart and driveth away all melancholy and sadness. The hives of bees being rubbed with the leaves, causeth the bees to keep together and causes others to come unto them. It helpeth the toothache, the mouth being washed with the decoction." (Gerard)

An alcoholic infusion of lemon balm known as Carmelite Water was made by Carmelite nuns in the Abbey of St Just, Cornwall, in the 14th century. It was regarded as an effective cure for headaches and neuralgia and became a daily drink of Emperor Charles V of Spain.

Sanguisorba officinalis (Rosaceae), Great Burnet

The name comes from the Latin *Sanguis*, blood and *Sorbere*, to absorb, which gives the clue to its use as a wound herb. The tannins in its roots give it an astringent quality which can control bleeding in cases of dysentery, stop nosebleeds and treat burns.

"Burnet is a singular good herb for wounds. It stauncheth bleeding. The leaves steeped in wine and drunken, comfort the heart and make it merry and are good against the trembling and shaking thereof." (Gerard)

It is still used in traditional Chinese medicine (known as Di Yu) to cool the blood, stop bleeding and heal wounds.

Central Circular Bed

Laurus nobilis (Lauraceae), Bay Laurel

Venerated in ancient Greece, Apollo's son Asclepius, the Greek god of medicine, had Bay Laurel dedicated to him to guard against disease. In Rome it was a symbol of victory and immortality; victorious Roman generals wore laurel crowns and graduating students in Italy continue the custom. This practice is the source of the terms *Baccalaureate* and Poet *Laureate*.

Many superstitions were associated with it in ancient Rome. Its untimely withering always presaged a disaster. It was believed to afford protection from lightning and Emperor Tiberius regularly covered his head with a laurel wreath and retreated under his bed! Pliny gives a long list of ailments treated by laurel oil: paralysis, sciatica, bruises, headaches, catarrh and ear infection.

Culpeper wrote, "very effectual against the poison of venomous creatures, and the stings of bees and wasps, and also against the pestilence or other infectious diseases."

Widely used as an essential herb in cooking, it is still used for digestive disorders in Italy by making a tea with a few leaves in boiling water, and there is a Bay leaf liqueur called Alloro.

Lavandula angustifolia Hidcote (Lamiaceae), Lavender

It was introduced into Britain by the Romans and used as a perfume in their baths. Its name is derived from the Latin *lavare,* to wash. It was popular as a strewing herb, for scenting linen and as a cosmetic scent from the earliest times. Oil of lavender was obtained by distillation and was used as an insect repellent and also medicinally for rheumatism, toothache, and faintness. It is useful when applied to minor wounds and burns.

Gerard recommended it highly for the palsy (paralysis). It is used in aromatherapy, potpourri and as a tea to help digestion and headaches. It should never be used for scenting the interior of cars as its aroma enhances sleep. It is of course loved by bees and butterflies.

Galanthus nivalis (Amaryllidaceae), Snowdrop

One of the most loved of garden plants, and cultivated in Britain since 1598, which appears as the daylight hours are beginning to lengthen towards the end of winter. The generic name comes from *Gala*, milk, and *Anthos,* flower. In 1983, it was suggested that the snowdrop was the mysterious magical herb called Moly, which is described in Homer's Odyssey, and may have been the antidote to the Enchantress Circe's poisons, although there are other candidates for this. Theophrastus also described its use against poisons.

The drug **Galantamine,** which has now been used since 2001 to treat memory loss in mild to moderate Alzheimer's disease, was discovered in 1951 in the Caucasian snowdrop, *Galanthus woronowii*. It was subsequently sourced from Narcissus (daffodil) and then Leucojum (snowflake) bulbs, but as it has now been synthesised since the mid-1990s, the need for the exploitation of wild populations of bulbs has ceased. It potentiates the action of the neurotransmitter acetylcholine, an important chemical for brain function, by inhibiting the action of the enzyme acetylcholinesterase, which might explain its action as an antidote to certain poisons.

Crocus sativus (Iridaceae), Saffron Crocus

One of the most ancient of plant names, derived from the Semitic *Karcom*. Its stygma and styles (known as threads) are the source of saffron, the world's most expensive spice, cultivated and traded in Greece and the Middle East for over four millennia. Iran now accounts for 90% of world production. It came to England with the Romans who took it everywhere they went and was used in their food and in Saffron cakes, especially in Cornwall, where they are still popular. It was reintroduced in the Middle Ages and was cultivated in Essex by the 16th century (Saffron Walden).

It has been used in perfumery, as a fabric dye for the robes of Buddhist monks, for the illumination of manuscripts and of course in cooking where it confers an intense yellow colour.

"Saffron is endowed with great virtues, for it refreshes the spirits and is good against fainting fits and the palpitation of the heart. It strengthens the stomach, helps digestion, cleanses the lungs, and is good in coughs." (Culpeper)

Recent research shows that one or several of the ingredients **Crocin**, **Crocetin** and **Safranal**, may be useful as an anti-depressant but further research is awaited.

Front Left Bed

Galega officinalis (Fabaceae), Goat's rue

The common name of Goat's rue comes from an earlier name, *Ruta capraria* (pertaining to goats). Widespread throughout temperate Europe, where it is known as French lilac and Italian fitch, and introduced into England by 1568, Gerard recognised its use as a "singular herb against all poison and against wormes, to kill and drive them forth. It helpeth the bitings and stingings of venomous beasts. It is most excellent being eaten against all poison and pestilence. The seedes do feed pullen (chickens) exceedingly, and cause them to yield a greater store of eggs."

The discovery of **Galegine** and **Guanidine** in the plant in the 1920s and their effect on lowering blood sugar levels, led to the production of the biguanide drugs **Metformin** and **Phenformin** in the 1950s. **Metformin** is now the most widely prescribed drug for diabetes in the world.

Digitalis purpurea and lanata (Plantaginaceae), Foxglove and Grecian foxglove

Considered poisonous and purgative since the time of Galen because of its bitter taste, Gerard, quoting others, recommended its use for "cutting and consuming the thicke toughnesse of grosse and slimie phlegm." The pioneering work of Dr William Withering (1785) showed that *D. purpurea* was effective in treating the dropsy (heart failure), whilst recognising its side effects from overdose, such as xanthopsia (yellow vision), slow pulse rate, and diarrhoea and vomiting. It contains cardiac glycosides which control and prevent abnormal heart rhythms and also strengthen the heart muscle. The modern glycoside, Digoxin, first isolated in 1930, is extracted directly from the leaves of *D.lanata*, the Grecian foxglove, and is safer in its pure form than the mixture of glycosides present in the leaf of *D.purpurea,* which vary in content from season to season.

Melilotus officinalis (Fabaceae), Yellow Sweet Clover

Historically, it was often used in poultices to relieve inflammation, including The King's Grace ointment designed for King Henry VIII "to coole and dry and comfort the membre."

Gerard wrote at length about this herb, repeating what Pliny the Elder had written nearly 2000 years ago! "Melilot boiled in sweet wine untill it be soft, if you adde thereto the yolke of a rosted egge, the meale of fenegreeke, and lineseed, the roots of marsh mallowes, and hogs grease stamped together, and used as a pultis, doth asswage and soften all manner of swellings, especially about the matrix, fundament and genitories, being applied unto those places hot……The herbe boiled in wine and drunke provoketh urine, breaketh the stone, and asswageth the paine of the kidnies, bladder and belly and ripeneth flegme, and causeth it to be easily cast forth. The juice thereof dropped into the eies cleereth the sight, consumeth, dissolveth and cleane taketh away the web, pearle and spot in the eies."

Introduced from Europe as a fodder crop, it was planted on the North American plains at the end of the 19th century. When some cattle died from internal bleeding, a perceptive veterinary pathologist, Frank Schofield, discovered in 1924 that they had eaten mouldy hay made from Sweet clover, which he suspected to be the cause of the bleeding disorder. Further research by Karl Link identified Dicumarol in 1940 as the causative agent which was released from the naturally occurring coumarins in Sweet clover by the action of fungi. This antagonised the function of Vitamin K and led to a fall in Prothrombin levels (part of the clotting process) which caused spontaneous bleeding. Dicumarol was initially tried as a rodenticide, but rats rapidly developed resistance to it. Many synthetic derivatives were made and one in particular with greatly enhanced potency was licensed in1948 as a rodenticide under the name Warfarin, the name derived from its patent holder, the **W**isconsin **A**lumni **R**esearch **F**oundation with **arin** from coumarin as an ending. This was eventually introduced into human clinical use in the early 1950s and rapidly became the standard treatment for all forms of thrombo-embolic disease that require anti-coagulation. The President of the United States, Dwight Eisenhower, was an early recipient of it in 1955 when hospitalised in Denver, Colorado, after a heart attack.

Eryngium variifolium (Apiaceae), Moroccan Sea Holly

An old herbal remedy which the celebrated Dutch physician Herman Boerhaave prescribed in the 17th century for kidney complaints and scurvy. Gerard used it for bladder stones. The roots could be candied by boiling in sugar and were sold as a sweetmeat, called eringoes. They were regarded as an aphrodisiac which might explain why Falstaff called them 'kissing-comfits', in Shakespeare's play, *The Merry Wives of Windsor*.

"The roots preserved with sugar are exceeding good to be given unto old and aged people that are consumed and withered with age." (Gerard)

Ruta graveolens (Rutaceae), Rue

Known as Herb of Grace from the practice of using a sprig to sprinkle Holy Water on the congregation in Catholic churches. Gerard wrote, "provokes urine, brings downe the sicknesse, expels the dead child and afterbirth, being inwardly taken." He also recommended it for improving eyesight when mixed with honey and fennel.

"The seed taken in wine is an antidote against all dangerous medicines or deadly poisons. Rue is a plant of many virtues and good against infectious pestilential diseases, and the plague itself." (Culpeper)

Both Leonardo da Vinci and Michelangelo have claimed that their inner vision was enhanced by this herb. It is still used as a flavouring agent in the Italian alcoholic drink Grappa.

⚠ Beware skin contact with the leaf of Rue, especially in sunlight. The plant contains a chemical called psoralens which causes intense phototoxicity, resulting in severe sunburn and painful blisters. ⚠

Hyssopus officinalis (Lamiaceae), Hyssop

Native to southern Europe and introduced by the 12th century, it has a very pleasant aromatic odour and was used as a strewing herb. It is still used in cooking, salads, and liqueurs such as Chartreuse. Hyssop tea has been a popular household remedy for stomach complaints, coughs and sore throats. Its **Thujone** and **Phenol** content make it an effective antiseptic. The essential oil was valued in perfumery but must not be consumed as it can provoke convulsions. Its flowers are a rich source of nectar for pollinators.

Hippocrates recommended hyssop for chest complaints and the Persians used Hyssop water as a body lotion. Gerard used hyssop as a gargle for sore throats and also as a purgative to expel worms. The early colonists took it to the New World to use in tea and herbal tobacco.

Culpeper wrote, "the head being anointed with the oil thereof, it killeth the lice. The greene herb bruised, will speedily heal up any cut or wound."

Hyssop (from the Hebrew, *ezov*) has several mentions in the Bible. In Psalm 51, v.7, it is written: "Purge me with Hyssop, and I shall be clean." It is also mentioned in Exodus, 12:22, where Moses tells the elders of Israel to mark their front doors with a bunch of hyssop dipped in lamb's blood so that the Lord God would 'Passover' and spare them on his way to smite the Egyptians. However, true hyssop is not indigenous to Palestine, and there is controversy as to the real identity of Biblical hyssop. It is possible that it is either the local oregano, *Origanum siriacum*, or the caper, *Capparis spinosa*.

Marrubium vulgare (Lamiaceae), Horehound.

A member of the mint family, its use in respiratory disorders was described by Celsus 2000 years ago. In modern use it is made into candied lozenges to ease a sore throat, herbal tea and horehound beer.

Gerard wrote, "boiled in water and drunke, it openeth the liver and spleene, cleanseth the brest and lungs and prevailes greatly against an old cough."

"It is a remedy for those that are short winded, have a cough or are fallen into a consumption. It helpeth to expectorate tough phlegm from the chest. It is given to women to bring down their courses, to expel their afterbirth, and to them that have sore and long travails (*labour*)." (Culpeper)

Santolina chamaecyparissus (Asteraceae), Cotton Lavender

An aromatic herb introduced from Southern Europe in the 16th century by French Huguenot gardeners to create knot gardens, it was placed among clothes to repel moths and other insects. The name comes from *sanctum linum*, holy flax.

Pliny wrote, "drunke in wine is a good medicine against the poysons of all serpents and venomous beasts."

"It killeth wormes either given greene or dry and the seed hath the same vertue." (Gerard)

Ajuga reptans (Lamiaceae), Bugle

A good wound herb, known as carpenter's herb, due to its ability to stem bleeding. Gerard states, "the decoction of bugle drunken, dissolveth clotted or congealed blood within the bodie, healeth and maketh sound all wounds both inward and outward. The same decoction cureth the rotten ulcers and sores of the mouth and gums."

A gargle made from the leaves will soothe a sore throat and it has also been used for respiratory disorders.

It is a useful garden plant for ground cover and its flowers are an important source of nectar for a large range of butterflies.

Valeriana officinalis (Caprifoliaceae), Valerian

The generic name comes from the latin *valere*, to be healthy. It was formerly used for anxiety states, migraine and insomnia, hysteria and violent asthma. It was also widely used to treat epilepsy and the modern anti-epileptic medication, **Sodium Valproate**, is now made from **Valproic acid,** an analogue of **Valeric Acid** which is found in Valerian.

It was known to Hippocrates, and Dioscorides and Galen knew Valerian as **Phu,** a reference to the unpleasant smell of its roots which attracts cats and rats. Galen used it for insomnia.

"It is used generally in cuts, wounds and small hurts." (Gerard)

"To drink it provokes urine and helps the strangury, and takes away the paines of the sides, provokes women's courses and is used in antidotes." (Culpeper)

A tincture of Valerian was used in World War One to treat shell shock and nervous stress.

Valerian is currently approved by the European Medicines Agency as a traditional herbal medicine for mild anxiety and sleeplessness for up to four weeks. It should be avoided in pregnancy and not combined with alcohol or other sedative drugs and should not be used if driving or operating machinery.

Symphytum officinale (Boraginaceae), Comfrey

Traditionally known as Saracens' root, it came to England with the Crusaders, who had discovered its healing properties, and who then passed it on to the monasteries. Its root contains mucilage which hardens after being pounded, and it was used to set fractures, hence the old name Knitbone. Dioscorides recommended its use for healing wounds and broken bones. The mucilage was also used as a demulcent medicine, especially for lung disorders.

Gerard wrote, "the slimie substance of the root made in a posset of ale is given to drinke against the paine in the backe gotten by overmuch use of women." Culpeper recommended Comfrey tea for almost everything!

It has been widely used in herbal teas but since the late 1970s it has been known to be a liver poison and carcinogen due to the presence of **Pyrrolizidine** alkaloids and it should not be used internally.

Taxus brevifolia (Taxaceae), Pacific Yew

Always known to be highly poisonous, from the time of Dioscorides onwards, even to farm animals, an extract was found to be active against malignant cells when it was one of many thousands of plant extracts tested in a laboratory screening programme in the 1960s, in the American Cancer Institute, North Carolina, USA. It was isolated in 1971 and approved for medical use in 1993. Clinical trials showed it to be a first class drug, originally named **Taxol**, now named **Paclitaxel**, for treating ovarian and breast cancer.

The bark of eight trees was originally needed to produce enough drug to treat one patient, but fortunately it is now possible to obtain it synthetically in industrial fermenters using Taxus cell cultures. **Taxanes** are now

the mainstay of chemotherapy for cancers of stomach, lung, ovary, pancreas and breast. More recently it has been embedded in coronary artery stents to slow down the rate of re-occlusion by the adjoining endothelial cells lining the arteries.

Tanacetum parthenium (Asteraceae), Feverfew

The common name is derived from the Latin word *febrifugia*, meaning fever reducer. One of the medicinal herbs grown in the 18th century for the London herb market, it was used to treat fevers and headache. Modern research has proven its value, if taken daily, in preventing migraine, although sudden cessation of its use can lead to a withdrawal syndrome of rebound headaches and joint pains. It can interact adversely with other medicines which are metabolised in the liver and must not be combined with drugs which interfere with platelet function e.g. aspirin, as that is one of its effects and probably explains at least part of its beneficial influence on migraines.

Dioscorides valued it as a useful herb for its uterine effects and recommended it for childbirth and menstrual irregularities.

Its bitter taste was appreciated by Gerard, who wrote of it, "feverfew dried and made into pouder, and two drams of it taken with honie or sweet wine purgeth melancholy and flegme, wherefore it is very good for them that are giddy in the head."

"If the concoction is drunk it cleanses the womb, expels the afterbirth and does a woman all the good she can desire of an herb." (Culpeper)

The dried leaves make good moth repellents, when made into sachets.

Achillea millefolium (Asteraceae), Yarrow

Long considered a sacred herb, the name is derived from the Greek hero Achilles (c.1200 BC) who carried the herb into battle with his army to treat their wounds in the Trojan wars. Traditional names include *Soldiers woundwort, Staunchweed* and *Herba militaris* which gives the clue to its uses. It has been used in brewing to add bite to the flavour and as a preservative, before hops replaced it. In Anglo-Saxon times it was used to protect against evil and it is still sometimes hung up on St John's Eve (24 June) in homes to prevent illness.

Gerard wrote, "The leaves of yarrow do close up wounds. It stauncheth blood in any part of the body. Most men say that the leaves chewed are a remedy for the toothache."

Saponaria officinalis (Caryophyllaceae), Soapwort

Named from the latin *Sapo*, soap, it was introduced by the crusaders in the 13th century from the Mediterranean. Its leaves and roots when crushed can be used to make a gentle soapy solution, owing to their saponin content, for cleaning delicate fabrics and tapestries and also to wash sheep before their annual shearing.

"Bruised and agitated with water it raises a lather like soap which easily washes away greasy spots out of clothes. Applied externally, it cures the itch. The Germans make use of it for the cure of venereal disorders. In fact it cures virulent gonorroheas." (Culpeper)

Gerard mentions that it is useful in treating the French pox! (Syphilis)

Front Right Bed

Hypericum perforatum (Hypericaceae), St. John's Wort

Named because it flowers around St John's day on June 24th at the time of the summer solstice, it acquired a reputation for protection against lightning, witches and the Evil Eye. Currently popular for treating low

mood and mild anxiety but it interacts dangerously with a wide variety of conventional medicines and causes photosensitivity. It is toxic to grazing animals.

When a leaf is held up to the light, tiny holes are visible as if they have been pricked (hence the name *perforatum*), which are actually translucent oil glands containing **Hypericin** and **Hyperforin**. This 'pricking' was originally thought to be have been done by the devil in revenge for its beneficial protective effects**.** The red pigment from crushed flowers was taken to signify the blood of St. John at his beheading (25th August). The odour of its crushed leaves, similar to incense, was used to drive away evil spirits, which explains one of its old names, *Fuga Daemonium*.

An important Gerard plant, he wrote of it as "a most precious remedy for deep wounds and those which are thorow the body……for I undertake to cure any such wound as absolutely better than any man with naturall balsam." Recent research offers support for its healing properties, as **Hyperforin** has been found to have potent antibacterial qualities.

Galium odoratum (Rubiaceae), Sweet Woodruff

When dried it gives off a sweet and pleasant smell, like that of newly mown hay, due to its content of coumarins, which persists after drying. It was both hung up and strewed in churches in the Middle Ages, used as a moth deterrent and added to potpourri. It is still used in Germany to flavour May wine.

"It doth very well attemper the air, and to be good for the heart and liver. The root thereof drunke in wine stirreth up bodily lust." (Gerard)

Alchemilla vulgaris (Rosaceae), Lady's Mantle

Dew collects in the folds of its leaves, and 16th century alchemists (hence its name) thought dew had magical properties. In medieval times it was dedicated to the Virgin Mary, and considered to offer protection to women.

It is an important Gerard plant, and he wrote, "it is applied to all inward wounds and outward hurts, it stoppeth bleeding, it keeps down maidens paps or dugs (*breasts*), and when they be too great or flaggy it maketh them lesser or harder."

Currently used by herbalists for menstrual irregularities, but it interacts with anticoagulants and impairs absorption of iron. Its high tannin content makes it astringent and possibly helpful for mild diarrhoea and sore throats.

Tanacetum vulgare (Asteraceae), Tansy

The name derives from the Greek, *athanasia,* and Latin, *tanazita,* meaning immortality and it was applied to embalming sheets in order to discourage worms. It was used in the Middle Ages as a strewing herb and as an insect repellent, being rubbed over meat to keep flies away. Its **Pyrethrin** content explains its insecticidal effects. Cakes, called tansies, were eaten in the 16th century as a remembrance of the bitter herbs eaten at Passover.

Gerard wrote, "the seede of tansie is a singular and approved medicine against wormes, it killeth and driveth them forth."

Prunella vulgaris (Lamiaceae), Self Heal

Used from the 15th century to treat wounds and especially to stop bleeding as well as to soothe sore throats. Being a very common plant, it was always available. Roman soldiers carried it into battle to treat their own wounds.

It was an important wound herb for Gerard who wrote, "The decoction of Prunell made with wine or water doth joine together and make whole and sounde all

wounds both inward and outward. It serveth for the same that Bugle (*Ajuga reptans*) doth and in all the world there are not two better wound herbs."

Salvia officinalis (Lamiaceae), Garden Sage

Native to Italy and introduced to England by the Romans, its name comes from the Latin, *salveo,* meaning I save or heal. A favourite and essential Mediterranean herb for cooking, it has also been used as a medicinal herb since ancient times. Dioscorides recommended it for wounds and coughs and wrote, "why should a man die who has sage in his garden?"

Gerard, quoting Agrippa, wrote, "women with childe if they be like to come before their time, and are troubled with abortments, do eate thereof to their great good. Sage is singular good for the head and braine. It quickneth the senses and memory. It is likewise commended against the spitting of bloode, the cough, the paines of the sides and the bitings of serpents. No man needs to doubt of the wholesomenesse of Sage Ale, being brewed as it should be with Sage, Scabious, Betony, Spikenard, Squinanth and Fennell seeds."

A Sage infusion, used as a gargle, is excellent for sore throats, laryngitis and mouth ulcers, but its **Thujone** content, which is toxic in large quantities, should limit its intake.

There is recent interest in its potential to aid memory and possibly improve the symptoms of Alzheimer's disease by its actions as an inhibitor of the brain enzyme acetylcholinesterase, thus maintaining higher concentrations of the important neurotransmitter Acetylcholine.

Mentha pulegium (Lamiaceae), Pennyroyal

The name is a corruption from the French, *Puliol Royale*. The species name is derived from the Latin word for flea, Pulex, as both the fresh leaves and the smoke from burning dried leaves were used to repel the insect.

Gerard called it Pudding Grass and described its use to provoke menstruation and childbirth and as a garland to "help the swimming in the head and the paines and giddinesse thereof." He also

recommended its use “when at sea to be cast into corrupt water, it helpeth it much, neither will it hurt them that drinke thereof.”

The oil derived from Pennyroyal is toxic and induces irreversible kidney damage.

Asperula tinctoria (Rubiaceae), Dyer's Woodruff

Native to central and northern Europe, it was valued by the ancient Greeks and Romans because its root yields a red dye for dyeing clothes. This plant is a reminder of the age old tradition of using plants for dyeing cloth and wool and provides a link with the Worshipful Company of Dyers of London.

Iris pallida (Iridaceae), Dalmatian Iris

The genus is named after the Greek Goddess of the rainbow, who was also the messenger of the Gods. This is one of the two species of Iris which from ancient times were used to produce Orris Root. The dried powdered root, containing Myristic acid, smells of violets, and was widely used in perfumery and potpourri. Clothworkers added it to sweeten their cloth and it was placed amongst linen and laundry for its pleasant smell. It was made into face powder and tooth powder, and distilled to produce oil of orris which was used to make scents, where it acts as a fixative and bass note. It is also an ingredient in many brands of gin.

Salvia rosmarinus (Lamiaceae), Rosemary formerly **Rosmarinus officinalis**

The name derives from the Latin for dew, *ros* and sea, *marinus*. It is widely cultivated as an ornamental garden plant and the leaves are used to flavour a range of foods in Mediterranean cuisine, but especially roasted lamb in the UK. It is used as a symbol of remembrance during war commemorations, funerals and in Shakespeare's Hamlet, Act 4, scene 5, "There's Rosemary, that's for remembrance." It was long used as a strewing herb, especially in law courts to ward off gaol fever.

Gerard wrote, "it is given against all fluxes of bloud; it is also good for all infirmities of the head and braine, proceeding of a cold and moist cause. The distilled water of the floures being drunke at morning and evening, taketh away the stench of the mouth and breath, making it sweet."

Rosemary oil is used in the perfumery industry and is added to toiletries for its scent which is believed to improve mental performance when inhaled. There is recent scientific evidence for both anti-inflammatory and anti-oxidant properties which opens up new avenues for research.

Betonica officinalis (Lamiaceae), Betony formerly **Stachys officinalis**

A herb with a very long history of use, first written about by Antonius Musa, physician to the Roman Emperor Augustus (27BC-AD14), "it is a very precious herb and most fitting to be kept in a man's house."

"Good for them that be subject to the falling sicknesse. It cleanseth the lungs and chest, it is good against the yellow jaundice. It maketh a man to have a good stomack and appetite. It maketh a man to pisse well. It is singular against all paines of the head, it killeth wormes in the belly, helpeth the ague, cleanseth the mother, and hath great vertue to heale the body." (Gerard)

Culpeper wrote, "it preserveth the liver and bodies of men from the danger of epidemical diseases, and from witchcraft also."

An Italian proverb advises, "sell your coat and buy Betony." A Spanish compliment states, "he has as many virtues as Betony."

A veritable herbal panacea, and one of the most important plants in the medieval world, but with no evidence on its safety or to support its diverse medicinal claims!

Officinal plants

The words **officinalis,** and **officinale** are the species name of several medicinal plants. They mean *from the monastic storeroom*, the **Officina,** or in today's language relating to drugs from a pharmacy. The first **Officinae** became established in monasteries about 1100 AD. The species name **officinarum** refers to a plant or other substance of no medicinal value that may still be obtained from the **Officina** for other use.

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Boerhaave, Herman (1668-1738) Dutch botanist and physician

Celsus, Aulus Cornelius (c.25 BC-c.AD 50) Encyclopaedist

Culpeper, Nicholas (1616-1654) English physician and herbalist

Dioscorides, Pedanius of Anazarbus (AD 40-90) Greek physician

Galen, Claudius of Pergamon (AD 129-c.200/216) Greek physician and surgeon in Rome

Gerard, John (1545-1612) Herbalist, Barber-Surgeon and gardener

Hippocrates (468-377 BC) Father of medicine and of the Doctrine of Humours

Lyte, Henry (1529-1607) English botanist and antiquary

Musa, Antonius (63 BC-AD 14) Greek botanist and physician to the Roman Emperor Augustus

Paracelsus, born Theophrastus von Hohenheim (1493-1541) Swiss physician

Parkinson, John (1567-1650) Apothecary to James I and botanist to Charles I

Pliny the Elder, (AD 23-79) Roman philosopher and naturalist

Theophrastus (371-287 BC) Greek philosopher and physician

Withering, William (1741-1799) English botanist, chemist and physician

John Gerard dedicated his Herbal to Lord Burghley with the following statement:

"What greater delight is there than to behold the earth apparaled with plants, as with a robe of imbroidered worke, set with orient pearles and garnished with great diversitie of rare and costly jewels?"

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March 2019. Revised February 2021

With acknowledgement to Barber Emeritus Dr Arthur Hollman
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