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| **Text for photos (C) Henry Oakeley, Sept 2013 for the Wellcome Image library** |
| *Abelia* x *grandiflora* R.Br. Caprifoliaceae. Distribution (*A. chinensis* R.Br. × *A. uniflora* R.Br.). Mexico, Himalayas to Eastern Asia. Ornamental flowering shrub. The name celebrates the short life of Dr Clarke Abel FRS (1789-1826), one of the first European botanists to collect in China, which he did when attached as physician to the Canton embassy in 1816-17. It has no medicinal uses but is a popular ornamental shrub in the honeysuckle family because it attracts butterflies and has a long flowering period. From June to October it produces a profusion of small, fragrant, pink-flushed, white flowers on long, arching branches. |
| *Acacia karroo* Hayne – Sweet-thorn; Karoo thorn. Small tree. Distribution Southern Angola, east to Mozambique, south to South Africa. This tree is festooned with fearsome thorns, and, just before the rainy season starts, it produces poisonous sap; the slightest graze from a thorn at this time causes swelling and pain for several days. The bush people of the northeast district of Namibia use its sap in an arrow poison, adding it to the larva of *Diamphidia* – which is also poisonous. Its active ingredients are cyanogenic glycosides – which produce cyanide on hydrolysis. The bark contains tannins, which have been implicated in carcinogenesis. *Acacia karoo* produces Cape Gum, which is used in pharmaceutical preparations and to treat diarrhoea. Used to make rope from the bark, gum to make candy, fodder for animals, charcoal. |
| *Acacia melanoxylon* R.Br. Mimosaceae. Australian Blackwood. Tree. Distribution: Eastern Australia. Tree. Invasive weed in South Africa, Portugal, California. Local uses: analgesic. Causes allergic contact dermatitis due to 2,6,-dimethoxybenzoquinone. Pinnate leaves of young plant drop off and phylloclades are formed instead. |
| *Acanthus dioscoridis* L. Acanthaceae. Distribution: Iran, Iraq, southern Turkey. Herbaceous perennial flowering plant. Named for Pedanius Dioscorides of Anazarbus, 1st century Greek physician and herbalist whose book, *De Materia Medica*, was the main source of herbal medicinal information for the next 1,600 years. He describes some 500 plants and their medicinal properties. His manuscript was copied and annotated over the centuries, and the earliest Greek text in existence is the illustrated Juliana Anicia Codex dated 512CE (Beck, 2005). The first English translation was made around 1650 by John Goodyear and published by Robert T. Gunther in 1934; the latest translation being by Beck, who we quote here. Dioscorides is particularly interesting in that many of his names were adopted by Linnaeus in the establishment of the current binomial system of nomenclature in 1753, and he grouped plants by their ‘medicinal’ properties, which put them close to modern plant family groupings. |
| *Acanthus spinosus* L. Acanthaceae. Bears breeches. Distribution: Southern Europe to Western Turkey. Herbaceous perennial flowering plant. Named for spiny leaves. Dioscorides recommended the roots applied for inflammation and spasms, and -when drunk- to promote urine, check diarrhoea, and for phthysis, ruptures and convulsions*.* The leaves are the model for those at the top of Corinthian columns. Tetraglycosides isolated from the plant show cytotoxicity in sea urchin eggs and crown gall tumour on potato disks. |
| *Acer japonicum* Thunb. Sapindaceae. Japanese maple. Small tree. Distribution: Japan, North Korea. Can be tapped in early spring for its sugar-rich sap although it is not as abundant as in *Acer saccharum*. |
| *Acer palmatum* Thunb. Sapindaceae. Japanese maple. Small tree. Distribution: Japan, North Korea. The cultivar 'Bloodgood' has red leaves. Used to induce tranquility in Japanese temple gardens. Can be tapped in early spring for its sugar-rich sap although it is not as abundant as in *Acer saccharum.* |
| *Achillea millefolium* L. Asteraceae. Yarrow or sneezewort, the latter because ground up it made a snuff to induce sneezing. Evergreen, herbaceous perennial. Distribution: Europe, Asia and North America. Dioscorides calls it Achilles’ woundwort, *sideritis*, writing that the ground-up foliage closes bleeding wounds, relieves inflammation and stops uterine bleeding. Gerard (1633) says that put up one’s nose it causes a nosebleed and so stops migraines. Named for the Greek warrior, Achilles, who used this plant for healing wounds – having been taught its properties by his teacher, Chiron the centaur. *Millefolium* because of the thousands of fronds that make up the leaf, and which, when applied to a bleeding wound, facilitate coagulation by platelets. |
| *Acinos alpinus* (L.) Moench. Lamiaceae. Rock thyme. Small herbaceous perennial. Distribution: C. and S. Europe. This is Mountain wild Basil, *Clinopodium alpinum,* of Parkinson (1640), the *Teucrium Alpinum* and *Clinopodium Alpinum hirsutum of* Bauhin. Then as now, when it has the synonyms *Thymus alpinus, Satureja alpina* and *Calamintha alpina,* its nomenclature has been confused. It is unlikely to be the *Acinos* or *Clinopodium* of Theophrastus or Dioscorides. Dioscorides gives opposing medicinal uses to the plants he knows by these two names, and Parkinson (1640) makes no judgement as to its uses. Reportedly drunk as a tea in Greece, but evidence for it being used historically for fevers is lacking. |
| *Aconitum carmichaelii* Debeaux. Ranunculaceae. Chinese aconite, Chinese wolfsbane, Carmichael's monkshood. Herbaceous perennial. Distribution C. to W. China to N. America. Named for Dr J.R. Carmichael (d. 1877), English physician, plant collector and Protestant missionary from 1862-1877 in Guangdong and Shandong, China initially in Canton. He aided Francis Forbes to collect plants for Kew. *Aconitum* plants are so poisonous that Theophrastus states that death was the punishment for possessing them. Aconitine is the poison and was used - from *Aconitum ferox* - in the 'curry murder' in London in 2009. It causes respiratory paralysis, bradycardia (slowing of the pulse), cardiac arrhythmias, tingling, sweating, gastric cramps, diarrhoea and death, both by ingestion and by absorption through the mucous membranes and the skin. Despite this it is widely used in Chinese herbal medicine. It is a restricted herbal medicine which can only be dispensed by a herbal practitioner for external use following a one-to-one consultation, or by prescription from a registered doctor or dentist (UK Medicines and Healthcare Products Regulatory Agency (MHRA)). |
| *Acorus gramineus* Aiton, Acoraceae. Japanese sweet flag; grassy-leaved sweet flag. Rhizomatous perennial. Distribution: E. Himalaya to Japan and Philippines. The cultivar 'Oborozuki' has yellow leaves with green stripes. The rhizomes are aromatic. The European *Acorus calumus* is used to make a volatile oil which contains β-asarone as the major component. This is carcinogenic in animal studies and nephrotoxic and epileptogenic. *Acorus gramineus* is used medicinally throughout Asia and In the Philippines it has the same multiplicity of uses as *A. calamus,* including treatment of arthritis, lumbago, muscle pains, indigestion;toothache, as a tonic, to increase the appetite, haemorrhage, treat intestinal ulceration, used as a sedative, for tinnitus, deafness, poor memory,unconsciousness during a fever, for treating insanity, as aninsecticide abscesses and scabies and to protect young children from getting flatus when someone compliments them on their appearance – a condition known as ‘usog’. |
| *Adiantum venustum* D.Don Adiantaceae (although placed by some in Pteridaceae). Himalayan maidenhair fern. Small evergreen hardy fern. Distribution: Afghanistan-India. It gains its vernacular name from the wiry black stems that resemble hairs. *Adiantum* comes from the Greek for 'dry' as the leaflets remain permanently dry. The Cherokee used *A. pedatum* to make their hair shiny. Henry Lyte (1576), writing on *A. capillus-veneris*, notes that it restores hair, is an antidote to the bites of mad dogs and venemous beasts; helpeth shortness of breath and excess phlegm; treats kidney stones, periods, helps deliver the placenta, and more. Linnaeus (1782) recommended it for intestinal obstruction. |
| *Adonis vernalis* L. Ranunculaceae. Pheasant's eye, the golden flowered spring (or vernal) *Adonis*, is named in memory of Adonis, the Greek god of plants, who disappeared into the earth in the winter and reappeared in the spring. The flowers were said to have sprung from his blood when he was gored to death by a wild boar, but this plant must have been the blood red *Adonis aestivalis*, the summer *Adonis*. Distribution: Eurasia to Spain and Sweden. Gerard (1633) recommends it for renal stone and intestinal colic. Lewis & Elvin Lewis (2003) note it is poisonous, containing cardiac glycosides (adonitoxin, cymarin, K-strophanthin) and flavenoids. The UK Medicines and Healthcare Products Regulatory Agency (MHRA)) bans its use for ingestion 'no dose permitted' but allow it to be prescribed by a herbal practitioner on a one-to-one consultation. |
| *Aeonium undulatum*. Webb & Berthel. Crassulaceae. Tree House Leek; saucer plant. Tender succulent. Distribution: Canary Islands. The genus name possibly derives from the Greek for 'ageless'. The mucilage in the leaves is used for treating burns. Not described until 1840, |
| *Agapanthus* L'Her. Amaryllidaceae. African Lily. Bulbous plant. Distribution: South Africa. 'Streamline' is a hybrid cultivar of unknown parentage. The roots of *Agapanthus africanus* are used (in South African 'muthi' medicine) in a decoction for treatment of women in labour and after birth. It is believed to relieve difficult labour and to help the expelling of the placenta. The active chemicals are thought to be saponins and those in *Agapanthus* have uterotonic activity in crude decoctions (van Wyck, 2000). |
| *Agrimonia eupatoria* L. Agrimony, Eupatorium, Maudlein. Perennial herb. The species name comes from king Mithridates Eupator VI of Pontus (132-63 BC) who took regular doses of poison to develop an immunity to them. A 'Mithridate' was a medicine against poisons. Distribution: N. and S. Africa, N. Asia, Europe. '…provokes urine and the terms [periods], dries the brain, opens stoppings, helps the green sickness [iron deficiency anaemia], and profits such as have a cold weak liver; outwardly applied it takes away the hardness of the matrix [=uterus] and fills hollow ulcers with flesh' (Culpeper, 1650). Dioscorides (Beck, 2005) recommends mashed leaves in hog's grease for healing scarring ulcers, and the seed in wine for dysentery and serpent bites. Goodyear's 1655 translation of Dioscorides (Gunther 2000) has this as cannabis, which Parkinson (1640) says is in error and summarises the manifold uses from classical authors, from removing splinters to stopping menorrhagia. |
| *Ajuga reptans* L. Lamiaceae. Bugle, *Bugula vulgaris*. Perennial herb. The meaning of 'Ajuga' is obscure', 'reptans' refers to its creeping habit. 'Pink Elf' is a pink flowered cultivar. Distribution: Europe. Culpeper (1650) writes ',,, ... excellent for falls or inward bruises, for it dissolves congealed blood, profitable for inward wounds, helps the rickets and other stoppings of the Liver, outwardly it is of wonderful force in curing wounds and ulcers, though festered, as also gangrenes and fistulas, it helps broken bones and dislocations. To conclude, let my countrymen esteem it as a Jewel...'. Parkinson (1640) documents the historic confusion with *Consolida, Symphytum, Prunella, Laurentina,* etc. |
| *Albizia julibrissin* Durazz. Fabaceae. Persian silk tree. Called 'shabkhosb' in Persian, meaning 'sleeping tree' as the pinnate leaves close up at night. Tropical tree. Named for Filippo degli Albizzi, an Italian naturalist, who brought seeds from Constantinople to Florence in 1749, and introduced it to European horticulture. The specific epithet comes from the Persian 'gul-i abrisham' which means "silk flower". Distribution: South Africa to Ethiopia, Senegal, Madagascar, Asia. Bark is poisonous and emetic and antihelminthic. Various preparations are widely used for numerous conditions and the oxitocic albitocin is abortifacient. However, studies on the seeds and bark of other *Albizia* species in Africa, demonstrate it is highly toxic, half a kilogram of seeds given to a quarter ton bull, killed it in two hours (Neuwinger, 1996). A useful tree for controlling soil erosion, producing shade in coffee plantations, and as a decorative shade tree in gardens. |
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| *Alcea rosea* L., Malvaceae. Hollyhock. First called holyoke by Turner (1548). Cultivar 'Nigra' refers to its dark red coloured flowers. Distribution: Southwest China, but now a world-wide garden plant. Early medicinal uses are difficult to find as it was confused with mallow (*Malva, Lavatera*)*,* Marsh Mallow *(Althea*), hibiscus (*Hibiscus*), and abutilon (*Abutilon*) but Parkinson (1640) says the leaves of Hollihocke were, at one time, eaten, raw or boiled, as a purgative. Bentley (1861) says that it is used, like *Malva*, to make marsh-mallows; that a blue dye is obtained from the leaves, and ropes can be made from the fibres of the outer part of the stem. |
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| *Allium moly* L., Alliaceae. Golden garlic. Bulbous herb. Distribution: Southwest Europe and Northwest Africa. This is not the 'moly' of Homer's Odyssey Book 10 lines 302-6 which describes Mercury giving Ulysses 'Moly', the antidote to protect himself against Circe's poison '"... The root was black, while the flower was as white as milk; the gods call it Moly, and mortal men cannot uproot it, but the gods can do whatever they like. ' i.e. wrong colour, *Allium moly* has yellow flowers, and - according to Parkinson (1629) has white roots. The 'Moly' of Dioscorides is 'four cubits' (two metres) high, with white flowers (Beck, 2005). *Allium moly*  might grow to 50cm. It is poisonous. |
| *Allium schoenoprasum* L. Alliaceae. Chives. Bulbous perennial herb. *'schoenoprasm*' means 'rush leek' in Greek, referring to the narrow leaves. Distribution: Asia, Europe and North America. Leaves used as a garnish on cooked food and in salads. However like others in Boraginaceae it contains the pyrollizidine alkaloid cynoglossine which causes liver damage. |
| *Althaea officinalis* L. Malvaceae. Marsh Mallow. Herbaceous perennial. *Althaea* comes from the Greek word for healing; o*fficinalis* indicates that it was used in the 'offices' - the clinics - of the monks in medieval times. Distribution: Africa. The mucilage from the roots was made into confectionary called marshmallow, but no longer. It is now made of sugars, corn syrup and gelatin with various flavourings. Dioscorides (Beck, 2003) recommends it for injuries, parotid tumours, scrofula, mastitis, uterine disorders, urinary problems, painful hips, dysentery, shakes, ruptures, toothache, vitiligo, dysentery, haemoptysis, bites and burns. |
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| *Amaranthus* L. Amaranthoideae. Amaranth. Herbaceous perennial. Genus name means 'unfading' in reference to the durability of the colour in the flowers. 'Red Velvet' is a garden cultivar. Various species are used in Brazil 'to increase lactation'. Matthiolus (1569) in his commentary, unsurprisingly in view of its red flowers (the word 'flowers' is a synonym for menses), recommends *Amaranthus* for stopping heavy periods and leucorrhoea, as well as for coughing up blood and dysentery. |
| *Anchusa azurea* Mill. Boraginaceae. Italian bugloss. Herbaceous perennial. 'Loddon Royalist' is a cultivar which has the Award of Garden Merit from the Royal Horticultural Society. Distribution: North Africa, E. Asia, Europe. Contains the pyrrolizidine alkaloid cynoglossine which causes liver damage. *Anchusa officinalis* is a banned substance for herbal medicine in Australia, it is not licensed for the manufacture of herbal medicine in the UK but recommended, with cautions, by herbalists for coughs and other conditions. |
| *Anemone blanda* Schott & Kotschy, Ranunculaceae. Grecian windflower. Genus name may derive from Greek for wind, *blanda being Latin for mild or pleasing.* Perennial tuberous herb. Distribution SE Europe, Turkey, Lebanon, Syria. Not described until 1854 so no early herbal records under this name. However all species of Ranunculaceae are poisonous, containing protoanemonin, which causes blistering if sap gets on the skin and indigestion if ingested. |
| *Anthyllis vulneraria* L. Fabaceae. Kidney vetch, woundwort. '*vulneraria*' means 'wound healer'; 'wort' has been used in England since the 9th century to mean root or plant. Parkinson (1640) notes *Anthylis prior* and *Anthyllis lentisimilis* (Dodoens); *Anthyllis leguminosa* (Lobel, Clusius); *Lagopodium* (Tabermontanus); *Arthetica wundkraut Saxonum* (Thalius); *Vulneraria rustica* (Gesner); and several more names from different authors. Small herb. Distribution: Europe to Iran and North Africa. The hairy flowers and leaves would act, like cotton wool, to promote platelet clotting. Parkinson (1640) notes it as *Anthyllis leguminosa vulgaris* writing ' ... much use among the Germans for their wonds and hurts, inward and outward, so doe both wayes apply them, whence their name. Thalius [said] it was used for the gout' . *Anthyllis vulneraria* is being used to clear up contaminated mine sites as it can absorb zinc, lead and cadmium from mine tailings where the metal concentrations are 500 times higher than European standards allow, storing up to 8% by weight in vacuoles in their leaves. It has no modern medical use. |
| *Aralia spinosa* L. Araliaceae. Devil's walking stick, Prickly ash, Hercules' club. Tree. Distribution: Eastern North America. Contact with sap causes skin irritation, raw berries mildly toxic to humans, causing diarrhoea and vomiting. Eaten by bears. Used medicinally by Native Americans for a variety of conditions. |
| *Araneus diadematus* Clerk, Araneidae. Orb web Spider, European garden spider. Distribution: Europe and North America. Bite is unpleasant but not dangerous. Spiders’ webs have been used to stop bleeding from wounds (Stearns, 1801). They probably work by providing a framework for platelets to coagulate. |
| *Arctium lappa* L. Asteraceae. Greater Burdock. Distribution: Europe to India and Japan. Dioscorides (Beck, 2003) writes: '... helps those who spit blood and who suffer from abscesses ... plastered on it stems the pains around the joints that stem from twistings. The Leaves are applied beneficially on old ulcers.' Culpeper (1650) writes: ‘Burdanae, etc. Of Bur, Clot-Bur or Burdock, ... helps such as spit blood and matter, bruised and mixed salt and applied to the place, helpeth the bitings of mad dogs. It expels wind, easeth pains of the teeth, strengthens the back, helps the running of the reins, and the whites in women, being taken inwardly.’ The roots contain inulin, which is made into a non-digestible sweetener for diabetics. It has a multitude of uses in herbal medicine, in particular it is a component of a compound called ‘essiac’ that has been widely used as a treatment of cancers in the USA, but which is of no proven benefit. The young roots can be eaten raw or cooked. The seeds are hairy and care should be taken when harvesting them as inhaled they are reported as ‘toxic’. The root is licensed for use in Traditional Herbal Medicines in the UK (UK Medicines and Healthcare Products Regulatory Agency (MHRA)). |
| *Argemone mexicana* L. Papaveraceae. Mexican poppy; Mexican prickly poppy. In India it is called Satyanashi meaning 'devastating'. Herbaceous annual. Distribution Western US, West Indies and Mexico. The seeds yield 35% argemone (aka katkar) oil, contains up to 50% of toxic alkaloids including sanguinarine and dihydrosanguinarine. Mustard oil, used for cooking in India, Mauritius and Fiji, contaminated with as little as 1% katkar oil has caused numerous epidemics of Epidemic Dropsy, caused by proteinuria and consequent hypoalbuminaemia with fluid retention, pitting oedema and congestive cardiac failure, anaemia, skin pigmentation, retinal haemorrhages, glaucoma and shortness of breath. Total depletion of antioxidants especially vitamin E and A (tocopherol and retinol) occurs. Death rate is 5%, but with symptomatic treatment recovery usually occurs within three months. Contamination of wheat flour, in South Africa, with the seeds of *Argemone mexicana* caused the same illness. Most mustard seeds are black and indistinguishable from argemone seeds, so farmers are encouraged to grow yellow seed mustard so contamination can easily be seen when the seeds are inspected prior to oil extraction. Yellow seed mustard oil does not mix well with argemone oil so can also be detected at the oil stage. |
| *Asarum caudatum* Lindl. Aristolochiaceae. British Columbia wild ginger. *Asarum* is the Latin name for wild ginger; *caudatum* means 'with a tail' referring to the tails on the petals. Rhizomatous perennial herb. Distribution: Western USA, British Columbia to California. Not described until 1831 so no historical uses noted. May have been used instead of widely in North America instead of *Asarum canadense* when latter not available. In Canada A. canadense used root for heart complaints. The Menomini, Meskwaki, Ojibwa and Potawatomi used the root as a seasoning to make food palatable. Used for throat, stomach, lung problems and earache (Austin, 2004). |
| *Asphodeline lutea* Rchb. Yellow asphodel, King's spear, *Hastula regia*. Hardy rhizomatous perennial. Distribution Mediterranean and Caucasus. It is the flower of the dead, as Homer writes that it carpets an area in the gloomy darkness of the underworld (Hades), in Greek mythology where the souls of the dead are found. However this may be a misinterpretation of the Greek where 'Asphodel' has been read instead of 'ash-filled'. In the etymology of flower names, it is suggested that the yellow 'daffodil' is a corruption of French or Flemish 'de asphodel' (both ex Steve Reece, 2007). An Aristotelian epigram, refers to it growing on tombs: 'On my back I hold mallow and many-rooted asphodel ...' The asphodel was sacred to Persephone, goddess of the underworld, who was seized and wed by Hades, god of the underworld, and taken to his kingdom. Her disappearance brings the winter, and her reappearance each year, the spring. The only reliable source of information about its early medical uses is, probably, Dioscorides although the plant in his *De Materia Medica* may be *A. ramosus* or *A. albus*. He gives its properties as diuretic, induces menses, good for coughs and convulsions, an antidote to snake bite, applied as a poultice for sores of all sorts, and in compounds for eye, ear and tooth pains, and to cure alopecia and vitiligo, but induces diarrhoea and vomiting and is an anti-aphrodisiac. Fuchs (1542), as Ruel’s commentaries (1543) note, makes a big mistake as he has *Lilium martagon* as his concept of *A. luteus*. Ruel only illustrates its leaves and roots, calling it *Hastula regia* (Latin for King’s spear) but Matthiolus's Commentaries (1569 edition) has a reasonable woodcut also as *Hastula regia* (1569). Dodoen's *Cruydeboeck* (1556) does not mention or illustrate *Asphodelus luteus*. L'Escluse's French translation *Histoire des Plantes* (1557) follows the *Cruydeboeck*. Dodoen's Latin translation *Stirpium Historia Pemptades Sex* (1583) adds *A. luteus* with text and woodcut, with no uses. Henry Lyte's (1578) translation illustrates *Asphodelus luteus* as *Asphodeli tertia species* and 'Yellow affodyl' (vide etymology of 'daffodil') and also does not describe any uses for it. Gerard's translation *The Herba*l (1597 and 1633) continues the muddle and does not give any uses for this plant. Parkinson's comments (1640) on the lack of medicinal properties of asphodels, refer to quite different plants coming from wet areas in Lancashire, Scotland and Norway . He calls them *pseudoasphodelus major* and *minor* which he writes are called *Asphodelus luteus palustris* by Dodoens, and not 'King's Spear' which he illustrates with a good woodcut of *A. luteus* and calls it *Asphodelus luteus minor.* Once herbals started to be written in northern Europe, the knowledge of the arid loving, *Asphodelus luteus* of south east Europe was lost. |
| *Aster asperulus* Wall. Asteraceae. Himalayan Fall Aster. Herbaceous perennial. Distribution: Himalayas. Only recently introduced into cultivation |
| *Astrantia major* L. Apiaceae. Gentleman's Melancholy, Hattie's Pincushion, Mountain Sanicle, & Black-root Sanicle. It was called Black Masterwort by Gerard (1633) and *Imperatoria* by Parkinson (1640), 'Hadspen Blood' is a cultivar. Masterwort was cultivated as a pot-herb, recommended by Culpeper (1650) for "cold griefs and diseases both of the stomache and body". The roots were used as a purgative (Lindley, 1838) and an infusion from the whole plant as a diuretic. The botanical name *Astrantia* is a corruption of the old apothecaries’ name for this plant, Magistrantia, “masterwort”, implying its suitability for use only by adepts in herbalism. Distribution: central and eastern Europe. Parkinson (1640) recommended it for colds, dyspnoea, renal stone, inducing menses and for expelling a dead foetus, hysteria ('strangulation of the mother'), cramps, heart failure, epilepsy, purulent wounds and ulcers, and 'reviving the abilitie of generation being almost extinct' which Parkinson doubted, quartain fevers, colic and for purging the brain. Pommet (1712) gave a completely different list: against poisons, stinking breath, malignant and pestilential diseases, vertigo, apoplexy, palsies, toothache, scabby head, and agrees with its use for ulcers. Not used now, but as it is purgative, in the family Apiaceae, it is likely to be toxic. |
| *Astrantia maxima* Pall. Apiaceae. Large masterwort. The botanical name *Astrantia* is a corruption of the old apothecaries’ name for this plant, Magistrantia “masterwort”, implying its suitability for use only by adepts in herbalism. Probably mildly poisonous. |
| *Athyrium niponicum* (Mett.) Hance var. *pictum* (Maxwell) Fraser-Jenk. Woodsiaceae. Japanese Painted fern. Hardy fern. Distribution: Japan. Young fronds are boiled and eaten in Japan. However after the discovery of thiaminases in certain ferns *Pteridum aquilum* (bracken)*, Marsilea drummondii* and *Cheilanthes sieberi* cautions are given regarding the risk of thiaminase in all ferns. It can be mostly removed by boiling, but otherwise causes vitamin B1 (thiamine) deficiency and beriberi in a matter of weeks. Eating Bracken fern also causes cancer, as do the spores, but I could find no report of other ferns being toxic. |
| *Atropa belladonna* L. Solanaceae. Deadly nightshade. Dwale. Morella, Solatrum, Hound's berries, *Uva lupina, Cucubalus*, *Solanum lethale. Atropa* derives from Atropos the oldest of the three Fates of Greek mythology who cut the thread of Life (her sisters Clotho and Lachesis spun and measured the thread, respectively). *belladonna,* literally, means 'beautiful lady' and was the Italian name for it. Folklore has it that Italian ladies put drops from the plant or the fruits in their eyes to make themselves doe-eyed, myopic and beautiful. However, this is not supported by the 16th and 17th century literature, where no mention is ever made of dilated pupils (or any of the effects of parasympathetic blockade). Tournefort (1719) says 'The Italians named this plant *Belladonna*, which in their language signifies a beautiful woman, because the ladies use it much in the composition of their *Fucus* [rouge or deceit or cosmetic] or face paint.' Parkinson says that the Italian ladies use the distilled juice as a *fucus '...* peradventure [perhaps] to take away their high colour and make them looke paler.' I think it more likely that they absorbed atropine through their skin and were slightly 'stoned' and disinhibited, which made them beautiful ladies in the eyes of Italian males. Distribution: Europe, North Africa, western Asia. Culpeper (1650) writes: '*Solanum.* Nightshade: very cold and dry, binding … dangerous given inwardly … outwardly it helps the shingles, St Antonie's Fire [erysipelas] and other hot inflammation.' Most of the 16th, 17th and 18th century herbals recommend it topically for breast cancers. Poisonous plants were regarded as 'cold' plants as an excess of them caused death and the body became cold. They were regarded as opposing the hot humour which kept us warm and alive. Poultices of *Belladonna* leaves are still recommended for muscle strain in cyclists, by herbalists. Gerard (1633) writes that it: 'causeth sleep, troubleth the mind, bringeth madnesse if a few of the berries be inwardly taken, but if more be taken they also kill...'. He was also aware that the alkaloids could be absorbed through the skin for he notes that a poultice of the leaves applied to the forehead, induces sleep, and relieves headache. The whole plant contains the anticholinergic alkaloid atropine, which blocks the peripheral actions of acetylcholine in the parasympathetic nervous system. Atropine is a racemic mixture of d- and l- hyoscyamine. Atropine, dropped into the eyes, blocks the acetylcholine receptors of the pupil so it no longer constricts on exposure to bright light - so enabling an ophthalmologist to examine the retina with an ophthalmoscope. Atropine speeds up the heart rate, reduces salivation and sweating, reduces gut motility, inhibits the vertigo of sea sickness, and is used to block the acetylcholine receptors to prevent the effects of organophosphorous and other nerve gas poisons. It is still has important uses in medicine. Atropine poisoning takes three or four days to wear off, and the hallucinations experienced by its use are described as unpleasant. We have to be content with 'madness', 'frenzie' and 'idle and vain imaginations' in the early herbals to describe the hallucinations of atropine and related alkaloids as the word 'hallucination' in the sense of a perception for which there is no external stimulus, was not used in English until 1646 (Sir T. Browne, 1646). It is a restricted herbal medicine which can only be sold in premises which are registered pharmacies and by or under the supervision of a pharmacist (UK Medicines and Healthcare Products Regulatory Agency (MHRA)). |
| *Aucuba japonica* Thunb. Acubaceae. Spotted laurel, Japanese laurel. Its Japanese name is *aukubi.* 'Rosannie' is an unspotted cultivar which has the Award of Garden Merit from the RHS, and is unusual in that it has both male and female flowers, so always produces berries. The original *Aucuba japonica* plants introduced in 1783 were female and it was not until Robert Fortune brought back a male plant in 1861 that berries could be produced on the female plants. It is only mildly poisonous, containing the alkaloid aucubin, unlike true laurel, *Prunus laurocerasu*s, which contains a cyanogenic lipid which is converted to cyanide if the leaf is damaged. Aucubin is an iridoid glycoside, which defends the plant against herbivores, mostly insects which is probably why the leaves suffer little if any pest damage. There are no medical uses although the leaves are used in traditional Chinese medicine. |
| *Digitalis lanata* Ehrh. Scrophulariaceae Woolly or Grecian foxglove. Distribution: Eastern Europe. It contains large amounts of cardiac glycosides, such as Digoxin, which are used to treat heart failure by increasing the force of contraction of the heart. Digoxin is now made synthetically and the plant is no longer used. Cardiac glycosides are very toxic and the difference between the therapeutic and the toxic and fatal dose is small. Toxic effects include vomiting, slow heart rate, xanthopsia (vision becomes coloured yellow). It is visited by *Anthophora* Latreillebees (a tentative diagnosis), and one can find these lying upside down in the flowers, apparently intoxicated. On tapping them out, they fall straight to the ground. If placed onto one's palm they lie upside down until turned upright, where they remain with their wings outspread, not moving except to 'buzz' occasionally for several minutes before flying off. *Anthophora* bees are solitary bees which live in colonies. |
| *Bergenia* Moench. Saxifraginaceae. Elephant's ears. Named for Karl August von Bergen (1704-1759), physician and botanist, professor at Viadrina University, Frankfurt. 'Bressingham Ruby' is a cultivar raised at Blooms of Bressingham by Alan and Adrian Bloom. Rhizomatous perennial. Distribution: Afghanistan to China. Species information not known. |
| *Bergenia ciliata* (Haw.)Sternb. Saxifraginaceae. Elephant's ears. Named for Karl August von Bergen (1704-1759), physician and botanist, professor at Viadrina University, Frankfurt. Has hairy leaves, hence *ciliata.* Distribution: E. Afghanistan, Himalayas, Assam. Used for fevers, diarrhoea, bruises and boils, coughs, renal stones, diabetes, heart disease, haemorrhoids, stomach disorders (Harish et al www.ijabpt.com). It was described in the 1820s so there is no early literature. |
| *Borago officinalis* L. Boraginaceae. Borage. *officinalis* indicates it was used in the 'offices' - the consulting clinics - of medieval monks. Distribution: Europe. Culpeper: “... comforts the heart, cheers the spirit, drives away sadness and melancholy, they are rather laxative than binding; help swooning and heart qualms, breed special good blood; help consumptions, madness and such as are much weakened by sickness” and the flowers 'strengthen the heart and brain, and are profitable in fevers.' It is (or was) added to Pimms, along with oranges and cucumber etc., but Culpeper was referring to it cheering the human spirit. Under Bugloss, Culpeper notes ‘Buglossum. Buglos, its vertues are the same as Borage’ with a margin note that ‘In Sussex (because they must be francified [=rendered into French]) called Languedebeef; in plain English Oxtongue.’ Lindley, while noting its cucumber flavour and that it was added to cordials, doubted that it had any ‘exhilarating qualities’. He wrote that it ‘was once esteemed as a pectoral medicine [i.e. for chest complaints].’ It has been suspected of being hepatotoxic, containing pyrrolizidines, when ingested. It is genotoxic and carcinogenic. It should not be taken internally (UK Medicines Care Agency, 2002). |
| *Brillantaisia ulugurica* Lindau, Acanthaceae. Giant salvia. Tropical herbaceous plant. Distribution: Tropical Africa. *Brillantaisia patula* is used by the Yoruba in south Nigeria for small-pox medication, the roots being mixed with *Bahia nitida* and *Marantolchloa leucantha*, *Piper guineense* and snails. This is made into a soup and the snail piece eaten to protect against smallpox for a year (Neuwinger, 1994) which doubtless was effective after the global eradication of smallpox in 1979. *Brillantaisia nitens* *is used in the Cameroons to treat cardiovascular disorders.* Phytochemical screening of *Brillantaisia* species has shown antibacterial action, vascular smooth muscle relaxant properties. Kew reports their use as soap; the leaves for a foot itch; and as a medication in pregnancy (S. Nigeria). |
| *Brugmansia suaveolens* (Willd.)Sweet, Solanaceae. Angels' Trumpets. Semi-woody shrub or small tree. 'Pink Beauty' is a pink flowered cultivar. Named for Sebald Justin Brugmans (1763-1819) Professor of Natural History and Medicine, and director of the Botanical Garden at Leiden. Distribution: Coastal rain forests of south-east Brazil below 1,000m. The whole plant contains high concentrations of tropane alkaloids: hyoscine (scopolamine), apohyoscine, norhyoscine, atropine (a racemic mixture of d- and l- hyoscyamine), noratropine, and tigloyl esters. The roots contain additional alkaloids. The flowers principally contain norhyoscine (Evans & Woolley, 1969). The tropane alkaloids block the peripheral actions of acetylcholine in the parasympathetic nervous system. They block the pupillary response to bright light, speed up the heart rate, reduce salivation and sweating, reduce gut motility and inhibit the vertigo and nausea of sea sickness. Centrally they disinhibit and relax; and induce hallucinations, coma and death. The dried leaves were made into cigars, available on the National Health Service in 1948 to smoke as a treatment for asthma. As relaxation occurred and hallucinations were imminent, the patient's asthma was relieved. The leaves and flowers are dried and smoked around the world (in Australia the botanic gardens have to put fences around their plants to prevent theft) for their hallucinatory effects. Merely rubbing the flowers or leaves and then rubbing one's eye is sufficient to cause a dilated pupil, which may persist for three days (called 'gardener's mydriasis'). A contract worker at the Royal College of Physicians recounted drinking a tea made from the flowers (very bitter) of *Brugmansia suaveolens* at a beach party in South Africa and waking up 14 hours later with no memory of where he had been, covered in scratches and bruises, still with his surf board - but it appeared to have blue flames around the edges, and with tree small men in funny clothes and bobbly hats talking to him, who nobody else could see. He adamantly refused the offer of trying it again. Most tropane alkaloid induced hallucinations are perceived as unpleasant. Repeated rubbing the leaves with ones fingers can cause long term numbness, and sufficient hyoscine can be absorbed through the skin to induce trances and hallucinations if the leaves are rubbed over the whole body. Hyoscine (scopolamine) was reputedly used as a 'truth drug' because of its disinhibiting effect. It is used in pre-operative premedication, partly as a tranquilizer, partly to reduce saliva and bronchial secretions, and - perhaps - to induce amnesia (in case the patient wakes up during the operation). The plant is fragrant in the evening, and folk lore suggests that sleeping under it will bring death. However, analysis of the fragrance has not uncovered any lethal chemicals, mainly *trans*-ocimene and 1,8-cineole, with some terpenoids, benzenoids and indole. Perillene, a terpenoid, was the main volatile compound from the leaves. No tropane alkaloids were detected, and none of these are intoxicating at low exposures (Kite & Leon, 1995). |
| *Brugmansia suaveolens* (Willd.)Sweet, Solanaceae. Angels' Trumpets. Semi-woody shrub or small tree. 'Pink Beauty' is a pink flowered cultivar. Named for Sebald Justin Brugmans (1763-1819) Professor of Natural History and Medicine, and director of the Botanical Garden at Leiden. Distribution: Coastal rain forests of south-east Brazil below 1,000m. The whole plant contains high concentrations of tropane alkaloids: hyoscine (scopolamine), apohyoscine, norhyoscine, atropine (a racemic mixture of d- and l- hyoscyamine), noratropine, and tigloyl esters. The roots contain additional alkaloids. The flowers principally contain norhyoscine (Evans & Woolley, 1969). The tropane alkaloids block the peripheral actions of acetylcholine in the parasympathetic nervous system. They block the pupillary response to bright light, speed up the heart rate, reduce salivation and sweating, reduce gut motility and inhibit the vertigo and nausea of sea sickness. Centrally they disinhibit and relax; and induce hallucinations, coma and death. The dried leaves were made into cigars, available on the National Health Service in 1948 to smoke as a treatment for asthma. As relaxation occurred and hallucinations were imminent, the patient's asthma was relieved. The leaves and flowers are dried and smoked around the world (in Australia the botanic gardens have to put fences round their plants to prevent theft) for their hallucinatory effects. Merely rubbing the flowers or leaves and then rubbing one's eye is sufficient to cause a dilated pupil, which may persist for three days (called 'gardener's mydriasis'). A contract worker at the Royal College of Physicians recounted drinking a tea made from the flowers (very bitter) of Brugmansia suaveolens at a beach party in South Africa and waking up 14 hours later with no memory of where he had been, covered in scratches and bruises, still with his surf board - but it appeared to have blue flames around the edges, and with tree small men in funny clothes and bobbly hats talking to him, who nobody else could see. He adamantly refused the offer of trying it again. Most tropane alkaloid induced hallucinations are perceived as unpleasant. Repeated rubbing the leaves with one's fingers can cause long term numbness, and sufficient hyoscine can be absorbed through the skin to induce trances and hallucinations if the leaves are rubbed over the whole body. Hyoscine (scopolamine) was reputedly used as a 'truth drug' because of its disinhibiting effect. It is used in pre-operative premedication, partly as a tranquilizer, partly to reduce saliva and bronchial secretions, and - perhaps - to induce amnesia (in case the patient wakes up during the operation). The plant is fragrant in the evening, and folk lore suggests that sleeping under it will bring death. However, analysis of the fragrance has not uncovered any lethal chemicals, mainly trans-ocimene and 1,8-cineole, with someterpenoids, benzenoids and indole. Perillene, a terpenoid, was the main volatile compound from the leaves. No tropane alkaloids were detected, and none of these are intoxicating at low exposures (Kite & Leon, 1995). |
| *Calendula officinalis* L. Asteraceae. Pot marigold, common marigold, ruds or ruddles. *Calendula*, because it was said to flower most commonly at the first of each month - the 'calends' (Coles, 1657). *officinalis* indicates that it was used in the 'offices' - the clinics - of the monks in medieval times*.* Annual herb. Distribution: Southern Europe. The Doctrine of Signatures, indicated that as the flowers resembled the pupil of the eye (along with *Arnica,*  *Inula* and the ox-eye daisy), it was good for eye disorders (Porta, 1588). Coles (1658) writes '... the distilled water ... helpeth red and watery eyes, being washed therewith, which it does by Signature, as *Crollius* saith'. Culpeper writes: [recommending the leaves] '... loosen the belly, the juice held in the mouth helps the toothache and takes away any inflammation, or hot swelling being bathed with it mixed with a little vinegar.' The petals are used as a saffron substitute - ‘formerly much employed as a carminative; it is chiefly used now to adulterate saffron’ (Lindley, 1838). Avoid in pregnancy as it is a uterine stimulant (Medicines Control Agency, 2002). Flowers are added to salads and stews, and edible (although it is never suggested that one eats more than one). The plant contains carotenoids, flavoxanthin, auroxanthin and lutein and beta-carotene; saponins, sesquiterpine glucosides and triterpenes. While the Chrusanthemon/Calchas of Dioscorides had 'leaves much jagged' (Gunther, 1959)) so was not our marigold, it had a yellow daisy-like flower and he noted that if drunk it could make one 'Icteral have a good colour' which would be secondary to the carotene in yellow flowers. Turner (1551) writes that the flowers were used 'to make their hair yellow, and, coyly, 'a perfume made of the dry flowers of this herb, and put to the convenient place, bring down the secondes [placenta, afterbirth].' Currently, used to make hand creams and food dyes. Skin sensitivity may occur. It is no longer licensed for internal use. |
| *Callicarpa bodinieri* H. Lev. var *giraldii* Lamiaceae Beautyberry. The genus name *bodinieri* commemorates Emile Marie Bodinier (1842-1901) French missionary with Missions Etrangeres, and plant collector in China. He sent 930 herbarium specimens from the Peking region, via Pere David, to the Paris museum in 1890, and 1500 from Hong Kong in 1892 before going to Guizhou. The varietal name *giraldii* is not recognised by the International Plant Names Index, but used in horticulture. It commemorates Giuseppe Giraldi (1848-1901) an Italian missionary in China who collected plants in Shaanxi province 1890-1895 for the University of Florence (Bretschneider, 1898), . The cultivar 'Profusion' has an Award of Garden Merit from the Royal Horticultural Society. Medium-size deciduous shrub. Distribution: China. Described in 1911. The berries are bitter to taste, so probably poisonous, despite guesses to the contrary. The North American *Callicarpa americana* was used by the Alabama people in a sweat bath for malaria and rheumatism' . The Choctaw drank a decoction of the roots for dysentery, colic and dizziness; the Koasati used it for stomach ache; and the Seminole for 'snake sickness', itchy skin and urinary retention (Moerman, 1998). No documentation found for *C. bodinieri* being used in Chinese medicine. |
| *Camassia leichtlinii* (Baker)S.Watson Hyacinthaceae. Great Camas, Quamash. The species was named for Maximillian Leichtlin (1831-1910 of Baden Baden, Germany, bulb enthusiast who corresponded with J.G. Baker at Kew. Bulbous herb. Distribution: North America. The bulbs of *Camassi*a species were eaten by the Native Americans, the Nez Perce, after cooking by steaming for a day - which suggests they may be poisonous raw. They gave them to the American explorers, Meriwether Lewis and William Clerk, on their expedition (1804-1806) when they ran out of food. The bulbs of the similar looking 'Death camus', *Toxicoscordion venenosum* have been fatal when ingested by mistake (RBG Kew on-line). Steroidal saponins, which are precursors in the manufacture of steroids and cytotoxic activity has been detected in the sap of the bulbs. |
| *Camellia sasanqua* Thunb. Theaceae. Christmas camellia. *Camellia* commemorates Georg Josef Kamel (1661-1706), Jesuit pharmacist from Moravia (Czech Republic) who worked in the Philippines and sent plants to John Ray in England (Oakeley, 2012) Evergreen shrub. Distribution: Japan and China. Leaves are used in Japan to make tea (normally made from *C. sinensis*) and the seeds to make the edible tea seed oil. |
| *Capsicum annuum* 'Masquerade' Distribution: Central and South America. This ‘domesticated species’ originated from Mexico (although the centre of *Capsicum* evolution was much earlier and from Bolivia) and includes the bland salad peppers and the hot chilli peppers, of which capsaicin (sometimes called capsicain), from the lining of the inside of the chilli, is the main active ingredient. Chilli comes from the Aztec language of the Nahuatl people. It was reputedly introduced to Europe by Columbus in the mid-15th century, but was cultivated in Mexico since 4,000 BCE and used in cooking since 7,200 BCE. After its introduction to Europe, its cultivation very rapidly became world-wide. It appears first as a description (Bock, 1539) with the name *teutschem Pfeffer.* The first illustration, as *Siliquastrum*, appears in *Historia Stirpes commentarii insignis* (Fuchs, 1542). Fuchs did not realise it came from the Americas, as he identified it as a plant described by Pliny, Dioscorides and Avicenna and gave their uses of it. It appear in Dodoen's *Cruydeboeck* (1551) and Lyte's translation (1557) with the note that it is 'hot and drie in the third degree'. He recommended it for dressing meat, and noted that it 'warmeth the stomach' and was good for a sore throat, scrofula, and topically got rid of spots. Fuch's had reported these properties as being described by Avicenna, but what that plant was is unknown. Lindley (1838) wrote: 'It is employed in medicine, in combination with *Cinchona* in intermittent and lethargic affections, and also in atonic gout, dyspepsia accompanied by flatulence, tympanitis, paralysis etc. Its most valuable application appears however to be in *cynanche maligna* [=severe sore throat, with impending suffocation] and *scarlatina maligna* [=severe scarlet fever], used either as a gargle or administered internally.' However, its principal use medically has been in pain relief, applied locally for pain from muscle injury to post herpetic neuralgia. Capsaicin acts on the pain and heat sensing neurones to make them trigger the sensation of pain at body temperature. Repeated exposure to capsaicin depletes the neurotransmitter substance P that is used to perceive pain, so the relevant nerves no longer transmit the sensation of pain/heat from any cause. It is a banned substance in the equestrian events at the Olympics because of its ability to stop perception of pain. Capsaicin has been shown, experimentally, to kill cancer cells by attacking their mitochondria. Particular interest has concentrated on its ability to reduce the size of tumours of the pancreas and prostate. Various cultivars are used in cooking, and the strength (i.e. how hot they are) is measured in Scoville units. A standard chilli pepper used in England would be around 5,000 Scovilles, the hottest peppers are rated over one million Scoville units. |
| *Carpobrotus acinaciformis* (L.) L.Bolus Aizoaceae. Eland's Sour fig. Sally-my-handsome, its other common name is a corruption of *Mesembryanthemum (acinaciforme)* which was the genus ascribed to it by Linnaeus (1753) Succulent perennial. Distribution: South Africa. Antibacterial compounds have been isolated from it, it is rich in tannins. The leaf sap is used to treat infections of the mouth and throat. In South African ‘muthi’ medicine, the sap is used as a gargle for sore throats; for burns; eczema; tuberculosis; dysentery; toothache; thrush; stomach upsets and wounds. The fruit of the yellow-flowered, related species, *C. edulis*, also known as Hottentot fig, is made into a jam and put in curries. The sap is mucilaginous and when applied to a burn probably works by drying to provide a thin protective layer, preventing bacteria from reaching the burnt surface. Infection of burns is the commonest problem in their management and while in modern medicine an aerosol spray of a varnish-like material is used, the saps of various plants, including the aloes, are staple domestic remedies (van Wyk, 2000). |
| *Carthamus tinctorius* L. Asteraceae. Safe Flower, False Saffron - Distribution: W. Asia. Dioscorides (in Beck, 2003) notes the seeds as a purgative, but also advises it made up with 30 figs, which must have helped. Gerard (1640) calls it *Atractylis flore luteo* the yellow distaffe thistle. and follows Dioscorides in its uses, but does get the reader confused with *Cnicus benedictus*, calling both plants 'wild bastard saffron'. Culpeper makes no mention of it in his early works, but later (1826) have the following: ‘Wild Saffon, or Saf-flower ... accounted a pretty strong cathartic [causing diarrhoea and vomiting], evacuating tough viscid phlegm, both upwards and downwards, and by that means is said to clear the lungs, and help the phthisic [now equated with tuberculosis]. It is likewise serviceable against the jaundice; although pretty much out of use.’ Linnaeus (1782) noted its use for asthma, dropsy, icterus and 'Tussus senilis' , which is probably an old cough. Safflower oil is used for cooking; making margarine, and as a substitute for linseed oil in making up paints where the yellow colour of the latter would spoil the paint. Recently transgenic plants have been produced that synthesise human insulin. It is used to produce a dye, and cloth dyed with safflower was found in the tombs of the Pharaohs, dating back to 2,000 BC, including the tomb of King Tutankhamen. The dye is also used in foodstuffs. 600,000 tons a year are produced worldwide for the production of a yellow pigment for margarine. |
| *Catharanthus roseus (*L.)G.Don Apocynaceae. Madagascar Periwinkle Distribution: Madagascar. It is the source of vincristine and vinblastine, which impair cell multiplication by interfering with microtubule assembly, causing metaphase arrest and are effective medications for leukaemias, lymphomas and some solid tumours. The mortality from childhood leukaemia fell from 100% to 30% once it was introduced - not a drug that could ethically be tested by double-blind trials. These chemicals were initially discovered by investigators in 1958 who were looking for cures for diabetes so tested this plant which was being used in the West Indies to reduce blood sugar levels. There are 70 different alkaloids present in this plant, and some - catharanthine, leurosine sulphate, lochnerine, tetrahydroalstonine, vindoline and vindolinine - lower blood sugar levels. However, the toxicity of this plant is such that this is not a plant to try at home for diabetic management. The vincristine content of the plant is 0.0003%, so two kilograms of leaf are required to produce sufficient vincristine for a single course of treatment for a child (6gm). Fortunately it is a vigorous weed and easy to grow in the tropics. Artificial synthesis has now been achieved. |
| *Cedronella canariensis* (L.)Webb & Berthel. Basionym *Dracocephalum canariense.* Lamiaceae. Canary balm, Balm-of-Gilead, Canary Island tea. It smells slightly resinous of cedar, hence the diminutive name *Cedronella.* Perennial herb. Distribution: Canary Islands. True Balm-of-Gilead is the sap of the poplar, *Populus candicans.*  It was drunk as a tea, and the aroma was believed to relieve colds. No medicinal use. |
| *Centaurea hypoleuca* DC Asteraceae. Knapweed. Persian cornflower. 'John Coutts' cultivar named for John Coutts (1872-1952) Director, Royal Botanic Gardens, Kew. Distribution: Europe and Middle East. *Centaurea* species are important sources of nectar for honey bees. No medicinal properties, but *Centaurea* species have been used including bluebottle or cornflower, *Centaurea cyanus* L, which was recommended by Culpeper: “ ... helps the yellow jaundice, opens obstructions of the liver, helps pains of the spleen, provokes the terms, brings out the birth and afterbirth.” The *Centurea* of Dioscorides was 1.5 metres high, had blue flowers 'like a poppy' and cannot be our cornflower. Lindley (1838) notes that *Centaurea* were used as a febrifuge*.* |
| *Chaenomeles* Lindl. Rosaceae. X superba (Frahm)Rehder. Japanese quince, flowering quince. 'Issai White'. A garden hybrid *C. speciosa* x *C. japonica.* This white-flowered cultivar's name, 'Issai', means 'early flowering' in Japanese. Distribution: Parents of Japanese origin, garden cultivar. Fruit is rich in vitamin C, contains mucilage used as a demulcent. Gang Zhao et al (Science Direct 90(3):363-371 (2008)) report experimental antiparkinsonian potential. Used in compound medicines for neuralgia, migraine and depression in Traditional Chinese Medicine. Seeds reputed to contain cyanogenic glycosides. |
| *Chamaemelum nobile* (L.) All. Asteraceae. English, Roman or garden chamomile Distribution: Europe, Mediterranean. Culpeper (1650): “... assuage swellings, inflammations of the bowels, dissolve wind, are profitable given in clysters or drink, to such as are troubled with colic or [renal] stone.” The leaves are pleasantly fragrant, hence its use as a lawn plant, but also in aromatherapy. A ‘tea’ made from the flowers is apparently used to lighten hair colour. Chamomile contains sesquiterpene lactones, and these are known to possess allergenic properties. Hypersensitivity reactions have been reported in this and other members of the Compositae (Asteraceae) and cross sensitivity reactions may occur (Medicines Control Agency, 2002). Analgesic, and used for cramps and spasms (Quincy, 1718). Chamomile tea is used to help sleep, but may cause uterine contractions so avoid in pregnancy (US National Institutes of Health advice). |
| *Chrysogonum virginianum* L. Asteraceae. Golden knee. Distribution: Eastern US. No medicinal uses. |
| *Cichorium intybus* L., Asteraceae. Chicory, succory. Distribution: Uses: 'Cichory, (or Succory as the vulgar call it) cools and strengthens the liver: so doth Endive' (Culpeper, 1650). The *Cichorium sylvestre*, Wilde Succorie, of Gerard (1633) and the leaves cooked into a soup for ill people. Linnaeus (1782) reported it was used for Melancholia, Hypochondria, Hectica [fever], haemorrhage and gout. Root contains 20% inulin, a sweetening agent. Dried, roasted and ground up the roots are used as a coffee substitute, best known as Camp coffee (Chicory and Coffee essence). This used to be sold in tall square section bottle with a label showing a circa 1885 army tent with a Sikh soldier standing and serving coffee to a seated officer from the Gordon Highlanders. The bottle on the label has now moved on, and since 2006 it shows the same tent but the Sikh and the Scot are now both seated, drinking Camp coffee together. |
| *Cirsium rivulare* (Jacq.)All. Asteraceae 'Atropurpureum' . Plume thistle. Distribution: Central and SW Europe. The 16th and 17th century herbals call *Cirsium* 'thistles' without separating them as we do now into different genera - and attribute no use to them. A currently popular garden plant. |
| *Cistus incanus* ssp *creticus*  Juss. Cistaceae. Rock Rose. Distribution: Crete. Interesting symbiosis with fungus called *Tuber melanosporum* which increases nutrient absorption for the plant and inhibits growth of other plants in the vicinity. It is a source of the resin ‘labdanum’ (a.k.a. ‘ladanum’) used in perfumes (similar smell to ambergris), as is *Cistus ladanifer*. It has no medical uses now, and such use was dwindling even in the 18th century. In the 16th century (Henry Lyte’s 1575 translation of Rembert Dodoen’s *Cruydeboeck* of 1554) its uses were described (directly copied from Dioscorides’ *Materia Medica* (70AD)) as: ‘Ladanum dronketh with olde wine, stoppeth the laske [periods], and provoketh urine. It is very good against the hardness of the matrix or mother [uterus] layde to in the manner of a pessarie, and it draweth down the secondes or afterbirth, when it is layde upon quicke coles [hot coals], and the fumigation or parfume thereof be received up into the body of women. // The same applied to the head with Myrrhe and oyle of Myrrhe, cureth the scurffe, called Alopecia, and keepeth the heare [hair] from falling of [sic], but whereas it is already fallen away, it will not cause the heare to growe agayne. // ...' and goes on in this vein about its uses for pain in the ears, and removing sores and scars and other things. |
| *Cistus ladanifer*  L., Cistaceae. Common Gum Cistus or Ladanum/labdanum. Distribution: Southern Europe and N. Africa. The fragrant resin from the sticky leaves, Gum Labdanum, is extracted and used in Mediterranean regions as an insecticide and deodorant ((Lewis & Elvin-Lewis, 2003). Lyte (1578) advises local application to prevent hair loss and cure earache; to remove scars, and on the chest to alleviate coughs. The fumes from leaves burnt on hot coals, were said to cure uterine disorders. Monks collected the resin from the beards and hair of goats which foraged among the plants. |
| *Clivia miniata* Regel Amaryllidoideae Kaffir Lily, Natal Lily. Named for Lady Charlotte Clive, Duchess of Northumberland Distribution: South Africa. A toxic plant containing the cytotoxic chemical, Lycorine. |
| *Colchicum autumnale* L., Colchicaceae. Autumn crocus, meadow saffron, naked ladies. Distribution: Europe. Extremely toxic, containing colchicine which is effective in small doses in treating gout. It inhibits mitosis so is of interest in cancer treatment. It is used to treat Familial Mediterranean fever. It induces polyploidy in plant protocorms for the production of tetraploid forms which have bigger flowers and seeds. |
| *Coreopsis tinctoria* Nutt. Asteraceae. Plains coreopsis. Golden tickseed. Distribution: North America. Used by Cherokee as an infusion for diarrhoea. Drunk by the Lakota as a tea. Zuni women drink infusion of plant, minus roots, if they wish to have female babies; also as coffee substitute. Zuni, Cherokee and Apache used it to make a red dye. Navajo and Ramah used infusions or fumigation for infections including syphilis (Moerman,1998). |
| *Coronilla valentina* L. ssp *glauca*  Fabaceae. ssp. *Glauca* has the AGM of the Royal Horticultural Society. Distribution: Southern Europe. Contains beta-nitropropionic acid, a potent neurotoxin. A budgerigar that chewed parts of two leaves developed weakness, incoordination and tremor (Campbell, *J. Avian Med. and Surg*.20(2):97-100 (2006). An invasive plant, which provides good forage for ruminant animals. Poisonous to horses. |
| *Cosmos atrosanguineus* (Hook.)Voss Heliantheae. 'Chocolate Drop' Distribution: Mexico (now extinct). One clone survives which is reproduced by division worldwide. Garden plant. Not edible. |
| *Crocosmia* Planch.x *crocosmiiflora* Iridaceae 'Emily McKenzie', montbretia. Garden hybrid *C. aurea* x *C. pottsii* Distribution: Parent plants come from South Africa. Bulbs toxic. |
| *Crocosmia* Planch. x *crocosmiiflora* Iridaceae 'George Davidson', montbretia. Garden hybrid *C. aurea* x *C. pottsii*  Distribution: Parent plants come from South Africa. Bulbs toxic. |
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| *Crocus vernus* (L,)Hill Iridaceae. and Bombus terrestris, spring crocus with bumble bee. Distribution: Europe. *Crocus sativus* the source of Saffron, a spice from the pollinia of the flower, *Crocus vernus* has no medicinal properties. |
| *Crocus vernus* (L,)Hill Iridaceae. and Bombus terrestris, spring crocus with bumble bee. Distribution: Europe.  *Crocus sativus* is the source of Saffron, a spice from the pollinia of the flower; *Crocus vernus* has no medicinal properties. |
| *Cucurbita maxima* Duchesne Cucurbitaceae. Pumpkin. 'Golden Hubbard' Distribution. North America. Seeds cooked and eaten as a treatment for tapeworms, but now a restricted herbal product, only to be supplied in registered pharmacies or under the supervision of a pharmacist (UK Medicines and Healthcare Products Regulatory Agency (MHRA)). |
| *Cucurbita pepo* L., Cucurbitaceae. Distribution: Mexico (extinct) This species is one of the oldest cultivated plants, first grown 11,000 years ago in Mexico, but extinct in the wild. Varieties are selectively bred for their taste, colour and shape. The seeds, ground to a powder are used to kill intestinal tape-worms (Lewis & Elvin-Lewis, 2003). This is a 200-year-old cultivar whose seed has been conserved by the Amish of Pennsylvania, USA. The rind is very thick, but the taste is delicious. This is a 200-year-old cultivar whose seed has been conserved by the Amish of Pennsylvania, USA. The rind is very thick, but the taste is delicious. Seeds approved for use in making herbal medicines in the UK (Herbal Medicine legislation 2013) |
| *Ecballium elaterium* (L.)A.Rich. Benincaseae Squirting cucumber - when ripe, the seed explodes from its case, squirting some distance. Distribution: Asia, Europe and N. Africa. Contain cucurbitacins which are very bitter, cytotoxic and poisonous. A restricted herbal product, only to be supplied in registered pharmacies or under the supervision of a pharmacist (UK Medicines and Healthcare Products Regulatory Agency (MHRA)). |
| *Cynara cardunculus* L. Asteraceae. Cardoon, Globe Artichoke, Artechokes, *Scolymos cinara, Cynara*, Cinara. Distribution: Southern Europe and North Africa. Lyte (1576) writes that Dodoens (1552) could find no medical use for them and Galen (c.200 AD) said they were indigestible unless cooked. However, he relates that other authors recommend that if the flower heads are soaked in strong wine, they 'provoke urine and stir up lust in the body.' More prosaically, the roots boiled in wine and drunk it cause the urine to be 'stinking' and so cures smelly armpits. He adds that it strengthens the stomach so causing women to conceive Male children. He goes on to say that the young shoots boiled in broth also stir up lust in men and women, and more besides. Lyte (1576) was translating, I think with elaborations, from the chapter on *Scolymos cinara*, Artichaut, in Dodoen's *Croydeboeck* (1552) as L'Ecluse's French translation, *Dodoens Histoire des Plantes*  (1575) does not mention these latter uses, but Dodoen's own Latin translation, the *Pemptades* (1583), and Gerard's *Herbal* (1633) both do so. It is useful in understanding the history of these translations to realise that Gerard uses, almost verbatim, the translation of the 'smelly armpit' paragraph from Lyte. |
| *Cynara cardunculus* L. Asteraceae. Cardoon, Globe Artichoke, Artechokes, *Scolymos cinara, Cynara,* Cinara*.* Distribution: Southern Europe and North Africa. Lyte (1576) writes that Dodoens (1552) could find no medical use for them and Galen (c.200 AD) said they were indigestible unless cooked. However he relates that other authors recommend that if the flower heads are soaked in strong wine, they 'provoke urine and stir up lust in the body.' More prosaically, the roots boiled in wine and drunk it cause the urine to be 'stinking' and so cures smelly armpits. He adds that it strengthens the stomach so causing women to conceive Male children. He goes on to say that the young shoots boiled in broth also stir up lust in men and women, and more besides. Lyte (1576) was translating, I think with elaborations, from the chapter on *Scolymos cinara,* Artichaut, in Dodoen's Croydeboeck (1552) as L'Ecluse's French translation (1575) does not mention these latter uses, but Dodoen's own Latin translation, the *Pemptades*(1583), and Gerard's (1633) both do so. It is useful in understanding the history of these translations to realise that Gerard uses, almost *verbatim*, the translation of the 'smelly armpit' paragraph from Lyte. |
| *Cynoglossum officinale* L. Boraginaceae. Houndstongue. Distribution: Europe. Culpeper (1650) writes: “... being roasted and laid to the fundament, helps the haemorrhoids. It is also good against burnings and scaldings.” It contains hepatocarcinogenic pyrrolizidine alkaloids and while people are known to eat the young leaves as a vegetable, this is inadvisable. The whole plant is hairy and may cause contact dermatitis. The use of herbal remedies, which contain these alkaloids, by the Bantu of southern Africa correlates with their high incidence of tumours of the liver and pancreas. |
| *Cytisus scoparius* (L.) Link Fabaceae. Common broom, *Genista.* Distribution: Western and central Europe. Culpeper (1650) writes: '*Genista.* Broom: … clense and open the stomach, break the stone in the reins [kidneys] and bladder, help the green sickness [anaemia]. Let such as are troubled with heart qualms or faintings, forbear it, for it weakens the heart and spirit vital' and in respect of the flowers he writes: 'Broome-flowers, purge water, and are good in dropsies [now regarded as heart failure with fluid retention].' |
| *Dactylorhiza* aff *fuchsii* Druce ex Soo Orchidaceae Common Spotted orchid. Distribution: Ireland to Mongolia. Roots look like a hand. Coles (1657) calls them *Palma Christi sive* [or] *Satyrion* (to distinguish it from *Ricinus communis* which he calls *Palma Christi sive Ricinus*. This plant is probably his Female Satyrion and another *Dactylorhiza,* probably one of the English Marsh orchids, is his Male Satyrion Royal, with purple flowers. In common with *Orchis* he writes 'The full and plump roots of the *Satyrium* or *Orchis*, whereof the *Electuary Diasatyrium* is made, are of mighty efficacy to provoke to venery, which they that have bulbous roots [meaning the testicle shaped roots of *Orchis*] do by Signature.'. Terrestrial orchids continue, to be harvested by the millions annually in the Middle East for the production of Salep, including Salep ice cream, because of their mythological aphrodisiacal property. |
| *Dactylorhiza foliosa* (Rchb.f.)Soo Orchidaceae Distribution: Madeira. Roots look like a hand and Coles (1657) calls them *Palma Christi sive* [or] *Satyrion* (to distinguish it from *Ricinus communis* which he calls *Palma Christi sive Ricinus*. This plant would be the closest to his *Male Satyrion Royal,* with purple flowers (but this is likely to be one of the English Marsh orchids,, and *Dactylorhiza fuchsii* is his Female *Satyrion.* In common with *Orchis* he writes 'The full and plump roots of the *Satyrium* or *Orchis,* whereof the *Electuary Diasatyrium* is made, are of mighty efficacy to provoke to venery, which they that have bulbous roots [meaning the testicle shaped roots of *Orchis*] do by Signature.'. Terrestrial orchids continue to be harvested by the millions annually in the Middle East for the production of Salep, including Salep ice cream, because of their mythological aphrodisiacal property. |
| *Dahlia mercki* Lehm. Mexican dahlia. Orchidaceae. Distribution: Mexico. The chromosomes contain a gene which protects it against mildew and this gene has been transplanted into aubergines, so allowing them to resist this disease. |
| *Dahlia mercki* Lehm. Mexican dahlia. Orchidaceae. Distribution: Mexico. The chromosomes contain a gene which protects it against mildew and this gene has been transplanted into aubergines, so allowing them to resist this disease. |
| *Danae racemosa* (L.) Moench Asparagaceae. Alexandrian or Poet's laurel. Distribution: Turkey to Iran. A monotypic genus with supreme adaptation to dry conditions, bearing its flowers and fruits on phylloclades, leaf like expanded stems. The phylloclades are too thick for sunlight to pass through so have chlorophyll containing cells on both sides (the cells in the middle do not) and stomata on both sides to facilitate CO2 diffusion into the plant. |
| *Daphne bholua* Buch.-Ham. ex D.Don Thymelaeaceae Nepalese paper plant. Daphne was the nymph turned into a laurel to avoid being chased by Apollo. *Bholua* probably from the Nepalese name 'baruwa'. This cultivar has the RHS Award of Garden Merit as it is floriferous and hardier than others. 'Jacqueline Postill' Distribution: Nepal to Southern China. Bark used to make paper. |
| *Dianella tasmanica* Hook.f. Phormiaceae Tasman flax lily. Distribution: Australia. A pretty plant, but also a source of fine fibre. The leaves are used for making baskets and the berries as a dye source. No medicinal use found, but the fruit is an irritant; the fruit of *D. intermedia* has been suspected of causing the death of a child. However several species contain neurotoxins, and eating the fruits has resulted in dizziness and walking in circles. Extract of the root of *Dianella revoluta* have been shown to be active against polio virus *in vitro*. Fruits of *Dianella caerulea* can be eaten when ripe and soft, but the advice is that all *Dianella* fruits should be avoided until their pharmacology has been further assessed (Hegarty, 2001). A note on the herbarium sheet in the Pharmaceutical Society's herbarium for *Dianella caerulea* states that in India the roots were mashed and boiled with rice which was then scattered in the fields and the rats ate it and died in their hundreds. |
| *Dianthus caryophyllus* L. Caryophyllaceae Carnation, clove-gilliflowers - Mediterranean Culpeper (1650) writes that ‘Clove-gilliflowers, resist the pestilence, strengthen the heart, liver and stomach, and provokes lust.’ They smell strongly of cloves, and an oil made from the petals is used in perfumery, soaps etc. The petals are sometimes used as a garnish for salads. In herbal medicine they are used to make a tonic. |
| *Dierama pulcherrimum* Baker Iridaceae. Angel's Fishing rods, African harebell.. Herbaceous perennial. Distribution: South Africa. Said to be used in South African Muthi medicine, but no references found other than it being grown at the Medicinal Garden of the University of Washington and the Royal College of Physicians, London. |
| *Echinacea purpurea* (L.) Moench Asteraceae. Coneflower. Distribution: North America. Austin (2004) records that the roots were chewed, or used as a tincture for coughs by the Choctaw. Combined with *Rhus typhina* to treat venereal disease by the Delaware. Very little record of this being used by Native Americans, who used *E. angustifolia* very widely - Regarded as a panacea and magical herb. This and *E. pallida* were used to treat snakebite, spider bite, cancer, toothache, burns, sores, wounds, flu and colds. *E. purpurea* in modern times has been used as an ‘immunostimulant’, but is known to cause a fall in white cell count, and to be purely a placebo. Licensed for use as a Traditional Herbal Medicine, which does not require proof of efficacy, in the UK. |
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| *Epimedium grandiflorum* C.Morren Berberidaceae Barrenwort, Bishop's Hat, Goat weed. 'Lilafee' is a purple-flowered cultivar. Distribution: China, Japan and Korea. Marketed as an aphrodisiac, with the ability to act like sildenafil, and for osteoporosis. Side effects reported include dizziness, dry mouth, vomiting and cardiac irregularity. It is not listed in Wiart (2006) or Wichtl (1994). Its reputation began, apparently, when a farmer observed increased sexual activity in his goats after they had been eating Epimedium. Given the enormous profits made by medicines such as sildenafil, it is indicative of its therapeutic value that it has not been taken up by a pharmaceutical company. Poor absorption from the gut and lack of information on toxicity may be responsible. It is not licensed for sale in the UK as a Traditional Herbal Remedy (Traditional Herbal Medicines Registration, January 2013) and has not been assessed or approved by the European Medicines Agency's Committee on Herbal Medicinal Products (HMPC). |
| *Epimedium pubescens* Maxim. Berberidaceae. Horny (sic) Goat Weed. Distribution: China. Marketed as an aphrodisiac, with the ability to act like sildenafil and for osteoporosis. Side effects reported include dizziness, dry mouth, vomiting and cardiac irregularity. It is not listed in Wiart (2006) or Wichtl (1994). Its reputation began, apparently, when a Chinese farmer observed increased sexual activity in his goats after they had been eating *Epimedium.* Given the enormous profits made by medicines such as sildenafil, it is indicative of its therapeutic value that it has not been taken up by a pharmaceutical company. Poor absorption from the gut and lack of information on toxicity may be responsible. It is not licensed for sale in the UK as a Traditional Herbal Remedy (Traditional Herbal Medicines Registration, January 2013) and has not been assessed or approved by the European Medicines Agency's Committee on Herbal Medicinal Products (HMPC). |
| *Eranthis hyemalis* Salisb. Ranunculaceae Winter Aconite Distribution: Europe. The reason it was called Winter aconite and linked to *Aconitum napellus* as being just as poisonous is because plants were classified according to leaf shape in the 16th century. L'Obel's *Stirpium adversaria nova* (1571) and *Plantarum seu stirpium historia* (1576) (with a full page illustration on page 384 showing *Eranthis* and *Aconitum* together) along with the knowledge that related plants have similar medical properties caused the belief that *Eranthis* are as poisonous as *Aconitum*. They are both in Ranunculaceae and while *Eranthis* (like all Ranunculaceae)is toxic if eaten, it does not contain the same chemicals as *Aconitum*. Caesalpino (Ekphrasis, 1616) pointed out the error in classifying according to leaf shape and recommended flower shape. It contains pharmacologically interesting chemicals such as khellin, also present in *Ammi visnaga*. This is a vasodilator but quite toxic, but can be converted into khellin analogues such as sodium cromoglicate – used as a prophylaxis against asthma attacks – and amiodarone which has anti-arrhythmia actions so is used for atrial fibrillation and other arrhythmias. It is endangered and protected in the wild (Croatia) because of over-collecting for horticulture. |
| *Erythroxylum coca* Lam. Erythroxylaceae Coca. Distribution: Peru . Cocaine is extracted from the leaf. It is no longer in the UK Pharmacopoeia (used to be used as a euphoriant in ‘Brompton Mixture’ for terminally ill patients). Cocaine, widely used as a local anaesthetic until 1903, inhibits re-uptake of dopamine and serotonin at brain synapses so these mood elevating chemicals build up and cause a ‘high’. Its use was often fatal. Coca leaf chewing was described by Nicolas Monardes (1569; in English,1577).It is a tropane alkaloid, euphoriant, local anaesthetic and stimulant. Its anaesthetic action is due to blocking of sodium channels and thus the propagation of action potentials down nerves from skin to spine. It is 'snorted’ as cocaine hydrochloride (cocaine + hydrochloric acid), so when the cocaine is absorbed the hydrochloric acid acts on the nasal septum and destroys it. Cocaine was first extracted in 1855; Niemann described analgesic effect in 1860; Cocawine sold 1863; eye operation by Koller in 1884; first synthesised in 1898; added to Coca-Cola 1886-1906; banned in 1902-1910. In 1930s Japan was the world's leading cocaine producer (23.3%) followed by the United States (21.3%). Now produced mostly in Colombia, Ecuador and Peru. Anti-drug officers spray plants with glyphosate – ‘Boliviana negra’ is a glyphosate resistant cultivar, produced in response to this attempt to eradicate it. |
| *Erythrina crista-galli* L. Fabaceae. Cockspur coral tree. Distribution: South America. The national tree of Argentina, its flowers are pollinated by perching birds unlike many other species which are pollinated by humming birds. An extract from the bark is used as a powerful soporific, also as a gargle for sore throats and in the treatment of cuts, rheumatism and hepatitis, in Brazil (Mors, 1998). The seed contains the alkaloid beta-erythroidine. Analgesics, antimicrobial and anti-inflammatory substances are being sought from the leaves. Curare-like action in rats has been reported from the seeds. |
| *Eschscholzia californica* Cham. Papaveraceae. Californian poppy. Named for German botanist and physician, Johan Friedrich von Eschscholtz (1793-1831). Distribution: North America. Official state flower of California. Contains berberine, considered a potential source for many new medicines, and numerous alkaloids some of which may have mild anxiolytic activity. |
| *Eucomis comosa* (Houtt.)H.R.Wehrh. Hyacinthaceae Pineapple flower. From the Greek *eu comis* meaning 'good hair' referring to the tuft of leaves on top of the flowers. *Comosa* being Latin for 'with a tuft' referring to the same thing. 'Sparkling Burgundy' has the Award of Garden Merit from the RHS. Used in South African 'muthi' medicine. Enemas of *Eucomis autumnalis* are used in Africa to treat low backache, to aid postoperative recovery and to speed the healing of fractures. Decoctions are taken for the treatment of everything from hangovers to syphilis. The active ingredients include homisoflavones, which have anti-inflammatory and antispasmodic activity (van Wyk et al, 2000). |
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| *Eucryphia glutinosa* (Poepp. & Endlich.) Baill. Eucryphiaceae. Santo sour cherry. Woodland tree. Distribution: Ancient genus from Gondwanaland. Native of Chile, other species being found in eastern coastal Australia. It is now rare in its habitat, since it was much used as a timber tree. Australian aboriginals have used leatherwood (*Eucryphia lucida*) as an antiseptic and styptic. A recent investigation by the Australian Government Rural Industries and Development Corporation (B R D’Arcy, 2005) finds that leatherwood honey is rich in phenolic acids that possess some antibacterial and anti-oxidant activity. These natural products have been proposed as preservers of freshness in foodstuffs - a possible alternative to the synthetics currently used. |
| *Euonymus americanus* L. Celastraceae North America. Millspaugh (1974 ) reports that *E. atropurpureus* or Wahoo used by Native Americans as a laxative, for stomach upsets and secondary syphilis, coughs, colds and asthma; hepatic obstruction. Used to kill body lice. Toxic. |
| *Euphorbia characias* L. subsp. *wulfenii* Euphorbiaceae. Mediterranean spurge. Distribution: Southern Europe, North Africa. Dioscorides (Beck, 2005) advises that two obols (just over one gram) of the sap of E. characias, made into pills, caused vomiting and diarrhoea. He recognized the corrosive effect of the sap and advised coating oneself with oil or suet when extracting the sap in case it splashed onto the skin; and coating the pills with wax to avoid the sap burning the throat. He used it for toothache, applied to the tooth; as a depilatory; for treating warts, cutaneous papillomas (skin tags), cancers, gangrene, and fistulas. Recent studies have shown *Euphorbia peplus* sap to be effective against basal cell carcinomas and other skin cancers. The latex contains a copper containing amine oxidase, a lectin, lipase, peroxidase, and a diamine oxidase. In vitro the latex is synergistic with ketoconazole against *Candida albicans* (thrush). All *Euphorbia* have a toxic white latex, and in Europe this has been used as a folk remedy to treat warts (hence German name of Wortwurt). Gerard (1633) apparently did not believe that the sap of *Euphorbia* was corrosive, for he writes: ‘I tooke but one drop of it into my mouth; which neverthelesse did so inflame and swell in my throte that I hardly escaped with my life.’ It can cause skin allergies and the smoke from burning them is toxic. The genus is named for Euphorbus (fl. circa 10 BC – 20 AD), the Greek physician to the Berber King Juba II (c. 50 BC – 23 AD) of Numidia. |
| *Euphorbia milii* Des Moul. Euphorbiaceae. Crown of Thorns - so called because of its very spiny stems. Distribution: Madagascar. The latex contains a copper-containing amine oxidase, a lectin, lipase, peroxidase, and a diamine oxidase. In vitro the latex is synergistic with ketoconazole against Candida albicans (thrush). All Euphorbia have a toxic white latex, and in Europe this has been used as a folk remedy to treat warts. It can cause skin allergies and the smoke from burning them is toxic. The genus is named for Euphorbus (fl. circa 10 BC – 20 AD), the Greek physician to the Berber King Juba II (c. 50 BC – 23 AD) of Numidia, Euphorbia milii is one of the tropical spurges, with fierce, cactus-like spines, grown as a house plant. The sap of spurges is used in folk medicine for treating warts (not very effective), and, historically, as a purgative - the word spurge being derived from the French word for purgation. The sap (probably dried) was administered inside a fig because it is so corrosive that it would otherwise burn the mouth and oesophagus – a technique used today, rather more subtly, with ‘enteric coated’ medications. The sap contains a potential anti-leukaemic chemical, lasiodoplin, and is also used in drainage ditches to kill the snails which carry the parasitic trematode which causes fasciolaris. It does not kill the fish. |
| *Euphorbia nicaeensis* All. Euphorbiaceae. Distribution: North Africa, Southern Europe to Turkey. Root extracts have been shown to have cytotoxic and anti-inflammatory action in experimental situations. *Euphorbia* species all have toxic sap, and had many names in early literature, e.g. *esula,* about whichCulpeper (1650) *says* that '(taken inwardly) are too violent for vulgar use; outwardly in Ointments they cleanse the skin, and take away sunburning.' As *Tithymallos* - with various spellings - it was recognised by Theophrastus as an emetic (transl. by AF.Hort, 1980) |
| *Fargesia rufa* T.P.Yi Poaceae. Farges bamboo. Distribution: China. Named, in 1985, after Paul Guillaume Farges (1844-1912), a French missionary and plant collector, who went in 1867 with the Missions Étrangères to north-east Szechuan. He botanised extensively and amassed 4,000 herbarium specimens which he sent back to France. He discovered and sent back seeds of the handkerchief tree, *Davidia involucrata,* one of which germinated after 18 months. Eighty plants have been named after him. (Cox, 1945; Bretschneider, 1898). |
| *Fatsia japonica (Thunb.)* Decne. & Planch. Araliaceae False castor oil plant. Distribution: Japan, South Korea. Not even in the same family as the castor oil plant, *Ricinus communis.* An ornamental plant, *Fatsia* from the Japanese word for 'eight' *hachi* referring to the eight-lobed leaf. The sap can cause dermatitis. |
| *Felicia amelloides* (L.)Voss Asteraceae. Blue marguerite. 'Astrid Thomas' Distribution: South Africa. No medicinal uses. Can help stabilise sand dunes. |
| *Fuchsia magellanica* Lam. Onagraceae. Hardy fuchsia. Semi-hardy shrub. Distribution: Mountainous regions of Chile and Argentina where they are called 'Chilco' by the indigenous people, the Mapuche. The genus was discovered by Charles Plumier in Hispaniola in 1696/7, and named by him for Leonhart Fuchs (1501-1566), German Professor of Medicine, whose illustrated herbal, *De Historia Stirpium* (1542) attempted the identification of the plants in the Classical herbals. It also contained the first accounts of maize, *Zea mays*, and chilli peppers, *Capsicum annuum*, then recently introduced from Latin America.He was also the first person to publish an account and woodcuts of foxgloves, *Digitalis purpurea* and *D. lutea.* The book contains 500 descriptions and woodcuts of medicinal plants, arranged in alphabetical order, and relied heavily on the *De materia medica* (c. AD 70) of Dioscorides. He was a powerful influence on the herbals of Dodoens, and thence to Gerard, L’Escluse and Henry Lyte. A small quarto edition appeared in 1551, and a two volume facsimile of the 1542 edition with commentary and selected translations from the Latin was published by Stanford Press in 1999. The original woodcuts were passed from printer to printer and continued in use for 232 years (Schinz, 1774). |
| *Galanthus nivalis* L. Amaryllidaceae Snowdrop. Hardy, bulbous herb. Distribution: Europe. A chemical, galantamine, is sourced principally from the Caucasian snowdrop, Galanthus woronowii but is present in our ‘English’ snowdrop and related genera. It is a competitive, reversible, acetylcholinesterase inhibitor so increases brain acetylcholine, a chemical of great importance in cerebral function. As such it has been recommended for ameliorating the symptoms of mild to moderate Alzheimer’s disease, but not for mild cognitive impairment as in US clinical trials there was an increased mortality. Johnson (Gerard, 1633) calls it the bulbous violet, *Viola theophrasti*; *Leucoium* or snow drops and says there is no mention of it by ancient writers and that it has no medicinal use. Fuchs (1542) calls it *Leucoium theophrasti*, known to Pliny, and *Viola alba*, and concurs that it is of no use. |
| *Galega officinali*s L. Goat's Rue. Distribution: Central and Southern Europe, Asia Minor. Goat’s Rue – C & S Europe, Asia Minor. Culpeper (1650) writes that it ‘... resists poison, kills worms, resists the falling sickness [epilepsy], resisteth the pestilence.’ *Galega officinalis* contains guanidine which reduces blood sugar by decreasing insulin resistance and inhibiting hepatic gluconeogenesis.. Metformin and Phenformin are drugs for type II diabetes that rely on this group of chemicals, known as biguanidines. Its name *gala*, meaning milk plus *ega* meaning 'to bring on', refers to its alleged property of increasing milk yield, and has been used in France to increase milk yield in cows. *officinalis* refers to its use in the offices of the monks, and is a common specific name for medicinal plants before 1600 and adopted by Linnaeus (1753). The fresh plant tastes of pea pods. |
| *Gardenia jasminoides* J.Ellis Rubiaceae. Cape jasmine - as erroneously believed to have come from South Africa. Distribution: China. Named for Dr Alexander Garden FRS (1730-1791) Scottish-born physician and naturalist who lived in Charles Town, South Carolina, and corresponded with Linnaeus and many of the botanists of his era. The fruits are used in China both as a source of a yellow dye, and for various unsubstantiated medicinal uses. Other species of *Gardenia* are found in tropical Africa and the roots and leaves have all manner of putative uses. *Gardenia tenuifolia* is used as an aphrodisiac, for rickets, diarrhoea, leprosy, gall bladder problems, toothache, liver complaints, diabetes, hypertension, malaria and abdominal complaints. It causes violent vomiting and diarrhoea. It, and other species, are used to poison arrows and to poison fish. Some native, muthi medicine, healers regard *Gardenia* as a ‘last chance’ medicine, given to patients when all else fails – the patient either dies or recovers (Neuwinger, 1996). |
| *Garrya elliptica* Douglas ex Lindl. Garryaceae. Coast silk tassel. Evergreen shrub. Distribution: California and southern Oregon. Named for Nicholas Garry, Secretary of the Hudson Bay Company (1820-1830) who assisted David Douglas in his exploration of the Pacific Northwest (Stearn, 1992). Used by Pomo and Kashaya as an abortifacient and to induce menstruation (Moerman, 1998). |
| *Gaultheria procumbens* Kalm Ericaceae. Wintergreen, teaberry, boxberry, chickerberry. Distribution: North American forests. Named for French physician/botanist Jean Francois Gaultier (1708-1756). Physician to the French King, emigrated to Quebec in 1742. Researched flora of North America, died of typhus (Oakeley, 2012). Source of oil of wintergreen. Ten pounds of oil can be extracted from a ton of leaves. Toxic effects: Stupidity, swelling of the tongue, food craving, epigastric tenderness, vomiting, dyspnoea, hot skin, tachycardia, restlessness (MiIlspaugh, 1974). Active chemical is methyl salicylate. Used topically for musculo-skeletal conditions, it is converted to salicylic acid when absorbed. Excess use has caused a death. Salicylic acid is also used for warts and corns (first described by Dioscorides in 70CE); and for eczema when combined with steroids. Native Americans used an infusion for headaches, colds, medicinal tea, rheumatism, fevers and a multitude of other conditions (Moerman, 1998). |
| *Gentiana asclepiadea* L. Gentianaceae. Gentian. Perennial herb. Distribution. Southern Europe and Caucasus. Named after Gentius, King of Illyria (the western Balkan Peninsula) in 181–168 BC. Gentius had a powerful navy of 270 warships (lembi) and like most kings of this era he fought constant wars, fighting with the Romans against Macedonia, and then changing sides only to be defeated and brought captive to Rome in 168 BC; *asclepiadea* refers to Asclepius, the Greek god of medicine. Gentius ‘discovered’ the medicinal value of the root of *Gentiana lutea* according to Dioscorides, who recommends it for animal bites, sprains, healing wounds and (as a pessary) as an abortifacient. Later authors note its bitter taste, and quote Galen as thus indicating its use as a purgative. Culpeper (1649) writes: ... some call it Felwort or Baldmoney. It is ... a notable counterpoison, it opens obstructions, helps the bitings of venomous beasts, and mad dogs, helps digestion, and cleanseth the body of raw humours; our chyrugians [surgeons] use the root in the form of a tent to open the sore, they are also very profitable for ruptures [hernias] or such as are burnt. The root is still used as the bittering agent in Angostura bitters, the basis for a ‘Pink Gin’, and in herbal medicine for everything from malaria to snakebite. It is not the source of Gentian violet, a blue-purple dye, which is derived from coal tar. |
| *Geranium maderense* Yeo Geraniaceae Tender evergreen biennial. *Madeira cranesbill. Distribution: Madeira.* Solely grown for its spectacular flowers. |
| *Geranium phaeum* L. Geraniaceae Dusky cranesbill. Herbaceous perennial. Distribution: Europe. This seems to be the 'Dove's foote', *Geranium alterum,* of Lyte (1578). He says it is 'not good in Medicyne. Notwithstanding at this time, it is much used against all woundes, and ulcers being laid thereunto.'. Parkinson (1640) classifies cranesbills somewhat differently, but says that 'all are found to be effectual both in inward and outward wounds, to stay bleedings, vomitings and fluxes, eyther the decoction of the herbe or the powder of the leaves and roots used as the cause demands.' No current medicinal use. |
| *Geranium sanguineum* L. Geraniaceae Dusky cranesbill. Herbaceous perennial. Distribution: Europe and temperate Asia. County flower of Northumberland. This seems to be the 'Sanguin geranium or Blood Roote', *Geranium haematodes/haematite*s, of Lyte (1578). He writes that it is 'not used in Medicyne.' Parkinson (1640) classifies cranesbills somewhat differently, but says that 'all are found to be effectual both in inward and outward wounds, to stay bleedings, vomitings and fluxes, eyther the decoction of the herbe or the powder of the leaves and roots used as the cause demands. |
| *Geum rivale* L. Rosaceae. Water Avens. Indian Chocolate. 'Leonard's Variety' is a semi-double form. Distribution. Northern Europe, central Asia, North America. Water Avens, chocolate root, Indian chocolate. Used for most stomach problems and as a styptic for uterine haemorrhage, leucorrhoea, haematemesis and as a febrifuge (according to Rafinesque). In the US Pharmacopoeia at some time in past. Toxic effects: severe jerking, tearing pains like electric shocks from abdomen to end of urethra (Milspaugh, 1974). Used to treat diarrhoea, especially in children by Iroquois, Algonquians, and Malecite. Parkinson (1640) is unspecific regarding the medicinal properties of different species, but this is probably his *Caryophyllata montana sive palustris purpurea,* Purple Mountaine or Marsh Avens (and the current American common name is 'Purple Avens' and he notes that a plant of this, 'but taller and greater' has been recently brought from Virginia by John Newton a Surgeon of Colliton. John Newton was a surgeon who died in Colyton (present spelling) in Devon in 1647. He also brought *Lobelia cardinalis* for Parkinson.. He notes that C*aryophyllata* is the *Geum* of Pliny. He gives a great many uses. |
| *Glaucium flavum* Crantz Papaveraceae Yellow horned poppy. Distribution: North Africa, Western Asia to Europe. Contains glaucine which is toxic but in small doses may be bronchodilator. As *Papaver corniculatum luteum* it was known to Parkinson (1640) who reports it as bitter, so advises taking it in honey, as a purgative and analgesic; also for cleaning ulcers. |
| *Gloriosa superba*  L. Colchicaceae Gloriosa lily. *Gloriosa rothschildiana* is now a synonym. Climbing plant. Distribution: Southern Africa to Asia. National flower of Zimbabwe, state flower of Tamil Nadu. Contains colchicine which is poisonous, teratogenic and used for treating gout, Familial Mediterranean fever and Behcet's disease. Its toxicity limits its use as an anti-cancer agent. |
| *Hacquetia epipactis* DC Apiaceae. Small herbaceous perennial. No common name except Hacquetia Distribution: Europe. Named for the Austrian physician, Balthasar (or Belsazar) Hacquet (1739/40-1815). He studied medicine in Vienna, was a surgeon in the brutal Seven Years War (1756-1763) – a world-wide war in which up to 1,400,000 people died. Later he was professor at the University of Lemberg (1788-1810). He wrote widely on many scientific disciplines including geology. Parkinson (1640) grouped it with *Helleborus* and *Veratrum,* calling it '*Epipactis Matthioli, Matthiolus,* his bastard black hellebore' but does not give any uses. It has no medicinal property. |
| *Haemanthus albiflos* Jacq. Amaryllidaceae. Paintbrush plant. Distribution: South Africa. Used as a cough medicine and as a charm to ward off lightning (Pooley, 1998). |
| *Hamamelis x intermedia* Rehder Hamamelidaceae Garden hybrid between *H. japonica* and *H. mollis.* Witch hazel. 'Jelena' named for the wife of Robert de Belder of Arboretum Kalmthout, Belgium, whose family raised many *Hamamelis* cultivars. Distribution: *H. japonica* comes from Japan, *H. mollis* from China. The bark and leaves are the source of witch hazel for bruises, haemorrhoids, varicose veins, and other skin conditions, although commercially *H. virginiana* is the usual source. It is produced by stem distillation of the twigs. |
| *Helianthus annuus* L. Asteraceae Sun flowerDistribution: Peru to Mexico. The seeds are a source of linoleic acid, a polyunsaturated fat which as part of one's diet is given to reduce coronary artery and cerebrovascular disease, but recently a study has found an increased death rate (*BMJ*2013;346:e8707). Called 'the Indian Sunne or Golden Floure of Perrowe [Peru], *Chrysanthemum Peruvianum'* by Lyte (1578), it had only recently been introduced so he writes 'Of the vertue of this herbe and floure, we are able to say nothing because the same hath not bene yet found out, or proved of any man.' This was still the case in 1633 (Gerard) but, he writes, 'the floure of the Sun, Marigold of Peru: the buds before they be floured [i.e. before they come into flower], boiled and eaten with butter, vinegar and pepper, after the manner of Artichokes, are exceedingly pleasant meat, surpassing the Artichoke far in procuring bodily lust.' Bentley (1861) writes: 'The pith contains nitrate of potash, and is therefore sometimes used in the preparation of *moxa* [smoke pellets with medicinal intent] in Europe. The fruits [seeds] have been lately employed as an ingredient in a kind of soap called Sunflower Soap.' |
| *Helleborus x hybridus* Hort. Ex Vilmorin Ranunculaceae. A range of hybrids from *Helleborus orientalis the* Oriental hellebore. Distribution: Europe through to the Caucasus. All very poisonous. Culpeper (1650) says: “The roots (boiled in vinegar) ... be an admirable remedy against inveterate scabs, itch and leprosy, the same helps the toothache, being held in the mouth; dropped into the ears, helpeth deafness coming of melancholy and noises in the ears; corrected with a little cinnamon (as powder) it purgeth melancholy, resisteth madness.” The hellebores contain cardiac glycosides, that when eaten may cause the classical triad of coma, convulsions and death, but on the way causes vomiting and purging, and symptoms similar to those of digoxin poisoning with bradycardia and also bundle branch block, ventricular fibrillation and asystole. Used to be used to kill intestinal worms and presumably a dose just sufficient to kill the parasites was too small to kill the patient. It was used to kill lice but the sap causes dermatitis so, all in all, it is best avoided. Many other plants in the family Ranunculaceae, to which Helleborus belongs, contain numerous toxins. The name derives from the Greek, meaning ‘to injure + food’, and niger, meaning ‘black’ refers to the colour of the roots. |
| *Hepatica nobilis* Mill. Ranunculaceae. Liverwort - not to be confused with the lichen of the same name. Distribution: North America. Liverwort (‘liver plant’): discontinued herbal medicine for disorders of the liver. The name and the use to which the Liverworts have been put medicinally is suggested, according to the doctrine of signatures, by the shape of the leaves which are three-lobed, like the liver. It is little used in modern herbalism but was employed in treating disorders of the liver and gall bladder, indigestion etc. It is highly toxic. *Hepatica acutiloba* was widely used for liver disorders in the 1880s, with up to 200,000 kilos of leaves being harvested per annum to make liver tonics - which eventually caused jaundice. Gerard (1633) calls it *Hepaticum trifolium*, Noble Liverwort, Golden Trefoile and herbe Trinity and writes: 'It is reported to be good against weakness of the liver which proceedeth from a hot cause, for it cooleth and strengtheneth it not a little. ' He adds ' *Baptista Sardus* [a Piedmontese physican fl. 1500] commendeth it and writeth that the chiefe vertue is in the root; if a spoonful of the pouder thereof be given certaine dayes together with wine, or with some kind of broth, it profiteth much against the disease called *Enterocele.'* |
| *Hesperantha coccinea* (Backh. & Harv.) Goldblatt & J.C. Manning 'Major' the best red flowered form. Previously called *Schizostylis coccinea,*  Iridaceae. African or Kaffir lily.  Tuberous perennial Distribution Zimbabwe to South Africa. *Schizostylis* is Greek for 'divided style' - the style is in three parts; *coccinea* means 'red'. *Hesperantha* is Greek for 'evening flower' as the flowers open late in the day. No medicinal use. |
| *Hyacinthoides non-scripta* (L.) Chouard ex Rothm. Asparagaceae Bluebell. Perennial bulbous plant. Distribution W. Europe to N. Portugal. Seed and plants from wild stock are protected in England and Wales and all trade in them is prohibited, despite their abundance. All parts of the plant are poisonous and the sap can cause dermatitis. |
| *Hydrangea quercifolia* W.Bartram Hydrangeaceae. Oak-leaved hydrangea. Distribution: South-eastern United States. Beta-dichroine a quinazolinone also called febrifugine from the leaves of hydrangeas is 64-100 times more potent than quinine as an antimalarial in animals, but extremely toxic. A synthesised tolyl derivative, methaqualone (2-methyl-3-o-tolyl-4(3H)-quinazolinone), was found to be a mild hypnotic, and marketed in the sleeping tablet, Mandrax. Widely abused and quickly banned by most countries. Illegal manufacture continues and in South Africa methaqualone is the commonest drug of abuse, mixed with cannabis and smoked. |
| *Hypericum olympicum* L. Clusiaceae. Mount Olympus St John's wort. Deciduous perennial herb. Distribution Greece, Asia minor. This is not the plant used for mood disturbances in herbal medicine which is *Hypericum perforatum.* However, all the 370 species of *Hypericum* are called 'St John's Wort' so a potential for confusion exists. It shares some of the chemicals thought to be active in *Hypericum perforatum.* |
| *Illicium anisatum* L. Illiciaceae Japanese Star Anise. Distribution Japan. This was also called *Illicium religiosum* and the fruits are toxic. Effects of taking *Ilicium anisatum* tea include epilepsy, vomiting, shakiness and rapid eye movements (US Food and Drug Administration report, 2003). Lindley (1838) and Bentley (1861) thought that *I. anisatum* was used in cooking, but they were describing the uses of *I. verum* which is used as a spice in Asia.  *Illicium anisatum* syn. *religiosum* is 'used to make incense in Japanese and Chinese temples and was called Skimi by Kaempfer. This derives from the Japanese word 'shi-kimi'. The seed pods of both species contain shikimic acid (the name being derived from the Japanese) from which Tamiflu, the antiviral drug was synthesised. |
| *Illicium verum* Hook.f. Illiciaceae Chinese Star Anise *Distribution:* China.  *Illicium anisatum* Japanese Star Anise. Distribution Japan. *Illicium verum* is used as a spice in Asian cooking and for Star Anise tea. The distilled oil is added to cough mixture used by children. Introduced to Europe in 1588 (*Pharmacographia Indica,* 1890). *Illicium anisatum* syn. *religiosum*, has been confused with it (Lindley, 1838, Bentley 1861) but is poisonous and was used to make incense in Japanese and Chinese temples. It was called Skimi by Kaempfer. The seed pods of both species contain shikimic acid (the name being derived from the Japanese word for the plant - shi-kimi) from which Tamiflu, the antiviral drug was synthesised. |
| *Inula helenium* L. Asteraceae. Elecampine, Elecampane, *Enulae campinae* Distribution: Britain, S. Europe to the Himalayas. Used medicinally for 2,000 years. Culpeper (1650) writes ‘Elecampane, is ... wholesome for the stomach, resists poison, helps old coughs and shortness of breath, helps ruptures and provokes lust; in ointments it is good against scabs and itch.’ Coles (1657) writes '... some think it took the name from the tears of *Helen* [of Troy] from whence it sprung, which is a Fable.; others say it was so called, because *Helen* first found it available against the biting and stingings of venomous Beasts, and others think it took its name from the Island *Helena* where the best was found to grow. We in English call it Elecampane generally, yet in some countries of the Land, it is called Sabwort and Horse-heal.' He recommends it for almost every condition - phlegm, breathlessness, cough, stomach upsets, gout, rheumatism, epilepsy, plague, fevers, scabs, itch, sores, bad teeth, freckles, melancholy, purgation, wind, inducing diuresis and menstruation. Coles is quoting Dioscorides' *Materia Medica* of c. 70AD(Gunther, 1959). Bentley (1861) used it for chronic catarrh and dyspepsia. It contains sesquiterpene lactones which can cause allergies and irritation (Medicines Control Agency report, 2002).It is the source of Inulin, stored as an energy source for the plant instead of starch, a polysaccharide with use as a sugar substitute for diabetics, but for those with fructose malabsorption it causes flatulence and indigestion. It is licensed for use in Traditional Herbal Medicines in the UK (UK Medicines and Healthcare Products Regulatory Agency (MHRA)). |
| *Iris graminea* L. Iridaceae Grass-leaved flag. Flower de Luce. Distribution: Central and Southern Europe. This is probably the *Iris bulbosa minor sive angustifolia* [the lesser bulbed or narrow-leaved Iris], Lesser bulbed Flowerdeluce of Parkinson (1640). He advised that the properties of all Flag Irises were more or less the same, but says there is no agreement about the properties of the bulbous kinds (such as this plant). Of the Flag Irises, Culpeper (1650) writes that the roots 'resist poison, help shortness of the breath, prove the terms [menstruation]; the roots being green and bruised [crushed up] take away blackness and blewness of a stroke [i.e. a blow] being applied thereto.'. |
| *Iris unguicularis* Poir. Iridaceae. Algerian iris. Rhizomatous perennial. Distribution: NW Africa, E. Mediterranean It has scientifically-based potential. The rhizomes contain the chemical kaempferol which inhibits the enzyme alpha-glucosidase in the gut, reducing the rate of glucose absorption. This could be used to prevent the dangerous peaks of blood sugar that occur in diabetics and reduce eye and kidneycomplications. The unprocessed rhizome contains iridin, a toxic glycoside, which causes 'nausea, vomiting, diarrhoea and skin irritation'. |
| *Justicia carnea* Lindl. Acanthaceae. Brazilian Plume flower, Flamingo flower. Shrimp plant. Tender shrub. Distribution: Atlantic coast of Brazil. Named for James Justice (1698-1753) Scottish horticulturist, lawyer, 'tulip maniac' (Desmond, 1977). Asian species of *Justicia* are noted to be toxic and contain cytotoxic compounds which inhibit virus replication (Wiart, 2006) |
| *Knautia macedonica* Griseb. Dipsacaceae. Distribution: Macedonia. This honours the brothers Knaut, both physicians and botanists: Christof Knaut (also Knauth, 1638–94) and his brother Christian Knaut (1654–1716). The plant was traditionally used as a compress in its native Balkans to relieve dermatitis and itching. This use is a local survival of what was once a widespread application of this plant and its relations, and is an example of the doctrine of signatures in which the therapeutic benefit of a plant is suggested by some aspect of its anatomy; it has rough-textured leaves, so it was supposed to cure rough, itchy skin. It was locally called ‘Scabious’ and ‘Widow Flower’, the former because, like the genus *Scabious*, it was expected to cure scabies and itching (Oakeley, 2012) |
| *Lamium maculatum* L. Lamiaceae Spotted deadnettle, spotted henbit. The cultivar 'Beacon Silver' originated in the garden of a customer of the horticulturist Beth Chatto and given to her in 1976 (Beth Chatto Gardens website, 2013). Herbaceous perennial. Distribution: Europe, western Asia. This is the *Lamium foliis maculatis*, Archangel with spotted leaves, of Parkinson (1640), drunk with wine 'for the obstructions and hardness of the spleene'; and the flowers are 'thought good to make the heart merry, to drive away melancholy, and to quicken the spirits.' Mixed with Hog's lard it was used topically for the King's Evil [tuberculous lymph nodes in the neck] and for gout and sciatica. |
| *Lamium orvala* L.LamiaceaeBalm-leaved red deadnettle. *Orvala* is the Latinised name for the French name, *orvale*, for *Salvia sclarea* Distribution: Southern Europe. I can find no information about it. |
| *Lathyrus vernus* (L.)Bernh. Papilionaceae previously O*robus vernus* L. (Linnaeus, 1753) Spring vetchling. Distribution: Europe to Siberia. The seeds of several *Lathyrus* species are toxic, and when eaten cause a condition called lathyrism. The chemical diaminoproprionic acid in the seeds causes paralysis, spinal cord damage, aortic aneurysm, due to poisoning of mitochondria causing cell death. Occurs where food crops are contaminated by *Lathyrus* plants or where it is eaten as a 'famine food' when no other food is available. It is the *Orobus sylvaticus purpureus vernus* of Bauhin (1671) and *Orobus sylvaticus angustifolius* of Parkinson (1640) - who records that country folk had no uses for it. |
| *Lavatera olbia* L. Malvaceae Tree Mallow 'Pink Frills' Distribution: Southern Europe. Named for Jean Rodolphe Lavater (fl. 1700-08), physician, naturalist and FRS, friend of Tournefort (Oakeley 2012). Lobel (1570) relates, under the name *Althaea arborea olbia* that it was grown *in Morgani hortis Londini* [viz. in the garden in Coleman Street London of Hugh Morgan, Apothecary to Queen Elizabeth I]. Gerard (1633) writes that the leaves as a poultice are analgesic and, as a tea, help relieve the pain of renal stones; the roots, boiled in water with various other plants are useful for (among much else) clearing up ‘dangerous greene wounds ... it helpeth digestion in them and bringeth old ulcers to maturation’. The marshmallow of confectionery was derived from the root of *Althaea officinalis*, the marshmallow, but is now made of sugars, corn syrup and gelatin with various flavourings. |
| *Leptospermum scoparium* J.R.Forst & G.Forst Myrtaceae. New Zealand tea tree, manuka, manuka myrtle. ‘Red Damask' is a cultivar with the RHS Award of Garden Merit. Distribution: New Zealand and southeast Australia. A red-flowered form. Important in New Zealand as the source for manuka honey. The leaves were reputed to have been used to make a tea by Captain James Cook (1728-1729) on his voyages to Australia and New Zealand. Johan and George Forst, father and son, were the scientists on Cook's second voyage (1772-1775). It produces an essential oil. |
| *Libertia grandiflora* Sweet, Iridaceae. Tukauki, mikoikoi, New Zealand satin flower. Herbaceous perennial. Distribution: New Zealand. Named for Marie Libert, Belgian botanist (1782-1863). No medicinal use. |
| *Lilium henryi* Baker Liliaceae. Tiger Lily. Bulbous perennial. Distribution: China. This commemorates Dr Augustine Henry (1857–1930) who collected plants in China and Taiwan while working for Britain’s Imperial Customs Service (Oakeley, 2012). Reported to cause renal failure in cats. |
| *Lilium henryi* Baker Liliaceae. Tiger Lily. Distribution: China. This commemorates Dr Augustine Henry (1857–1930) who collected plants in China and Taiwan while working for Britain’s Imperial Customs Service (Oakeley, 2012). Reported to cause renal failure in cats. |
| *Lobelia cardinalis* L Campanulaceae Cardinal lobelia Distribution: Americas, Colombia to south-eastern Canada. The genus was named after Matthias de L’Obel or Lobel, (1538–1616), Flemish botanist and physician to James I of England, author of the great herbal *Plantarum seu Stirpium Historia* (1576). Lobeline, a chemical from the plant has nicotine like actions and for a while lobeline was used to help people withdraw from smoking, but was found to be ineffective. It was introduced from Virginia to John Parkinson in England by John Newton (1580-1647) a surgeon of Colyton (aka Colliton), Devon, who travelled to Virginia. |
| *Lobelia tupa*  L Campanulaceae Tabaco del Diablo [Devil's tobacco]. Distribution: Central Chile. Dried leaves are smoked as a hallucinogen by the Mapuchu Indians of Chile. It was also used as a respiratory stimulant. The genus was named after Matthias de L’Obel or Lobel, (1538–1616), Flemish botanist and physician to James I of England, author of the great herbal *Plantarum seu Stirpium Historia* (1576). Lobeline, a chemical from the plant has nicotine like actions and for a while lobeline was used to help people withdraw from smoking, but was found to be ineffective. |
| *Lonicera periclymenum* L. Caprifoliaceae. Honeysuckle Distribution: Europe. This shrubby, fragrant, white-flowered honeysuckle is named for Adam Lonitzer (Lonicerus) (1528–86). German botanist, physician and author of *Naturalis historiae opus novum* (1551, 1555) and the *Kreuterbuch* (1557); professor of mathematics at the University of Marburg (Oakeley, 2012). Gerard (1633), using the name *Periclymenum*, woodbinde or honisuckles, says that the flowers stop ‘pissing of blood’ and can be used for soreness of the throat and ‘the secret parts’. Modern literature (Frohne, 2004) reports that honeysuckles are poisonous and that the berries cause vomiting and the leaves purgation – a sure sign of toxicity. Sucking the nectar from the flowers appears acceptable, but toxicity if any is unknown. |
| *Magnolia* L. Magnoliaceae. 'Black Diamond' Distribution: Asian plant. Named for the French botanist and physician, Pierre Magnol (1638-1715), Professor of Botany and Director of the Royal Botanic Gardens at Montpelier. Charles Plummier (1646-1704) named a tree on Martinique after him (*Magnolia*) and the name was continued by Linnaeus (1753). |
| *Magnolia stellata* (Siebold & Zuch.) Maxim. Magnoliaceae. Star magnolia. Small flowering tree. Distribution: Japan. Named for the French botanist and physician, Pierre Magnol (1638-1715), Professor of Botany and Director of the Royal Botanic Gardens at Montpelier. Charles Plumier (1646-1704) named a tree on Martinique after him (Magnolia) and the name was continued by Linnaeus (1753). No medicinal use. This is a very ancient genus of flowering plants. |
| *Mahonia japonica* DC. Berberidaceae. Evergreen shrub. Distribution: China, although long cultivated in Japan. Listed as an ingredient in Traditional Chinese Medicines. No European or modern medicinal use. |
| *Mahonia aquifolium* Nutt. Berberidaceae 'Smaragd' Oregon grape. Distribution: Pacific coast of North America. Named for Bernard McMahon (1775-1816) Irish/American horticulturist, by Thomas Nuttal in 1818. Berries said to be edible. |
| *Malus domestica* Baumg. Rosaceae. 'Court Pendu Plat' Distribution: Central Asia, arising from the wild *Malus sieversii.* This cultivar dates from around 1600 and is a sweet eating apple introduced from France.. 'Cox's Orange Pippin' is a variety of *Malus domestica.* Apples are not mentioned in Fuchs (1542), or in the *Pharmacopeia Londinensis* (1618), or Culpeper (1650). Lyte (1576) says they cause indigestion, but are cooling so may be used in fevers ('hot agues') and the leaves can be applied to hot swellings. Parkinson (1640) writes that 'the sweet apples, as the Pippin and Pearmain, helpe to dissolve Melancholy humours, to procure mirth and expel heaviness'. |
| *Matthiola incana* (L.)W.T.Aiton Brassicaceae Distribution: The genus name commemorates Pietro Andrea Mattioli (1500/1–77), physician and botanist, whose name is Latinised to Matthiolus.. *Incana* means hoary or grey, referring to the colour of the leaves. Mattioli's commentaries on the *Materia Medica* of Dioscorides were hugely popular. *Matthiola incana* was first described by Linnaeus as *Cheiranthus incanus*, being changed to *Matthiola* by William Aiton, at Kew, in 1812. It is in the cabbage family. Commercial seed packets contain a mixture of single and double forms. The latter are sterile, but selective breeding has increased the proportion of double forms from the seed of single forms to as much as 80%. ‘Ten week stocks’ are popular garden annuals, flowering in the year of sowing, whereas ‘Brompton stocks’ (another variety of *M. incana*) are biennials, flowering the following year. Gerard (1633), called them Stocke Gillofloure or *Leucoium*, and notes the white and purple forms, singles and doubles. About their medicinal value he writes ‘not used in Physicke except among certain Empiricks and Quacksalvers, about love and lust matters, which for modestie I omit’. The thought of a member of the cabbage family being an aphrodisiac might encourage the gullible to take more seriously the government’s plea to eat five portions of vegetable/fruit per day. |
| *Myrtus communis* L. Myrtaceae Myrtle 'Variegata' Distribution: Europe. Dioscorides (Beck, 2005) recommends the fruit for treating haemoptysis (‘spitting blood’) and cystitis, and, if boiled, he said it made a fine wine. In various forms it was used as a hair dye, for sore eyes, anal and uterine prolapse, dandruff and shingles, all sorts of inflammations, scorpion bites and even sweaty armpits. Our plant has white berries, but he regarded those with black berries (they become black later in the season) as being more effective. Lyte (1576) adds that the juice of the berries kept the hair black and stopped it falling out, and prevented intoxication. He notes that it only flowered in hot summers in England, but it is reliable in flower now, either due to global warming or selection of suitable clones. According to Lyte, it is named after Merlyne, a fair maiden of Athens in ancient Greece, who judged the athletic games. Slain by a disgruntled competitor, the goddess Minerva brought her back as the myrtle tree in perpetual memory. The myrtle tree is also an ancient Jewish symbol for peace and justice. Myrtle wine is still made in Tuscany and now even in China. |
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| *Nandina domestica* Thunb. Berberidaceae. Heavenly bamboo. Distribution: Contains cyanogenic glycosides which liberate hydrogen cyanide when damaged. Nothing eats it. Pharmacists have also found a chemical in the sap, called nantenine, which is a potential antidote to poisoning by ecstasy with which it shares the same molecular shape. |
| *Neottia ovata* Bluff & Fingerh. Orchidaceae, previously *Listera ovata,* Twayblade. Distribution: Europe and North America. The *Cantharis rufipes* beetle is the pollinator and can be seen with pollinia on its head. This rather dull European orchid was, for 200 years, named after Dr Martin Lister FRCP FRS (1639–1712), physician to Queen Anne, as *Listera ovata.* It first appeared as *Ophris* (Fuchs, 1542), then as *Bifolium* (Dodoens, 1554, who classed it with *Neottia nidus-avis*), then *Ophrys ovata* (Linnaeus, 1753) followed by *Listera ovata* (Brown, 1813). Bluff and Fingerhuth called it *Neottia* in 1838, but it remained as *Listera* until recently when taxonomists agreed with Dodoens and accepted it as *Neottia ovata.* Martin Lister was born in Buckinghamshire, gained an arts degree at St John’s College, Cambridge, in 1658, and then an MA in 1662. He studied medicine, travelling in France until 1670, and on his return set up practice in York. He was much involved with natural history and antiquities, and was elected FRS in November 1671. His *Historiae conchyliorum*, published in 1685 was regarded as opening a new era in the science of conchology. He became physician to Queen Anne, who reigned 1702–14, in 1709. This orchid is found throughout northern Europe and Asia, and in North America (on an island in Lake Huron, Ontario). It was used for treating wounds and ruptures (Lyte, 1578; Fuchs, 1551; Gerard, 1633) but does not appear in modern medical herbals and has no medicinal value. (Oakeley, 2012). |
| *Nigella sativa* L. Ranunculaceae Love-in-the-mist, Black Cumin, Nutmeg flower, Roman Coriander. Distribution: SW Asia. Culpeper (1650) writes: ‘Nigella seeds, boyled in oil, and the forehead anointed with it, ease pains in the head, take away leprosie, itch, scurf, and helps scald-heads, inwardly taken they expel worms, they provoke urine and the terms, help difficulty of breathing: the smoke of them (being burned) drives away serpents and venomous beasts.’ The seeds are used as a spice, but as might be expected as a member of the family Ranunculaceae, the buttercups, the plant contains a highly poisonous glycoside, in this case called melanthin. The amount of toxicity present in spices is clearly insufficient to cause problems when used as such. |
| *Oenothera macrocarpa* Nutt. Onagraceae. Ozark Sundrops, Bigfruit Evening Primrose. Formerly *O. misssouriensis.* Distribution: South central USA. *O. macrocarpa* does not appear to have been used medicinally, but other species are so used. Austin (2004) records that *O. biennis* (Evening Primrose) was used by Native Americans as a potherb in West Virginia. Leaves as salad, roots boiled like potato also infusion to treat obesity and relieve piles (Cherokee); piles and boils (Iroquois); as a poultice on bruises (Ojibwa). Milspaugh (1974) records in Native American usage that the young roots of *O. biennis* were edible, pickled or boiled. Applied externally for skin eruptions in children. Later, for asthma, pertussis, gastric irritation, irritable bladder, chronic diarrhoea. He reports that toxicity effects include vertigo, inability to sit or stand, semi-coma, weakness and peripheral numbness, rigors, abdominal cramps, exhaustion, incontinence. It is rich in gamma linoleic acid and this, Primrose oil, was alleged to cure many diseases especially eczema but was found to be no better than placebo in a Cochrane review (Bamford et al, 2013) of Primrose oil capsules. Short term there are gastrointestinal side effects, long term use carries the risk of inflammation, thrombosis and immunosuppression. |
| *Olea europaea* L. Oleaceae Olive Distribution: Europe, Middle East. Dioscorides (Beck, 2005) regarded the olive as a panacea, curing all manner of cutaneous afflictions from shingles to sores; eye problems to bleeding and for cleaning gums, but the sap he regarded as a deadly poison, an abortifacient, but good for curing leprosy if applied topically. Other 16thC herbalists repeat Dioscorides but by Lindley’s time (1836) the bark had also acquired a reputation as a quinine substitute, so used for fevers. Its virtues have gradually descended to becoming an addition to salads and for lubricating ear wax, although the leaves are still used in herbal medicine. The great medicinal advantage of the oil is that ‘it does no harm’. Olive fruit takes much longer to ripen in northern latitudes, which is why we see it in mid-winter still on the tree at the Royal College of Physicians. It was presented to the College as a token of friendship by the Society of Apothecaries. |
| *Onychium japonicum* (Thunb.)Kunze Adiantaceae Carrot Fern, Sichuan Lace, cultivar 'Dali'. Distribution: Japan, China. This fern was named in 1848, but was declared an illegitimate name as Blume had already named an orchid *Onychium japonicum* in 1825. This was the *Epidendrum moniliforme* of Linnaeus, now *Dendrobium moniliforme* and it was only in 2011 at the International Botanical Conference in Melbourne, that Kanchi Gandhi and others were able to conserve the name *Onychium* for ferns. Used for multiple conditions in Traditional Chinese medicine, the plant contains chalcones and flavonoids. |
| *Opuntia humifusa*.Raf. Cactaceae Eastern prickly pear, Indian fig. Distribution: Eastern North America. Stearns (1801) reports 'OPUNTIA a species of cactus. The fruit is called the *prickly pear*. If eaten it turns the urine and milk in women's breast red'. This is likely to be *Opuntia robusta.* The ripe fruits are reported edible, raw, and the leaf pads also, either raw or cooked. The fine spines, glochids, cause severe skin irritation so should be wiped off or burnt off prior to cooking and eating. Moerman (1998) reports that *O. hemifusa* was widely used by Native American tribes for wounds, burns, snakebite, warts (fruit), and as a mordant for dyes used on leather. Widely used, with the spines removed, as a famine food, and dried for winter use. |
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| *Origanum dictamnus* L. Lamiaceae Dittany of Crete, Hop marjoram. Distribution: Crete. Culpeper (1650) writes: ‘... hastens travail [labour] in women, provokes the Terms [menstruation] . See the Leaves.’ Under 'Leaves' he writes: ‘Dictamny, or Dittany of Creet, ... brings away dead children, hastens womens travail, brings away the afterbirth, the very smell of it drives away venemous beasts, so deadly an enemy is it to poison, it’s an admirable remedy against wounds and Gunshot, wounds made with poisoned weapons, draws out splinters, broken bones etc. They say the goats and deers in Creet, being wounded with arrows, eat this herb, which makes the arrows fall out of themselves.' Dioscorides’ *Materia Medica* (c. 100 AD, trans. Beck, 2005), Pliny the Elder’s *Natural History* and Theophrastus’s *Enquiry into Plants* all have this information, as does Vergil’s *Aeneid* where he recounts how Venus produced it when her son, Aeneas, had received a deadly wound from an arrow, which fell out on its own when the wound was washed with it (Jashemski, 1999). Dioscorides attributes the same property to ‘Tragium’ or ‘Tragion’ which is probably *Hypericum hircinum* (a St. John’s Wort): ‘Tragium grows in Crete only ... the leaves and the seed and the tear, being laid on with wine doe draw out arrow heads and splinteres and all things fastened within ... They say also that ye wild goats having been shot, and then feeding upon this herb doe cast out ye arrows.’ . It has hairy leaves, in common with many 'vulnaries', and its alleged ability to heal probably has its origin in the ability of platelets to coagulate more easily on the hairs (in the same way that cotton wool is applied to a shaving cut to hasten clotting). |
| *Origanum vulgare* L. Lamiaceae. Wild Marjoram. Oregano, Sweet Marjoram. Cultivar 'Compactum' Distribution: Europe. Culpeper (1650) writes: ‘*Amaracus, Majorana*. ... Sweet marjoram is an excellent remedy for cold diseases of the brain, being only smelled to, helps such as are given to much fighting, easeth pains in the belly, provokes urine being taken inwardly... Outwardly in oils or salves it helpeth sinews that are shrunk, limbs out of joint, all aches and swellings...’ It is still used as an analgesic against toothache, the a piece of cotton being soaked in the oil and applied to the carious tooth. |
| *Ornithogalum umbellatum* L. Hyacinthaceae Star of Bethlehem, Grass lily. Distribution: Central Europe, SW Asia, NW Africa. All parts are poisonous, especially the bulbs. The toxin is a cardiac glycoside with effects similar to digoxin, vomiting, cardiac irregularities and death in humans and livestock. Only used for decoration by Native Americans (it is a non-native plant that has escaped into the wild from cultivation) and called Sleepydick (Moerman, 1998). One of its toxins is Convallotoxin, also present in Lily of the Valley, *Convallaria majalis.* |
| *Osmanthus delavayi* Franch. Oleaceae Evergreen shrub. Distribution: China. *Osmanthus* is derived from the Greek for 'fragrant flower', *delavayi* from its discoverer, the French Missionary with the Missions Étrangères, and plant collector, Pierre Delavay (1834-1895). He sent 200,000 herbarium specimens containing 4000 species including 1,500 new species to Franchet at the Museum of Natural History in Paris. He sent seed of *O. delavayi* to France (1886), but only one germinated, and all the plants in cultivation until it was recollected 40 years later, arose from this plant (Bretschneider, 1896). The flowers are used to make a tea in China, but the berries (drupes) are not regarded as edible. |
| *Paeonia officinalis* L. Paeoniaceae, European Peony, 'Flore Pleno' , the double form. Distribution: Europe. The peony commemorates Paeon, physician to the Gods of ancient Greece (Homer’s *Iliad* v. 401 and 899, circa 800 BC). Paeon, came to be associated as being Apollo, Greek god of healing, poetry, the sun and much else, and father of Aesculapius/Asclepias. Theophrastus (circa 300 BC), repeated by Pliny, wrote that if a woodpecker saw one collecting peony seed during the day, it would peck out one’s eyes, and (like mandrake) the roots had to be pulled up at night by tying them to the tail of a dog, and one’s ‘fundament might fall out’ [anal prolapse] if one cut the roots with a knife. Theophrastus commented ‘all this, however, I take to be so much fiction, most frivolously invented to puff up their supposed marvellous properties’. Dioscorides (70 AD, tr. Beck, 2003) wrote that 15 of its black seeds, drunk with wine, were good for nightmares, uterine suffocation and uterine pains. *Officinalis* indicates it was used in the offices, i.e. the clinics, of the monks in the medieval era. The roots, hung round the neck, were regarded as a cure for epilepsy for nearly two thousand years, and while Galen would have used *P. officinalis*, Parkinson (1640) recommends the male peony (*P. mascula*) for this. He also recommends drinking a decoction of the roots. Elizabeth Blackwell’s *A Curious Herbal* (1737), published by the College of Physicians, explains that it was used to cure febrile fits in children, associated with teething. Although she does not mention it, these stop whatever one does. Parkinson also reports that the seeds are used for snake bite, uterine bleeding, people who have lost the power of speech, nightmares and melancholy. |
| *Paeonia mascula* (L.)Mill. ssp *arietina* The Balkan or Male (from *mascula*) peony. Distribution: China, Middle East, southern Europe and Morocco. The peony commemorates Paeon physician to the Gods of ancient Greece (Homer’s *Iliad* v. 401 and 899, circa 800 BC). Paeon, came to be associated as being Apollo, Greek god of healing, poetry, the sun and much else, and father of Aesculapius/Asclepias. Theophrastus (circa 300 BC), repeated by Pliny, wrote that if a woodpecker saw one collecting peony seed during the day, it would peck out one’s eyes, and (like mandrake) the roots had to be pulled up at night by tying them to the tail of a dog, and one’s ‘fundament might fall out’ [anal prolapse] if one cut the roots with a knife. Theophrastus commented ‘all this, however, I take to be so much fiction, most frivolously invented to puff up their supposed marvellous properties’. The roots, hung round the neck, were regarded as a cure for epilepsy for nearly two thousand years, and while Galen would have used *P. officinalis,* Parkinson (1640) recommends the male (i.e. *mascula*) peony for this. He also recommends drinking a decoction of the roots. Elizabeth Blackwell’s *A Curious Herbal* (1737), published by the College of Physicians, explains that it was used to cure febrile fits in children, associated with teething. Although she does not mention it, these stop whatever one does. Parkinson also reports that the seeds are used for snake bite, uterine bleeding, people who have lost the power of speech, nightmares and melancholy. |
| *Paeonia suffruticosa* Andrews 'Bai Yu' Distribution: China. The peony commemorates Paeon physician to the Gods of ancient Greece (Homer’s Iliad v. 401 and 899, circa 800 BC). Paeon, came to be associated as being Apollo, Greek god of healing, poetry, the sun and much else, and father of Aesculapius/Asclepias. *Paeonia suffruticosa* was introduced to horticulture by Sir Joseph Banks (1743-1820). A root extract in 25% alcohol has recently been licensed for use for the relief of menopausal hot flushing as an across-the-counter medication in Britain, despite inhibiting clotting mechanisms and causing uterine contractions; lack of toxicity, genotoxicity or genotoxicity trials, and the absence of proof that it works (UK Medicines and Healthcare Products Regulatory Agency (MHRA)). |
| *Papaver rhoeas* L. Papaveraceae Corn Poppy, Flanders Poppy. Distribution: Temperate Old World. Dioscorides (Gunther, 1959) recommended five or six seed heads in wine to get a good night's sleep; the leaves and seeds applied as a poultice to heal inflammation, and the decoction sprinkled on was soporiferous. Culpeper (1650) ' ... Syrup of Red, or Erratick Poppies: by many called Corn-Roses. ... Some are of the opinion that these Poppies are the coldest of all other - believe them that list [wishes to]: I know no danger in this syrup, so it be taken in moderation; and bread immoderately taken hurts; the syrup cools the blood, helps surfets and may safely be given in Frenzies, Feavers and hot Agues'. Here Culpeper is using the Doctrine of the Humours, in that an excess of a poisonous plant causes death and for the body to become cold, so a smaller dose will be good for fevers. He points out that eating too much bread can make one ill. Culpeper (1652) writes ‘... is good to prevent the falling sickness [epilepsy] ...’ for ‘procuring rest and sleep’, for curing coughs and sore throats, treating menorrhagia, agues (aches), frenzies (delirium), pleurisy and toothache; and if applied as a poultice for reducing inflammations and erysipelas (St. Anthony’s Fire). 'Poppy seeds ease pain and provoke sleep. Your best way is to make an emulsion of them with barley water.’ Contains rhoeadine and thebaine which are both mild analgesics and sedative. Latter is toxic and used to make oxycodone and oxymorphone which are opiate analgesics, and naloxone an antidote to opiates – displaces them from μ-opioid receptors in the brain. Thebaine can cause addiction, convulsions and death. It is mainly used to make powerful μ-opioid agonists, called Bentley compounds, some being 10,000 times more powerful than morphine. One is Etorphine, a μ, δ, and κ opioid receptor agonist 3,000 times more potent than morphine. It is only licensed for use on elephants and other large animals. It is fatal to humans. It is almost instantaneous in action and is almost instantaneously reversed by naloxone and/or diprenorphine. Dihydroetorphine is 12,000 times the strength of morphine. The petals were used to make a sedative for children (Sowerby, 1818). |
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| *Papaver somniferum* L. Papaveraceae Opium Poppy Distribution: Asia minor, but has been dated to 5000BC in Spanish caves. Now grows almost everywhere. The oldest medicine in continuous use, described in the Ebers' papyrus (1550 BC), called Meconium, Laudanum, Paregoric and syrup of poppies. Culpeper (1650) on Meconium '...the juyce of English Poppies boyled till it be thick' and 'I am of the opinion that Opium is nothing else but the juyce of poppies growing in hotter countries, *for such Opium as Authors talk of comes from Utopia* [he means an imaginary land, I suspect]’. He cautions 'Syrups of Poppies provoke sleep, but in that I desire they may be used with a great deal of caution and wariness...' and warns in particular about giving syrup of poppies to children to get them to sleep. The alkaloids in the sap include: Morphine 12% - affects μ-opioid receptors in the brain and causes happiness, sleepiness, pain relief, suppresses cough and causes constipation. Codeine 3% – mild opiate actions – converted to morphine in the body. Papaverine, relaxes smooth muscle spasm in arteries of heart and brain, and also for intestinal spasm, migraine and erectile dysfunction. Not analgesic. Thebaine mildly analgesic, stimulatory, is made into oxycodone and oxymorphone which are analgesics, and naloxone for treatment of opiate overdose – μ-opioid receptor competitive antagonist – it displaces morphine from μ-opioid receptors, and reverses the constipation caused by opiates. Protopine – analgesic, antihistamine so relieves pain of inflammation. Noscapine – anti-tussive (anti-cough). In 2006 the world production of opium was 6,610 metric tons, in 1906 it was over 30,000 tons when 25% of Chinese males were regular users. The Opium wars of the end of the 19th century were caused by Britain selling huge quantities of Opium to China to restore the balance of payments deficit. Laudanum: 10mg of morphine (as opium) per ml. Paregoric: camphorated opium tincture. 0.4mg morphine per ml. Gee’s Linctus: up to 60 mg in a bottle. J Collis Browne’s chlorodyne: cannabis, morphine, alcohol etc. Kaolin and Morph. - up to 60 mg in a bottle. Dover’s Powders – contained Ipecacuana and morphine. Heroin is made from morphine, but converted back into morphine in the body (Oakeley, 2012). One gram of poppy seeds contains 0.250mgm of morphine, and while one poppy seed bagel will make a urine test positive for morphine for a week, one would need 30-40 bagels to have any discernible effect. |
| *Paris quadrifolia* L. Trilliaceae Herb Paris Distribution: Europe and temperate Asia. This dramatic plant was known as Herb Paris or one-berry. Because of the shape of the four leaves, resembling a Burgundian cross or a true love-knot, it was also known as Herb True Love. Prosaically, the name ‘Paris’ stems from the Latin ‘pars’ meaning ‘parts’ referring to the four equal leaves, and not to the French capital or the lover of Helen of Troy. Sixteenth century herbalists such as Fuchs, who calls it *Aconitum pardalianches* which means leopard’s bane, and Lobel who calls it *Solanum tetraphyllum*, attributed the poisonous properties of *Aconitum* to it. The latter, called monkshood and wolfsbane, are well known as poisonous garden plants. Gerard (1633), however, reports that Lobel fed it to animals and it did them no harm, and caused the recovery of a dog poisoned deliberately with arsenic and mercury, while another dog, which did not receive Herb Paris, died. It was recommended thereafter as an antidote to poisons. Coles (1657) wrote '*Herb Paris* is exceedingly *cold*, whereupon it is proved to represse the rage and force of any Poyson, Humour , or Inflammation.' Because of its 'cold' property it was good for swellings of 'the Privy parts' (where presumably hot passions were thought to lie), to heal ulcers, cure poisoning, plague, procure sleep (the berries) and cure colic. Through the concept of the Doctrine of Signatures, the black berry represented an eye, so oil distilled from it was known as *Anima oculorum*, the soul of the eye, and 'effectual for all the disease of the eye'. Linnaeus (1782) listed it as treating 'Convulsions, Mania, Bubones, Pleurisy, Ophthalmia', but modern authors report the berry to be toxic. That one poison acted as an antidote to another was a common, if incorrect, belief in the days of herbal medicine. |
| *Pelargonium tricuspidatum* L'Her. Geraniaceae Distribution: South Africa. Mainly used to produce aromatic oils. |
| *Perovskia atriplicifolia* Benth. Lamiaceae Cultivar 'Blue Spire'. Russian sage. Herbaceous perennial. Distribution: Central Asia. Flowers eaten; leaves smoked as a euphoriant. In Pakistan and Baluchistan, used to treat dysentery. The cultivar 'Blue Spire' is probably a hybrid with *P. abrotanoides* and has the RHS Award of Garden Merit. |
| *Petasites hybridus* (L.)G.Gaertn., B.Mey. & Scherb. Asteraceae. Butterbur, Bog rhubarb. Distribution: Europe, NW Asia. Culpeper (1650) writes: “The roots are ... exceeding good in violent and pestilential fevers, they provoke the terms, expel poison, and kill worms.” Modern herbalists recommend it for a wide range of therapies, but it contains pyrrolizidine alkaloids, which are hepatotoxic and cause liver cancers. Nevertheless, in a trial aimed at reducing frequency of migraine attacks, a standardised commercial preparation was well tolerated, and was effective at higher doses, but placebo in this trial reduced migraines by over 50% in 49% of the patients (*Neurology* 2004; 63: 2240-2244). In view of its toxicity, it is best avoided. |
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| *Petasites paradoxus* Baumg. Asteraceae Alpine Butterbur. Herbaceous Perennial. Distribution:Temperate Northern hemisphere. It contains pyrrolizidine alkaloids, which are hepatotoxic and cause liver cancers. |
| *Photinia x fraseri* Dress. Rosaceae 'Red Robin' Evergreen shrub. Distribution: Himalaya to Japan, south to India and Thailand. Named for John Fraser (1750-1811) Scot who had a plant nursery in Chelsea and made several plant collecting trips to North America. From Newfoundland to the Carolinas. Poisonous. Leaves contain cyanogenic glycosides, stored in vacuoles in the cell. When chewed are converted to hydrogen cyanide by enzymes in the cell, so are exceedingly poisonous to animals, particularly ruminants. |
| *Physalis alkekengi* L. Rosaceae Chinese lantern, Winter Cherry, Bladder Cherry. Distribution: C & S Europe, W. Asia to Japan Culpeper: In his *English Physitian* of 1652 writes: Winter Cherry ...are of great use in physic ...’ and recommends them for almost all kidney and urinary problems. In particular he seems to advocate the use of green berries in beer, for preventing kidney stones lodging in the ureters. It is called ‘*aikakengi*’ in the College’s *Pharmacopoeia Londinensis* of 1618. Belonging to the family Solanaceae, all its parts are poisonous except the ripe fruit. The green fruit and the rest of the plant contain atropinic compounds and will produce a dry mouth, rapid heartbeat, hallucinations, coma and death if enough is taken. As the atropine is only present in the unripe fruit eating one will make the mouth go dry (and it has the most unpleasant taste), but it will also relax the smooth muscle in the wall of the ureter which helps passage of ureteric stones. Culpeper’s observations on its usefulness are supported by more modern observations. When ripe, the orange fruit inside its skeletal outer ‘lantern’ is edible, free of atropine, and delicious. |
| *Physocarpus opulifolius* (L.)Maxim. Roasaceae Distribution: North America. Austin (2004) reported it was used for gynaecological problems by the Iroquois and Menomini; and the root as an emetic by the Ojibwa; and for treating gonorrhoea, tuberculosis and as a laxative (tribes in western USA). Plants are toxic. |
| *Pinus mugo* Turra, Pinaceae Mountain pine. Distribution: Mountain regions in south and central Europe. Source of pine cone syrup used in cooking. Pine trees in general have a small edible pine nut in the pine cone, which Lyte (1578) writes are 'good for the lungs, they cleanse the breast, and cause the fleme to be spit out: also they nourish well and engender good blood, and for this cause they are good for such as have the cough.' He wrote that it was used for burns, wounds, dysentery, and as a diuretic. Quincy says of fir (P*inus) c*ones that they strengthen the genital parts, and increase the quantity of seed, or increase Desire without adding to Ability or Performance. |
| *Platanus orientalis* L. Platanaceae subsp *insularis* or *Platanus insularis* Kotschy ex Koehne. Distribution: Greek Islands. In 400 BC, Hippocrates, the Father of Medicine, taught medical students under a plane tree on the island of Cos off the coast of mainland Greece. There is a huge tree there, about 500 years old, with a circumference of 12 metres, which bears a sign that it is the original tree. It may well, however, be a descendant. Seed from this tree was taken to the National Botanic Garden in New York by the distinguished American neurologist, Wilder Penfield. Cuttings from the resulting seedlings were sent to the Royal Botanic Gardens, Kew, and from there one was donated to the Royal College of Physicians, London, in 1965. A second tree that came from the same source via the Chelsea Physic Garden was also planted in the College lawn in 1965, but removed after a number of years. |
| *Plectranthus argentatus* S.T.Blake Lamiaceae Silver spurflower. Herbaceous perennial. Distribution: Queensland and New South Wales, Australia. Little is known of its chemical constituents. It does contain many novel diterpenoids in its leaf glands (Alder, A.C. et al, *Helvetica Chimica Acta*, 2004, 67(6): 1523 – 1530).This genus has had some species from the genus *Coleus* incorporated into it, and these form a separate clade on phylogenetic analysis. The species in the ‘*Coleus*’ clade have a higher incidence of medicinal usage, being used to treat digestive, skin, infective and respiratory problems. They contain monoterpenoids, sesquiterpenoids, and diterpenoids. |
| *Plumbago auriculata* Blume Plumbaginaceae Plumbago, Leadwort. Distribution: South Africa. It is used traditionally to treat warts, broken bones and wounds. It is taken as a snuff for headaches and as an emetic to dispel bad dreams. A stick of the plant is placed in the thatch of huts to ward off lightning.” Iwou (1993) reports other *Plumbago* species are used to cause skin blistering, treat leprosy, induce blistering, and to treat piles, parasites and to induce abortions. The genus name derives from the Latin for lead, but authors differ as to whether it was used as a treatment of lead poisoning, or that when it was used for eye conditions the skin turned the colour of lead. |
| *Polemonium caeruleum* L. Polemoniaceae Jacob's ladder, Greek Valerian. Hardy perennial. Distribution: Temperate Europe. Dioscorides in 70 AD (Beck, 2005), and Lyte (1578) recommended it drunk in wine, for malignant ulcers, dysentery, difficulty in micturition, hip disease. The root was worn round the neck to protect against scorpions, and stopped toothache if chewed. Called *Valerian Graeca* by Dodoens (1551) and Parkinson (1640), *Valeriana peregrina Belgarum* by Lobel (1576). |
| *Polygala myrtifolia* L. Polygalaceae Cultivar 'Grandiflora'. Myrtle-leaf milkwort. Distribution: Europe. Name *Polygala* comes from the Greek for 'much milk'. Lyte (1578) calls Birdes Foote Trefoil (with yellow flowers), *Polygala* of Dioscorides. The accompanying woodcut of Lentilles, *Lens*, looks like *Polygala* but not *myrtifolia* which has shorter, myrtle-like leaves. Both Gunther (1959) and Lyte follow Dioscorides in using them for diarrhoea, menorrhagia, and breasts engorged with milk. Parkinson (1640) noted the same uses, but also noted that none of his contemporaries had sorted out what the plant of Dioscorides was, and his are milkweeds, calling them the Greater Milk wort, *Polygala major.* No modern uses*.* |
| *Polygonatum* x *hybridum* Brugger Convalliariaceae. Hybrid Solomon's Seal (*P. multiflorum* x *P. odoratum*) It has the RHS Award of Garden Merit. Rhizomatous herbaceous perennial. Distribution: Garden plant whose parents come from Europe and Asia. Dioscorides (70 AD ex Beck, 2005) reports that *Polygonatum* is good for wounds if a poultice is applied, and that it also removes facial blemishes. |
| *Polygonum bistorta* L. Polygonaceae Bistort, snakeweed, Easter Ledges. Distribution: Europe, N & W Asia. Culpeper: “... taken inwardly resist pestilence and poison, helps ruptures, and bruises, stays fluxes, vomiting and immoderate flowing of the terms in women, helps inflammations and soreness of the mouth, and fastens loose teeth, being bruised and boiled in white wine and the mouth washed with it.” In modern herbal medicine it is still used for a similar wide variety of internal conditions, but it can also be cooked and eaten as a vegetable. The use to relieve toothache, applied as a paste to the affected tooth, seems to have been widespread. |
| *Primula sieboldii* E.Morren Primulaceae 'Long Acre hybrids' Distribution Japan. It is a pretty Japanese primrose named for Dr Phillip von Siebold (1796-1866), a German physician/botanist/zoologist who worked in Japan and introduced many new plants to Europe. His daughter Oine (1827-1903) was the first practising female physician in Japan. |
| *Primula veris* L. Primulaceae. Cowslip, *Herba paralysis* Distribution: W. Asia, Europe. Fuchs ((1542) quotes Dioscorides Pliny and Galen, with numerous uses, from bruises, toothache, as a hair dye, for oedema, inflamed eye, and mixed with honey, wine or vinegar for ulcer and wounds, for scorpion bites, and pain in the sides and chest, and more. Lobel (1576) calls them *Primula veriflorae*, Phlomides, *Primula veris, Verbascula.* Like other herbals of the 16th and 17th century, the woodcuts leave one in no doubt that *Primula veris* was being written about.However, other translators of Dioscorides (Gunther, 1959 with Goodyear's 1655 translation; Beck, 2005) have attributed these uses to *Verbascum* L. Lyte (1578) calls them Cowslippe, Petie mulleyn, *Verbasculum odoratum, Primula veris, Herbae paralysis* and *Artheticae.* Along with cowslips and oxeslips, he says they are 'used dayly among other pot herbes, but in Physicke there is no great account of them. They are good for the head and synewes ...'. Culpeper (1650): ‘Cowslips strengthen the brain, senses, and memory, exceedingly, resist all disease there as convulsions, falling sickness, palsies etc.’ Quincy (1718) writes that they were used for *Paralytic* and *Arthritick* complaints, but seldom used, and their juice was used to provoke sneezing. Gradually their uses diminish and Lindley (1838) merely writes 'The flowers possess well-marked sedative properties and make a pleasant soporific wine.' It contains quinones and these may give rise to allergic reactions (Medicine Control Agency, 2002). It is licensed for use in Traditional Herbal Medicines in the UK (UK Medicines and Healthcare Products Regulatory Agency (MHRA)). |
| *Prostanthera ovalifolia* R.Br. Lamiaceae Alpine anise bush, Oval leaf Mintbush, Purple mintbush. Woody shrub. Distribution: Australia. Minty flavoured leaves used in jams and jellies. Various essential oils are produced from commercially grown *P. ovalifolia* (cis-dihydroagarofuran, kessane, 1,8-cineole which is also known as eucalyptol, p-cymene,) and *P. cuneata* also contains eucalyptol. Concentrations of essential oils in the plants vary according to the clonal variety, growing conditions and time of year. Aboriginal peoples used *Prostanthera* leaves in medicinal ointments and washes, but one species, *P. striatiflora*, was used to poison waterholes to kill visiting emu (Hegarty, 2001). |
| *Protea cyanoides* L. Proteaceae King Protea Distribution; South Africa. National flower of South Africa. Of particular interest is the antiquity of this family, for it is found in Australia, South America and South Africa, so evolved on Gondwanaland before it separated into its present continents. No medicinal or culinary uses. |
| *Prunella vulgaris* L. Lamiaceae Self Heal, Carpenter’s Herb, Sicklewort, Consolida minor. Distribution: Europe. Culpeper (1650): ‘See *Bugle*. So shall I not need to write the same thing twice, the vertues being the same.’ Under Bugle he writes: ‘Bugula. Bugle or middle Comfrey ... excellent for falls or inward bruises, for it dissolves congealed blood, profitable for inward wounds, helps the rickets and other stoppings of the Liver, outwardly it is of wonderful force in curing wounds and ulcers, though festered, as also gangrenes and fistulas, it helps broken bones and dislocations. To conclude, let my countrymen esteem it as a Jewel...’ Bugle is *Ajuga reptans* which has the same creeping habit, but is in another genus. |
| *Prunus incisa* Thunb. Rosaceae 'Kojo-no-mai' Fuji Cherry. Distribution: Japan. An ancient cultivar with no medicinal uses. The seeds and the leaves contain cyanogenic glycosides so best avoided. |
| *Prunus mume* Siebold & Zucc. Rosaceae Chinese Plum, Japanese Apricot. Distribution: Eastern Asia. The fruit is used to flavour alcohol and used as a *digestive* to improve appetite. |
| *Pulmonaria* L. Boraginaceae Cultivar 'Blue Ensign' has blue flowers. Distribution: Europe. *Pulmonaria* or Lungwort are names for a lichen and a perennial plant in the Boraginaceae. This is the latter. Lyte (1578) has a woodcut of our plant and also calls it Sage of Jerusalem and says it is of 'no particular use in physicke, but is much used in meates and salads with eggs, as is also Cowslippes and Primroses, whereunto in temperature it is much alike.' He lists and describes the lichen separately. Culpeper (1650) said he found many sorts of lunguewort in perusing Authors ' *Pulmonari, arborea* and *Symphytum maculosum* [and the latter is our plant, the others the lichen] and that they 'helpe infirmities of the lungues, as hoarseness, coughs, wheezing, shortnesse of breath etc.' Coles (1657) who espouses the Doctrine of Signatures in a way unrivalled by any other English author, might have been expected to confirm the concept that the mottled leaves looked like the cut surface of a lung which indicates their purpose, but he only mentions the lungwort which is a lichen. However, Porta'sbeautiful book on the Doctrine, *Phytognomica* (1588), is clear that the plant called *pulmonaria* with hairy leaves like a bugloss, spotted white with purple flowers, commonly called '*cynoglossa*' [with a woodcut which could be *Pulmonaria officinalis*] indicate its use for ulcerated lungs, spitting blood, shortness of breath and asthma equally with the lichen with the same name. Lobel & Pena (1570) call it '*PULMONARIA, masculosa folia Borrago. floribus Primula veris, purpureis* [PULMONARIA spotted, Borage-leaved, flowers like *Primula veris -* Cowslips - purple]' and say that women mix the leaves with a little broth and make it into an omelette for lung disorders and to strengthen the heart Lobel (1576) calls it *Maculosa Pulmonaria* and describes a white flowered form with a good woodcut. Gerard (1633) uses the same woodcut as Lobel and calls it *Pulmonatia foliis Echii*, Buglosse Cowslips with red flowers, and a woodcut of a narrow leaved plant as *Pulmonaria masculosa,* Spotted Cowslips of Jerusalem with red, blue and purple flowers and says 'the leaves are used among pot-herbes. The roots are also thought to be good against the infirmities of ulcers of the lungs...'. Quincy (1718) writes: '... it has a glutinous juice ... and heals ulcers and erosions. It is commended in coughs and spitting of blood but is little used either in the Shop or Prescriptions'. Not used in modern medicine. It is in the family Boraginaceae whose species are often rich in pyrrolizidine alkaloids that cause liver toxicity and liver cancers, but levels in *Pulmonaria officinalis* may not be significant. |
| *Pulmonaria rubra* L. Boraginaceae A red-flowered species, mentioned in 16th and 17th herbals, but with the same properties as *officinalis.* Distribution: Europe. *Pulmonaria* or Lungwort are names for a lichen and a perennial plant in the Boraginaceae. This is the latter. Lyte (1578) has a woodcut of our plant and also calls it Sage of Jerusalem and says it is of 'no particular use in physicke, but is much used in meates and salads with eggs, as is also Cowslippes and Primroses, whereunto in temperature it is much alike.' He lists and describes the lichen separately. Culpeper (1650) said he found many sorts of lunguewort in perusing Authors '*Pulmonari, arborea* and *Symphytum maculosum* [and the latter is our plant, the others the lichen] and that they 'helpe infirmities of the lungues, as hoarseness, coughs, wheezing, shortnesse of breath etc.' Coles (1657) who espouses the Doctrine of Signatures in a way unrivalled by any other English author, might have been expected to confirm the concept that the mottled leaves looked like the cut surface of a lung which indicates their purpose, but he only mentions the lungwort which is a lichen. However, Porta's beautiful book on the Doctrine, *Phytognomica* (1588), is clear that the plant called *pulmonaria* with hairy leaves like a bugloss, spotted white with purple flowers, commonly called 'cynoglossa' [with a woodcut which could be *Pulmonaria officinalis*] indicate its use for ulcerated lungs, spitting blood, shortness of breath and asthma equally with the lichen with the same name. Lobel & Pena (1570) call it 'PULMONARIA, masculosa folia Borrago. floribus Primula veris, purpureis[ PULMONARIA spotted, Borage-leaved, flowers like *Primula veris* - Cowslips - purple] and say that women mix the leaves with a little broth and make it into an omelette for lung disorders and to strengthen the heart. Lobel (1576) calls it *Maculosa Pulmonaria* and describes a white flowered form, with a good woodcut. Gerard (1633) uses the same woodcut as Lobel and calls it *Pulmonatia foliis Echii*, Buglosse Cowslips with red flowers, and a woodcut of a narrow leaved plant as *Pulmonaria masculosa*, Spotted Cowslips of Jerusalem with red, blue and purple flowers and says 'the leaves are used among pot-herbes. The roots are also thought to be good against the infirmities of ulcers of the lungs...'. Quincy (1718) writes: '... it has a glutinous juice ... and heals ulcers and erosions. It is commended in coughs and spitting of blood but is little used either in the Shop or Prescriptions. Not used in modern medicine. It is in the family Boraginaceae whose species are often rich in pyrrolizidine alkaloids that cause liver toxicity and liver cancers, but levels in Pulmonaria officinalis may not be significant. |
| *Pulsatilla vulgaris* Mill. Ranunculaceae. Pasque flower, wind flower, being visited by a bumble bee, *Bombylius major* Distribution: Europe. Lindley (1838) and Woodville (1790) knew this as *Anemone pulsatilla*, the common name being Pasque (Easter) Flower. At the end of the 18th century it was recommended for blindness, cataracts, syphilis, strokes and much more, treatments which, as was clear to physicians at the time, were valueless. Gerard (1633) writes: ‘They serve only for the adorning of gardens and garlands, being floures of great beauty’. It is in the buttercup family, Ranunculaceae, all members of which are poisonous. It was recommended, by mouth, for ‘obstinate case of taenia’ (tapeworms). One hopes it was more toxic to the worm than the patient. Flowers with a central disc and radiating florets were regarded as being good for eye complaints under the Doctrine of Signatures. Porta (1588) writes (translated): ‘Argemone [Papaver argemone], and anemone, have flowers of this shape, from this they cure ulcers and cloudiness of the cornea’. There were occupational diseases even before there were words like pneumoconiosis, and Lindley writes that ‘the powder of the root causes itching of the eyes, colic and vomiting, if in pulverising it the operator do not avoid the fine dust which is driven up.’ |
| *Pulsatilla vulgaris* Mill. Ranunculaceae Pasque flower. Distribution: Europe. Lindley (1838) and Woodville (1790) knew this as *Anemone pulsatilla*, the common name being Pasque (Easter) Flower. At the end of the 18th century it was recommended for blindness, cataracts, syphilis, strokes and much more, treatments which, as was clear to physicians at the time, were valueless. Gerard (1633) writes: ‘They serve only for the adorning of gardens and garlands, being floures of great beauty’. It is in the buttercup family, Ranunculaceae, all members of which are poisonous. It was recommended, by mouth, for ‘obstinate case of taenia’ (tapeworms). One hopes it was more toxic to the worm than the patient. Flowers with a central disc and radiating florets were regarded as being good for eye complaints under the Doctrine of Signatures. Porta (1588) writes (translated): ‘Argemone [Papaver argemone], and anemone, have flowers of this shape, from this they cure ulcers and cloudiness of the cornea’. There were occupational diseases even before there were words like pneumoconiosis, and Lindley writes that ‘the powder of the root causes itching of the eyes, colic and vomiting, if in pulverising it the operator do not avoid the fine dust which is driven up.’ |
| *Punica granatum* L. Lythraceae Pomegranate, *granatum malum*, balustines. Distribution: E. Mediterranean to Himalayas. The Pomegranate is in the centre of the Arms of the Royal College of Physicians, perhaps for its use in cooling, and therefore for fevers. However it was the sour pomegranate that would have been used as Dioscorides says the sweet ones are unfit for use in agues. Culpeper (1650) makes no mention of the fruit, but says of the flowers ‘... they stop fluxes and the Terms in women.’ In the *Complete Herbal and English Physician* (1826) he says the fruit ‘... has the same general qualities as other acid fruits.’ Of the flowers he says (among other properties) that ‘A strong infusion of these cures ulcers in the mouth and throat, and fastens loose teeth.’ Gerard (1633) says that the cravings of pregnant women can be abolished with the juice, and perhaps it was scurvy which was being treated effectively when he reports that the juice was very effective against splitting of blood and for loose teeth. The dwarf form of this species, *Punica granatum* var. *nana* has fruits no more than 3cm across. Pomegranate bark can only be sold by registered pharmacies in the UK and used to be used as a vermifuge, with the secondary use that the tincture made from it doubled as a permanent ink. In South Africa the fruit rind is used for diarrhoea and stomach ache, and the bark as a vermifuge, but undesirable side effects make this dangerous. It is reported to be effective against fevers, as a diuretic, to lower blood sugar and to be both antibacterial and antiviral (van Wyk, 2000). |
| *Ranunculus ficaria* L. Ranunculaceae Lesser Celandine, Cultivar 'Brazen Hussy' Distribution: Europe. lesser celandine, pilewort and figwort: for piles. Carrying the roots, or applying a paste made from them, alleviated haemorrhoids/piles, according to Lyte. An early English name for a haemorrhoid was a ‘fig’ and ‘ficaria’ means ‘pertaining to piles’. Celandine is a corruption of the Greek word ‘chelidonion’, meaning a swallow, was said to flower when the swallows appeared and to wither away when they left, according to Lyte. However, Dioscorides attributes this phenomenon to our greater celandine, *Chelidonium majus*, which starts later and continues in flower until the autumn. Of course, in southern Italy the proverb is ‘One swallow does not make a spring’ as opposed to the English ‘One swallow does not make a summer’, and they appear earlier and leave even later in the land of Dioscorides. However, *Ranunculus ficaria* is no relation of *Chelidonium majus.* Plants in the buttercup family, Ranunculaceae, tend to be poisonous and are one of the few plants that thrive in alpine meadows when cows are present. The cows avoid them but eat almost all the other wild flowers. |
| *Rehmannia angulata* (Oliv.)Hemsl. Scrophulariaceae Chinese foxglove. Distribution: China. Named for Joseph Rehmann ((1753-1831) German physician (Stearn, 1994) who emigrated to St Petersburg and became the personal physician to Tsar Nicholas 1. *Rehmannia glutinosa* is used in Traditional Chinese Medicine for arthritis. |
| *Reineckea carnea* Kunth. Convallariaceae Distribution: China Named for Joseph Heinrich Julius Reinecke (1799-1871) of Berlin (Stearn, 1994). |
| *Reseda lutea* L. Resedaceae Wild Mignonette. Dyers Rocket. Herbaceous plant. Distribution: Eurasia and North Africa. This plant, and in particular *R. luteola,* is the source of 'weld' a yellow dye from luteolin a flavonoid in the sap. It is said to have been used since the first millennium BC, but curiously Dioscorides, Lyte, Gerard, Lobel, Fuchs, Coles, Quincy, Linnaeus (1782) either do not mention it or make it synonymous with *Eruca*, Rocket, and make no reference to it as a dye source. The name *Resedo* means 'I sit up' in Latin, which Stearn (1994) interprets as 'I heal' which makes its absence even more strange. It is noted as the dye source by Bentley (1861). |
| *Rhamnus frangula* L. Rhamnaceae 'Asplenifolia' Alder Buckthorn. Deciduous shrub. Distribution: Europe, North Africa and to China. *Rhamnus purshiana* is the source of *Cascara sagrada* a powerful purgative. *Rhamnus* is the Greek for spiny shrubs; *frangula* is the Latin word for Buckthorn. Dodoens (1554) calls it *Fragula* and in Lyte's translation he calls it Black Aller (sic) or *Alnus nigra* and says that the bark soaked in wine and drunk causes profuse vomiting, and boiled in vinegar and applied to the scalp, cures scurf; cattle that eat the leaves, he reports, produce more milk. It contains anthraquinones, the same chemicals as found in Senokot. It is licensed for use in Traditional Herbal Medicines in the UK (UK Medicines and Healthcare Products Regulatory Agency (MHRA)). |
| *Rhodiola rosea* L. Crassulaceae Golden root, roseroot Distribution: Arctic, Eastern North America, mountains of central Asia. Herbalists regard it as having curative properties for diseases as diverse as cancer, influenza, depression and other conditions. It has not been licensed for use in manufactured herbal medicines in the UK. |
| *Rhododendron yakushuminum* Nakai, Ericaceae. Cultivar 'Grumpy'. Distribution: Yaku-shima an island off the south coast of Japan. Discovered early 1900s, introduced to UK in 1934. No medicinal value but the leaves of rhododendrons are very poisonous, due to a toxic resin called grayanotoxin. This is also present in the nectar; sucking it from the flowers or eating two leaves, causes serious illness - stomach upsets, gastric haemorrhage, aspiration pneumonia, renal tubular damage and liver damage. Diarrhoea, vomiting, anorexia, weakness, incoordination, stupor and often death (Illinois Veterinary library website, 2013). Other websites extol the virtues of tea from *R caucasicum,* attributing the longevity of the people of Georgia to regular use. Honey from pollen of *R. luteum* is thought to have poisoned Xenophon's army in 401BC and Pompey's army in his campaign against King Mithridates of Pontus in 66 BC. Honey from another rhododendron, *R. afghanicum,* poisoned Alexander the Great's army in 327 BC. |
| *Rhododendron yakushuminum* Nakai Ericaceae. Cultivar 'Grumpy' Distribution: Yaku-shima an island off the south coast of Japan. Discovered early 1900s, introduced to UK in 1934. No medicinal value but the leaves of rhododendrons are very poisonous due to a toxic resin called grayanotoxin. This is also present in the nectar; sucking it from the flowers or eating two leaves, causes serious illness - stomach upsets, gastric haemorrhage, aspiration pneumonia, renal tubular damage and liver damage. Diarrhoea, vomiting, anorexia, weakness, incoordination, stupor and often death (Illinois Veterinary library website, 2013). Other websites extol the virtues of tea from *R caucasicum* attributing the longevity of the people of Georgia to regular use. Honey from pollen of *R. luteum* is thought to have poisoned Xenophon's army in 401BC and Pompey's army in his campaign against King Mithridates of Pontus in 66 BC. Honey from another rhododendron*, R. afghanicum*, poisoned Alexander the Great's army in 327 BC. |
| *Ribes odoratum* H.L.Wendl Grossulariaceae Buffalo currant. Distribution:North America. Fruits edible. Presumably a source of vitamin C but no medicinal use. No reports of medicinal usage by Native Americans found. |
| *Ricinus communis* L. Euphorbiaceae Castor oil plant. *Palma Christi.* Distribution: Mediterranean, E Africa, India. The seeds themselves are pretty, brown, bean-like usually with gold filigree markings on them, and the interior of the seed is the source of castor oil. The outer coat of the seed is the source of the poison ricin, famous (infamous) for the umbrella murder of Georgi Markov on Waterloo Bridge in 1978. The KGB are alleged to have killed Georgi Markov, a dissident Bulgarian journalist, with a pellet containing 0.28mgm of ricin fired into his leg using a specially adapted air gun in an umbrella. While his symptoms were those of ricin poisoning, no ricin was ever found in the pellet that was extracted from his leg. Two seeds, chewed and ingested are said to be fatal, but most people vomit and get rid of the toxin. Ducks are resistant to ricin, and need to ingest more than 80 to be fatal! In Peru the leaves are used as a tea for stomach ache, although they contain small amounts of ricin. It is called *Palma Christi* in early herbals because of the five pointed leaves, which schematically represent a hand. It is a monotypic genus in the spurge family. |
| *Rodgersia aesculifolia* Batalin Saxifraginaceae Chestnut-leaved Rodgersia. Herbaceous perennial. Distribution: Northern China. Named for Rear Admiral John Rodgers (1812-1882), American naval officer who commanded the Pacific expedition 1852-1856 when the genus was first discovered. Used as a Traditional Chinese Medicine for rheumatism, bronchitis, dysentery, asthma, and gastritis. |
| *Rohdea japonica* Roth Convallariaceae Distribution: Japan. It is a monotypic genus known as *omoto* in Japan, meaning ‘evergreen’. It is regarded as a symbol of long life and good fortune; Ieyasu Tokugawa, the first Shogun of the Edo period (1603–1867), took three plants with him to Edo Castle to ensure happy fortune. Its cultivation became such a craze in Japan that its sale was banned in 1852, but it remains hugely popular with 600 cultivars registered with the Japan Rohdea Society. It is used in Chinese medicine but is regarded elsewhere as being poisonous and best avoided. Named by Roth for his friend Michael Rohde (1782–1812). Rohde was a physician and botanist from Bremen whose doctoral thesis was on quinine, He died of typhoid in 1812, aged 30 (Oakeley, 2012). |
| *Rosa* L. Rosaceae 'Ispahan' Distribution: Garden origin. Hybrid rose. |
| *Rosa* L. Rosaceae 'Ispahan' Distribution: Garden origin. Hybrid rose. |
| *Rosa* L. Rosaceae 'Rhapsody in Blue' Distribution: Garden origin. Hybrid rose. |
| *Rosa* L. Rosaceae 'Charles de Mills' Distribution: Garden origin. Hybrid rose. |
| *Rosa damascena* Mill. Rosaceae Distribution: Garden origin. A hybrid between *R. gallica* and *R. moschata..* |
| *Rosa gallica* L. Rosaceae Distribution: S & C Europe, Western Asia. Culpeper: “Red roses cool, bind, strengthen both vital and animal virtue, restores such as are in consumptions, strengthen. Notes: Rose water and distilled oil of roses have been used in herbal medicine for over a thousand years, and are still used in aromatherapy. |
| *Rosa nitida* Willd. Rosaceae. Shining rose. Distribution: North-eastern North America. *Nitida* is Latin for shining, referring to the shiny leaves. The seed heads contain vitamin C. |
| *Rosa rugosa* Thunb. Rosaceae 'Frau Dagmar Hastrup' . Ramanas rose, Japanese rose. Distribution: Eastern Asia. Fruits rich in vitamin C and E. |
| *Rosa rugosa Thunb. Rosaceae 'Frau Dagmar Hastrup' .* Ramanas rose, Japanese rose. Distribution: Eastern Asia. Fruits rich in vitamin C and E. |
| *Rosmarinus officinalis* L. Lamiaceae Rosemary. Woody perennial. Distribution: Mediterranean. Quincy (1718) commended the flowers for epilepsy, apoplexy, palsies, uterine obstruction, jaundice, gout, and syringed into the ear with warm water for dislodging wax. It is licensed for use in Traditional Herbal Medicines in the UK (UK Medicines and Healthcare Products Regulatory Agency (MHRA)). |
| *Potentilla thurberi* A.Gray Rosaceae Hardy perennial. Cultivar 'Monarch's Velvet'. English name for *Potentilla* is Cinquefoil. Distribution: Mexico. New Mexico and Arizona. but potentillas are found in all the northern hemisphere continents. Named for Dr George Thurber (1821-1890), horticulturist, botanist and quartermaster of the Mexican Boundary Survey of 1850-1854 and Professor of Botany and Horticulture at Michigan Agricultural College 1859-1863. Potentillas are in use in Traditional Chinese Herbal Medicine. Lyte (1578 calls them Cinquefoyle, Sinckefoyle, Five finger grasse, Pentaphyllon, separating them from Tormentil or Setfoyle, which are now all in *Potentilla.* He recommends them in different preparations for toothache, mouth ulcers, dysentery ['bloudy fluxe'] excessive bleeding, gout, sciatica, 'evilfavoured nayles', diseases of the lungs, liver and all poisons, tertian and quartan fevers, epilepsy, prolapses and inguinal hernias ['the falling downe of the bowelles or other matter in the Coddes'], and mixed with salte and sugar to close wounds, fistulas and ulcers. In his use for Tormentil he has an interesting example of the Doctrine of the Humours in recommending it be made up with water of a Smythes forge, or water wherein Iron, or a hot burning steel hath bene often quenched' for curing a fever or bleeding of any sort (gastrointestinal, uterine, kidney etc.). Clearly, the concept was that water that cooled an excess of the hot, fiery element (of Empedocles) would quench the excess of the excess of the hot fiery humour (of Hippocrates) represented by the blood, in such illnesses (see also pimpinell, *Sanguisorba officinalis*). Culpeper (1650) as always in his early editions, is succinct: '*Pentaphylli,* Of Cinkfoyl: Commonly called five-leaved or five-fingered grass; ... stops blood flowing from any part of the body, it helps infirmities of the Liver and Lungues, helps putrified ulcers of the mouth, the root boyled in Vinegar is good against the Shingles, and appeaseth the rage of any fretting sores.' His contemporary, William Coles (1657) is making use of the Doctrine of Signatures, first invoked by Theophrastus, in recommending with respect to the distilled water of the roots and leaves (the latter resembling a hand) 'Cinkefoile ... if the hands be often washed therein, and suffered every time to dry of it self, without wiping, it wil in a short time help the Palsie, or shaking of them.' Quincy (1718) writes of Pentalphylli, *Cinquefoil.* 'Schroder runs thro most Chronical Distempers in its Commendation, as it is not unusual for many *German Writers* to do' [German herbal medicine legislation to this day is much more embracing than in the rest of Europe] and gives a long list of conditions, similar to Lyte's, that it is reputed to treat, but ends ' Notwithstanding all these Excellencies, this *Simple*  is now only remembered for a place it has in the *Theriaca Andromachi,* and is not of any other use in the Shops or Practice.' Linnaeus (1782) follows Lyte (who is of course translating Dodoens, 1552) in recommending *Potentilla* for jaundice, dysentery and prolapse, but adds leucorrhoea and calculus. |
| *Rubus spectabilis* Pursh Rosaceae. The cultivar 'Olympic Double' is a double form which does not bear fruit. Salmonberry. Perennial woody herb. Distribution: West coast of North America from Alaska to California. The fruit (technically, drupelets) look like a raspberry and are edible, made into jams and used to make a purple to dull blue dye. Moerman (1998) found them used by almost every North American tribe, mostly culinary for the fruits and young shoots, my favourite 'medicinal' use being the application of chewed sprouts to the head of a child to make him grow (Kwakiutl tribe). Linnaeus (1782) recommends *Rubus* for scurvy (as well as fevers, rashes, and coughing up blood). |
| *Rudbeckia* L. Asteraceae Un-namedcultivar. Orange Cone flower. Herbaceous perennial. Distribution: North America. It is named for Olof Rudbeck, father (1630–1702) and son (1660–1740). Olof Rudbeck the Elder was professor of medicine at Uppsala University, and established a botanic garden there. He was the discoverer of the human lymphatic system. His son succeeded his father as professor of medicine, and one of his students was Carl Linnaeus (1707–88) who named the genus *Rudbeckia* after him and his father. It is a plant which is poisonous to cattle, sheep and pigs with no medicinal uses. Austin (1974) discusses *R. hirta,* also regarded as a toxic plant. It was used externally by the Cherokee to bathe sores and snakebites and made into a tea for treating diarrhoea; the Seminoles used it for headaches and fever and the Miccosukee for sunstroke and headache. The Cherokee and the Iroquois used it to treat intestinal worms. |
| *Rudbeckia triloba* L. Asteraceae Orange Cone flower. Herbaceous perennial. Distribution: North America. It is named for Olof Rudbeck, father (1630–1702) and son (1660–1740). Olof Rudbeck the Elder was professor of medicine at Uppsala University, and established a botanic garden there. He was the discoverer of the human lymphatic system. His son succeeded his father as professor of medicine, and one of his students was Carl Linnaeus (1707–88) who named the genus *Rudbeckia* after him and his father. It is a plant which is poisonous to cattle, sheep and pigs with no medicinal uses. Austin (1974) discusses *R. hirta*, also regarded as a toxic plant. It was used externally by the Cherokee to bathe sores and snakebites and made into a tea for treating diarrhoea; the Seminoles used it for headaches and fever and the Miccosukee for sunstroke and headache. The Cherokee and the Iroquois used it to treat intestinal worms |
| *Ruscus aculeatus* L. Ruscaceae Butchers Broom., Box holly, Knee Holly, Jew’s myrtle. Distribution: Mediterranean to Britain. *Aculeatus* means 'prickly' which describes the plant well. Dioscorides in 70 AD (Gunther, 1959) says of this plant ‘... ye leaves and berries drunk in wine have ye force to move urine, expel the menstrua, and to break ye stones in ye bladder ...’ and adds also ‘ ... it cures also ye Icterus and ye strangurie and ye headache.' Its use did not change for a millennium and a half; Culpeper (1650) 'Of knee-holly ... provoke urine, break the stone, and help such as cannot piss freely.’ However, a century or so later Linnaeus (1782) uses it for 'Hydrops ! Ascites, Icterus' [cardiac failure, abdominal distension due to fluid, and jaundice]. However modern herbals on the internet (2013) say it is now used for haemorrhoids, increasing peripheral blood flow and varicose veins. It is not licensed for use in the UK for the manufacture of herbal medicines and the European Medicines Agency *Evaluation of Medicines for Human Use* (September 2008) was critical of clinical studies, noted contact dermatitis and allergic dermatitis from topical use and diarrhoea and lymphocytic colitis from oral use, and lack of genotoxicity studies. It permitted it for 'traditional use' for relieving the symptoms of varicose veins (heavy legs) and the itching and burning associated with haemorrhoids, only. We can find a cryptic comment in Parkinson (1640) on the English name: Quoting Virgil (translated) 'the rough *Ruscus*, in woods and river banks, yeilds switches [brooms]' and comments 'to make Broomes to sweepe the house, from whence came the name *Scopia Regia* [Royal Palace swept], but the King's chamber, by revolution of time turned to the Butchers stall, for that a bundle of stalks tied together, serveth them to clense their stalles, and from thence we have our English name, Butchers Broome.' The thick 'leaves' are phylloclades, expanded stems, as one can see the flowers, and the red berries, arising from their surface. As such they contain chlorophyll in the cells on both surfaces which improves photosynthetic function, but have fewer stomata - it needs some for carbon dioxide exchange - so lose less water and tolerate drought well. It is licensed for use in Traditional Herbal Medicines in the UK (UK Medicines and Healthcare Products Regulatory Agency (MHRA)). |
| *Salvia coahuilensis* Fernald Lamiaceae Coahuila Sage. Perennial shrub. Distribution: Mexico. Most of the historical medicinal literature is on common sage, *Salvia officinalis*. The name *Salvia* meaning 'healthy'. Elizabeth Blackwell (1737) wrote that it had '... all the noble Properties of the other hot Plants; more especially for the Head, Memory, Eyes, and all Paralytical Affections. In short, 'tis a Plant endu'd with so many and wonderful Properties, as that the assiduous use of it is said to render Men Immortal" with which Hans Sloane agreed. Its health giving properties were recorded in the aphorisms of the School of Salerno (fl 9-13th century) - quoted in the Decameron [ c.1350, translated: Why should man die when *Salvia* grows in the Garden']. Some salvias, such as *Salvia divinorum*, contain hallucinogenic compounds. |
| *Salvia nemorosa* L. Lamiaceae Woodland sage. Balkan claryDistribution: Central Europe, Western Asia. Most of the historical medicinal literature is on common sage, *Salvia officinalis.* The name *Salvia* meaning 'healthy'. Elizabeth Blackwell (1737) wrote that it had '... all the noble Properties of the other hot Plants; more especially for the Head, Memory, Eyes, and all Paralytical Affections. In short, 'tis a Plant endu'd with so many and wonderful Properties, as that the assiduous use of it is said to render Men Immortal" with which Hans Sloane agreed. Linnaeus (1782) also: 'Timor, Languor, Leucorrhoea, Senectus [fear, tiredness, white vaginal discharge, old age]'. Its health giving and immortality conferring properties were recorded in the aphorisms of the School of Salerno (fl 9-13th century) - quoted in the *Decameron* [ c.1350, translated: Why should man die when *Salvia* grows in the Garden']. Some salvias, such as *Salvia divinorum* contain hallucinogenic compounds. |
| *Sambucus nigra* f *porphyrophylla* E.C.Nelson Caprifolia Cultivar 'Gerda'. Elderberry. Distribution: The leaves, stems and seeds contain cyanogenic glycosides which liberate hydrogen cyanide when crushed or chewed. While elderberry cordials are drunk widely, it has not been accepted for use as a traditional herbal medicine (European Medicines Agency, draft report, 2013) |
| *Sanguisorba officinalis* L. Rosaceae Cultivar 'Tanna'. Great Burnet, Burnet Bloodwort, Pimpinella. Perennial herb. *Sanguisorba* is from the Latin 'to absorb blood', *officinalis* to indicate its long time medicinal use. Distribution: W Europe, Orient, N America. Culpeper makes no mention of it in his *Physical Directory* (1650), but in his *English Physitian* (1652) he writes at length, praising its virtues (prepared in a glass of claret) in treating diseases of the heart, driving away melancholy, treating discharges, bleeding, ulcers and preventing the plague. Parkinson (1640) calling it '*Pimpinella sive* [or] *Sangisorba,* Burnet' concurs. Modern Chinese herbal medicine uses this in compounds for the topical treatment of third degree burns. Lyte (1578) also refers to its ability to staunch bleeding, adding that drunk with water 'in which [hot] Iron had often been quenched' works well (see *Potentilla thurber*i). Lyte also reports that 'some have written that its blood staunching effects are performed if 'the herbe alone being but onely holden in a mans hande ...'. |
| *Saponaria officinalis* L. Caryophyllaceae Cultivar 'Alba Plena' has double white flowers. Soapwort. Distribution: Europe. Linnaeus (1782) noted its use for weight loss, vaginal discharge, jaundice and parasitic intestinal worms [*Ascaris lumbricoides*]. The roots, crushed, lathered in water, were used as a soap substitute (Stearn, 1994), but Lyte (1578) says it is the leaves which were used. He writes that German swineherds give it chopped up to their pigs to protect them 'from the Murren' [i.e. 'murrain' the name used for all the fatal epidemics of cattle and sheep that swept Europe in the 14th century, causing the Great Famine of 1315-1317, and in later years]. As a medicine he thought it good against all chest conditions, 'venome and poyson', air-born infection and pestilence [the plague], and for healing wounds and ulcers. |
| *Sarcococca hookeriana* Baill. Buxaceae var digyna. This variety has the RHS Award of Garden Merit. Himalayan Sweet Box. Distribution: China to Himalayas. *Sarcoccoca* means flesh fruit; *hookeriana* pertains to one of the Hooker's, Directors of the Botanic Garden, Kew - but could be either the father or the son; *digyna* may be from the Linnaean order of plants, Digynia, meaning 'with two styles' (the stalks that connect the stigma to the ovary). Steroidal alkaloids have been found in the plant which have antileishmaniasis activity i*n vitro.* |
| *Scabiosa columbaria* L. Dipsacaceae. Small scabious. Distribution: Europe. Culpeper (1650) writes: ‘The roots either boiled or beaten into powder and so taken, helps such as are extremely troubled with scabs and itch, are medicinal in the French-pocks [syphilis], hard swellings, inward wounds ...’ The genus name comes from the Latin word scabies, meaning ‘itch’. According to the Doctrine of Signatures, the rough leaves indicated that it would cure eczematous skin. However, the leaves are not really very rough... Not used in herbal medicine at the present time except in Southern Africa where it is used for colic and heartburn, and the roots made into an ointment for curing wounds (van Wyk, 2000). |
| *Scadoxus multiflorus* Raf. Amaryllidaceae. Blood Flower, Poison root, Fireball Lily. Distribution: Sub-Saharan Africa. The genus name is a concatenation of the Greek words, *Sciadion* meaning a parasol or umbel, and *doxa* meaning 'glorious'; *multiflorus* is Latin for 'many flowers' (Stearn, 1994). The juice of the bulbs is an ingredient of arrow poisons in several countries; in Guinea and Nigeria it is used as a fishing poison. 25 gm of leaf or bulb is sufficient to kill a sheep or a goat, and the leaves are just as toxic as the bulbs. It is used in Senegal for heart failure, and elsewhere for wounds, a lubricant for cows at parturition, scabies and (in India) for colds and asthma. It contains numerous alkaloids including galanthamine. This has antiacetylcholinesterase activity and has been proposed as being useful in Alzheimer’s syndrome. It also reverses the effects of curare. The effects of all the alkaloids have been studied and are numerous. See Neuwinger (1996). |
| *Hesperantha coccinea* (Backj.&Harv.)Goldblatt &J.C.Manning Iridaceaepreviously known as *Schizostylis coccinea* River Lily, Kaffir lily. Distribution: South Africa and Zimbabwe*. Schizostylis* is Greek for 'divided style' - the style is in three parts; coccinea means 'red'. *Hesperantha* is Greek for 'evening flower' as the flowers open late in the day. No medicinal use. |
| *Scutellaria baicalensis* Georgi Lamiaceae. Baikal skullcap. Distribution: China. There are several hundred species of *Scutellaria,* also known as skull caps, so correct identification is important - in particular from *Scutellaria lateriflora* an American species known as Blue skullcap. The latter is used as an abortifacient and to expel placenta by the Cherokee and for cleaning the throat by the Iroquois (Austin, 2004). Much vaunted as a treatment for rabies with unlikely statistics (1,400 cases cured by one doctor alone). Also as ‘antispasmodic, nervine, [for] chorea, convulsions, tetanus, tremors, delirium tremens, [and as a] diaphoretic and diuretic'. Toxicity symptoms include mental confusion, stupor, headache, vertigo, photophobia, dilated pupils, difficulty in micturition, bradycardia, tremulousness and languor, followed by wakefulness and restlessness (Milspaugh, 1974). Hutchens (1991) reported that it reduces sexual desire and was used for almost every nervous illness. *Scutellaria baicalensis* contains baicalin, baicalein and wogonin (European Medicines Agency, September 2010). It is used in Traditional Chinese Medicine for treating inflammation, cancer, bacterial and viral infections of the lungs and gut and is one of the '50 Chinese herbs' in the lists of some authors. *Scutellaria lateriflora* (combined with *Verbena officinalis*, *Passiflora incarnata* and the seed of *Avena sativa* (oats) is licensed for use in Britain as a herbal medicine for temporary relief of mild symptoms of stress such as mild anxiety and to aid sleep, based upon traditional use only. *Scutellaria baicalensis* is not licensed for use in the UK (UK Medicines and Healthcare Products Regulatory Agency (MHRA)). |
| *Hylotelephium telephium* (L.)H.Ohba previously *Sedum telephium* L. Crassulaceae. Cultivar 'Matrona'. Orpine, Stonecrop. Succulent herb. Distribution: UK to Japan. Culpeper (1650) writes: ‘Crassula. Orpine. ... Outwardly, used with vinegar it clears the skin, inwardly taken, it helps gnawings of the stomach and bowels, ulcers in the lungs, bloody flux and Quinsy in the throat: for which last disease, it is inferior to none. Take not too much of it ...’ Named after Telephus, the son of Hercules (Stearn, 1994). Lyte calls it *Crassula minor,* Orpyne, *Faba crassa*, *Fabaria*, and says its use is the same as a Houseleek or Syngreene. The latter are *Sempervivum* species - the name derived from the Anglo-Saxon *singrene* meaning 'always green', referring to the fact that it stays green even when not in the earth. Apropos *Sempervivum*, he describes the redness and blistering that the sap has on bare skin, and how it is good for poisons, for if taken with vinegar by mouth it causes vomiting, but only safe to do so in strong people. He tries to distinguish Stonecrops [*Sedum*], which he also calls *Crassula major,* Wild Prickmadam, and *Sedum mlnor*, Stone Hore, from Sengreene for he advises the latter (i.e. *Sedum*), alone or mixed with barley meal, applied topically to burns, scalds, St Anthony's fire [erysipelas], ulcers and sores, to cure them and for sore eyes. Not approved by the European Medicines Agency for Traditional Herbal Medicinal use. |
| *Sempervivum tectorum* L. Crassulaceae Houseleek, Senegreene Distribution: Europe. *Sempervivum* means 'live forever', *tectorum* means 'roof', and was apparently grown on house roofs to protect against lightning. Lyte (1578 distinguishes Stonecrops (*Sedum*) from Sengreene (*Sempervivum*) for he advises the latter, alone or mixed with barley meal, applied topically to burns, scalds, St Anthony's fire [erysipelas] , ulcers and sores, will cure them and sore eyes. Apropos of stonecrops (*Sedum*), he describes the redness and blistering that the sap has on bare skin, and how it is good for poisons for if taken with vinegar by mouth it causes vomiting, but only safe to do so in strong people. He seems fairly confused as to which is which. Not approved by the European Medicines Agency for Traditional Herbal Medicinal use. |
| *Senecio pulcher* Hook.&Arn. Asteraceae Distribution: South America. It has not attracted attention as a medicinal or toxic plant but members of the genus *Senecio* contain pyrrolizidine alkaloids that are toxic to the liver and may cause liver cancer. A traditional Chinese medicine (TCM) product, Qianbai Biyan Pian, contains *Senecio scandens* which contains the unsaturated pyrrolizidine alkaloids, senecionine and seneciphylline. This is now a banned drug. (Safety of Herbal Medicinal Products, July 2002, Medicines Control Agency). |
| *Senna corymbosa* (Lam.)H.S.Irwin&Barneby Caesalpinaceae. Argentine Senna. Distribution: Argentine (other species from Europe). This beautiful shrub that flowers from midsummer until the frosts of winter, is the source of one of the best known of all herbal medicines – senokot (and senna pods and senna tea), introduced to European medicine (as *Senna alexandrina* from Egypt) by the Arabians. Every part of the plant contains anthraquinones which, if taken internally, act as a powerful laxative to treat constipation by stimulating the nerve cells of the large bowel. Gerard (1633) notes ‘it is a singular purging medicine’ with over a page on its uses. When used regularly the nerves to the large bowel may be destroyed, leaving a permanently dilated large bowel that never functions properly again. This is a plant which causes the condition it treats to become permanent. Additionally, with prolonged use, the lining of the bowel turns black, serum potassium levels may fall, resulting in cardiac irregularities and sometimes death. Coma, neuropathy and hepatitis have also been reported. It is advertised on television (the actor involved is seen to be depressed and bloated until she takes Senokot, after which she is happy - Hippocrates would have attributed this antidepressant effect to the plant's ability to purge her of the black melancholic humour present in her bowel motions). It is available without prescription or health warning against long-term use. What do you think? Lyte (1578) recommends it strongly for depression, but one might claim to be cured rather than take it again. |
| *Serratula tinctoria* subsp*. seoanei* (Willk.)M.Lainz Asteraceae. Saw-wort (in the USA called Dyer's plumeless saw-wort). Distribution: Europe. Named after Dr Victor Lopez Seoane (1832-1900) a Spanish naturalist and physician who was Professor of Physics, Chemistry and Natural History in Corunna. He attained a certain infamy in that three of the subspecies of birds which he published as new discoveries were in leaflets dated 1870 and 1891 but were actually published in 1894, the discovery of which rendered two of his discoveries attributable to others (Ferrer, in *Ingenium* 7:345-377 (2001). This plant was described by Heinrich Willkomm in 1899 as *Serratula seoanei*, but M. Lainz, in 1979, decided it was merely a subspecies of *Serratula tinctoria,* a plant described by Linnaeus (1753)*. Linnaeus* based his description on a plant with a woodcut in Dodoens' *Pemptades* (1583), saying it had pinnate leaves. However, that woodcut is of two different plants, and when re-used by Gerard (1633) he pointed out that Tabernamontanus (1625) had a woodcut of them and a third plant all with leaves varying from just pinnate to entire. Whatever, the leaves on *Serratula tinctorius* subsp. *seoanei* are very distinct, but while pinnate the leaflets are exceedingly narrowly and deeply dissected, Gerard (1633) writes that it is 'wonderfully commended to be most singular [useful] for wounds, ruptures, burstings, and such like...' It is a dye plant, containing luteolin, the same yellow dye as is present in *Reseda luteola* (source of the dye 'weld'). Seoane also has a viper, *Vipera seoanei*, named after him; a grasshopper *Ephippiger seoanei* (now *Neocallicrania setigera: Callicrania seoanei* is another synonym). |
| *Silphium perfoliatum* L. Asteraceae Indian Cup. Distribution: North America. Austin (2004) records that another species, *S. compositum,* was used by Native Americans to produce a chewing gum from the dried sap of the roots, and Native American medicinal uses for 'Indian Cup' are probably referable to *S. compositum* and not *S. perfoliatum.* *Silphium perfoliatum* contains enzymes that inhibit trypsin and chymotrypsin which gives it resistance to fungal, bacterial and insect attacks. Male gall wasps (*Antisotrophus rufus*) alter the chemistry of the plant to enable them to locate females, making it a 'signpost' plant. The gall wasp lays its eggs in the stem of *Silphium laciniatum*, to provide food for the larva on emergence, and the galls containing a male or a female wasp will cause the plant to give off a different chemical odour. Emerging male wasps can search for female wasps, which emerge later, by locating this chemical fragrance which acts as a sex pheromone proxy (Tooker et al *Proc Natl Acad Sci U S A*. 2002 Nov 26;99(24):15486-91). No medicinal or other uses for *S. perfoliatum* found. |
| *Silybum marianum* (L.) Gaertn. Asteraceae Milk thistle. *Carduus Mariae.* Distribution: Europe. Gerard (1633) calls it *Carduus Mariae, Carduus Lectus*,or Ladies Thistle, and *Carduus leucographus* [meaning 'white writing', in reference to the white markings on the leaves] because Pliny wrote about a plant he called *Leucographis* although Gerard notes that it would be 'hard to assume this to be the same [plant].' He also queries if it is the same as the *Alba spina* of Galen. Of the latter he reports that Galen recommended it for all manner of bleeding, toothache and the seeds for cramp. Gerard writes that Dioscorides recommends that a drink of the seeds helps infants whose sinews are 'drawne together'; as an antidote to snakebite and, worn round the neck, to keep snakes away. However Dioscorides (as translated by John Goodyear in 1655 (Gunther, 1959) writes that the new leaves are eaten soaked in oil and salt, and the roots, drunk with Melicrate [honey and wine] make one vomit. It is clear that there is no good link of the plant named *Silybum mariae* with the plants of ancient Greece and Rome. The fruit is licensed for use in Traditional Herbal Medicines in the UK to 'relieve the symptoms associated with occasional over indulgence of drink and food such as indigestion and upset stomach' based on traditional use only (UK Medicines and Healthcare Products Regulatory Agency (MHRA)). |
| *Skimmia japonica* Thunb. Rutaceae. Cultivar 'Rubella'. Distribution: China, Japan and E. Asia. The genus name is derived from the Japanese word *shikimi* (Stearn, 1994). All parts of the plant are poisonous, containing skimmianin. It is said to cause vomiting, and if eaten in large quantities, cardiac arrest. (Duke, 1985). |
| *Skimmia japonica* Thunb. Rutaceae 'Rubella' Distribution: China, Japan and E. Asia. The genus name is derived from the Japanese word *shikimi* (Stearn, 1994). All parts of the plant are poisonous, containing skimmianin. It is said to cause vomiting and, if eaten in large quantities, cardiac arrest. (Duke, 1985) |
| *Smilacina racemosa* Desf. syn. *Maianthemum racemosum* (L.)Link Convallariaceae. False Spikenard, False Solomon's Seal, Scurvy berries, Treacle berries. Herbaceous perennial. Distribution: North America. Probably introduced to England by John Tradescant the Younger in 1656 as it appears in his garden plant catalogue in *Musaeum Tradescantianum* in 1656. Austin (2004) reports on Native American traditional usage: a cold infusion of the roots was used for sore eyes (Cherokee); to stop bleeding of the lungs (Abenaki); and as an Infusion to wash back sores (Algonquin). Used after miscarriages, to kill tapeworms, to counteract poison, for rheumatism, externally on sore feet, and for snakebite (Iroquois); as an infusion for rashes and itch (Malecite and Micmac). Cough mixture (Mohegan). Poultice from roots for cuts, back pain, headaches, sore throat (Ojibwa). Revive comatose patients (Potawatomi). Eaten as potato after soaking in lye, parboiling and cooking (Ojibwa). Taste of treacle when ripe, but cathartic – eat with caution. |
| *Smyrnium olusatrum* L. Apiaceae. Alexanders, Black Lovage, Horse Parsley. Distribution: W & S Europe, Mediterranean. Culpeper (1650) writes: ‘*Hipposelinum*. Alexanders or Alisanders, provoke urine, expel the afterbirth, provoke urine, help the strangury, expel the wind.’ Culpeper has taken this mainly from Dioscorides’ *Materia Medica* (circa 100 AD). The genus name is said to derive from Smyrna, a city which was founded by Alexander the Great (although there was one which pre-dated his Smyrna). on the Aegean coast of Anatolia. The species name comes from the Latin *olus* meaning a pot herb (cooking vegetable) and *atrum* meaning black, in reference to the seeds. It is described as tasting like a rather bitter, second-class celery. The English name may derive from Alexandria or Alexander the Great. It is rarely used in herbal medicine now. |
| *Solanum atropurpureum* Schrank Solanaceae. Purple Devil. Purple-spined Nightshade. Herbaceous perennial. Distribution: Brazil. This ferociously spined plant contains tropane alkaloids, atropine, hyoscyamine and scopolamine. All are anticholinergic and block the acetylcholine mediated actions of the parasympathetic nervous system. While the alkaloids are used in medicine and as an antidote to anticholinergic nerve gas poisons, the plant itself is not used in medicine. Its sharp spines can be irritant. |
| *Solanum laciniatum* Aiton Solanaceae. Kangaroo Apple. Evergreen shrub. Distribution: New Zealand and the east coast of Australia. It contains steroidal saponins that can be converted into steroids, including progesterone, oestrogens, cortisone, prednisolone etc. In 1943, Professor Russell Marker discovered a method of obtaining an unsaturated steroidal saponine, diosogenin, from Mexican yam (*Dioscorea mexicana*), which can easily and cheaply be converted into steroids, such as prednisone and progesterone, reducing the price of steroid production to a fraction (0.5%) of its former cost. For 20 years drug companies showed little interest, and it was only as a result of Professor Marker forming his own company, and the concerted efforts of several gynaecologists, physiologists and birth-control advocates, that the contraceptive pill was ‘born’ in 1960. |
| *Stachys byzantina* K.Koch also known as *Stachys lanata.* Lamiaceae. Lamb's Ears. Distribution: Europe. Its woolly leaves were regarded as a vulnery, to stop bleeding, which it would have done in a manner similar to cotton-wool, allowing platelets to clot on its hairs. |
| *Stokesia laevis* Greene Asteraceae. Stoke's Aster, Cornflower Aster. Distribution: South-eastern USA. Named by Charles Louis L’Héritier in 1789 for Dr Jonathan Stokes (1755-1831), a member of the Lunar Society and Linnean Society, botanist and physician. Stokes dedicated his thesis on dephlogisticated air [later realised to be oxygen] to Dr William Withering and wrote the preface to Withering’s iconic work *On the Foxglove* (1785). He also contributed histories on six patients he had treated for heart failure (‘dropsy’) with foxglove leaf, *Digitalis*, in his medical practice in Stourbridge. He continued at the Lunar Society until 1788; became a founding associate of the Linnean Society (1790); helped Withering with the latter’s botanical works, adding a bibliography of 264 titles to the second edition of Withering’s *A Botanical Arrangement of British Plants* (1792), which much impressed Sir J.E. Smith the President of the Linnean Society. He added an account of the medical uses of the plants which Withering resented and they fell out. Stokes published *A botanical materia medica* (1812), and *Botanical commentaries* (1830). He corresponded with Linnaeus the younger, and Dr William Wright sent plants back to him from Jamaica (Oakeley, 2012). It has no medicinal properties. |
| *Succisia pratensis* Greene Asteraceae. Devil’s Bit Scabious, Blue Buttons. Distribution: Europe, W Asia, Africa. Culpeper (1650), under ‘Herbs’ he writes: ‘*Succisa, Morsus diobolo,* Devil’s Bit. Inwardly taken it easeth the fits of the mother [probably uterine spasm or pain], and breaks wind, taketh away the swellings in the mouth, and slimy phlegm that sticks to the jaws, neither is there a more present remedy in the world, for those cold swellings of the neck, which the vulgar call the Almonds [lymph nodes] of the neck than this herb bruised and applied to them. Folk lore attribute it as a cure-all which was so sucessful that the Devil bit off the bottom of the roots when he saw it growing down into Hades. However, the roots show no sign of such damage to support the myth. |
| *Helianthus annuus* Greene Asteraceae. Sunflower, Marigold of Peru, Floure of the Sun. Distribution: Peru and Mexico. It was much recommended by Gerard (1633) who advises that the buds, covered in flour, boiled, and eaten with 'butter, vinegar and pepper, far surpass artichokes in procuring bodily lust’. Sadly, today only the seeds of sunflower are consumed, as the source of sunflower seed oil used in cooking. It contains mono and polyunsaturated fats, linoleic acid and oleic acid, and is low in saturated fats. As such it was thought to lower cholesterol and so the risk of heart disease, but it may increase the risk of breast and prostatic cancer. However a recent report *BMJ*2013;346:e8707 concludes that '... clinical benefits ... [of] omega 6 linoleic acid, have not been established. In this cohort, substituting dietary linoleic acid in place of saturated fats increased the rates of death from all causes, coronary heart disease, and cardiovascular disease. An updated meta-analysis of linoleic acid intervention trials showed no evidence of cardiovascular benefit. ...'. It is a rich source of vitamin E. Not in Fuchs (1552), but elegantly illustrated in Lobel (1576) as *Solis flos* and *Chrysanthemum peruvianum*. Hybridising and selective breeding can reduce the level of saturated fats even further, as well as producing scarlet flowers like this cultivar. Darwin’s ‘natural selection’ has been replaced by ‘artificial selection’ as the commonest cause of new varieties of plant. |
| *Tagetes erecta* L. Asteraceae 'Simba' Mexican Marigold. Distribution: Mexico. Moerman (1998) reports that the Cherokee used a tea made from it to treat eczema, and extracted a yellow dye from the flowers. |
| *Tanacetum cinerariifolium* Sch.Blp. Asteraceae Dalmatian chrysanthemum, Pyrethrum, Pellitory, Tansy. Distribution: Balkans. Source of the insecticides called pyrethrins. The *Physicians of Myddfai* in the 13th century used it for toothache. Gerard called it *Pyrethrum officinare,* Pellitorie of Spain but mentions no insecticidal use, mostly for 'palsies', agues, epilepsy, headaches, to induce salivation, and applied to the skin, to induce sweating. He advised surgeons to use it to make a cream against the *Morbum Neopolitanum* [syphilis]. However he also describes *Tanacetum* or Tansy quite separately.. Quincy (1718) gave the same uses; Woodville (1792) only recommends it for intestinal worms, Bentley (1861) used it as a tonic and for intestinal worms, Flucker & Hanbury (1879) used it to induce salivation. Martindale (1936) had all the insecticidal uses from scabies to mosquito repellent and as a treatment for intestinal worms. Whatever the confusion regarding names, it is hard to see that it was used as an insecticide until a hundred years ago. |
| *Taxus baccata* L. Taxaceae European Yew. Trees are feminine in Latin, so while *Taxus* has a masculine ending (-us), its specific name, *baccata* (meaning 'having fleshy berries' (Stearn, 1994))*,* agrees with it in gender by having a female ending ( -a). Distribution: Europe. Although regarded as poisonous since Theophrastus, Gerard and his school friends used to eat the red berries (they are technically called 'arils') without harm. Johnson clearly ate the fleshy arils and spat out the seed, which is as poisonous as the leaves. It is a source of taxol, an important chemotherapeutic agent for breast and other cancers. It was first extracted from the bark of *T. brevifolia*, the Pacific yew tree, in 1966. About 1,100 kg of bark produces 10 g of taxol, and 360,000 trees a year would have been required for the needs of the USA – an unsustainable amount. In 1990 a precursor of taxol was extracted from the needles of the European yew so saving the Pacific trees. It is now produced in fermentation tanks from cell cultures of *Taxus*. Curiously, there is a fungus, *Nodulisporium sylviforme*, which lives on the yew tree, that also produces taxol. Because taxol stops cell division, it is also used in the stents that are inserted to keep coronary arteries open. Here it inhibits – in a different way, but like anti-fouling paint on the bottom of ships – the overgrowth of endothelial cells that would otherwise eventually block the tube. The economic costs of anticancer drugs are significant. Paclitaxel ‘Taxol’ for breast cancer costs (2012) £246 every 3 weeks; Doxetaxel (synthesised from paclitaxel) for breast, ovarian and other cancers costs up to £900 every three weeks; Cabazitaxel (a further synthetic) for prostate cancers costs £3,698 every 3 weeks and because of the cost is only licensed to be used in the UK after other treatments fail. Doxyrubicin (cost £915) from a bacteria, *Streptomyces peucitius,* is the main breast cancer drug now (2013). |
| *Tellima grandiflora* (Pursh)Lindl. Saxifragaceae Distribution: Western North America from Alaska to California. The Native American Skagit tribe from Washington State, used it to improve appetite. The Nitinaht used it to stop having dreams of sexual intercourse with the dead (Moerman, 1998). |
| *Teucrium chamaedrys* L. Lamiaceae. Wall Germander. Distribution: Europe. *Teucrium* is named after king Teucer (who lived in the era between 1400 and 1000 BC) the first King of Troy. Dioscorides named a medicinal herb after Teucer, and Linnaeus consolidated this in 1753; (Stearn, 1994). *chamaedrys* comes from the Greek words *chamai* meaning 'on the ground' and *drys*, meaning 'oak', originally used by Theophrastus for a low growing plant with oak-like leaves (Stearn, 1994). Lyte (1578) recommended it for cough, shortness of breath, dropsy, strangury, for inducing menstruation, hardness of the spleen, and cataracts. |
| *Teucrium fruticans*  L. Lamiaceae. Tree germander Distribution: Western Mediterranean. Teucrium is named after king Teucer (who lived in the era between 1400 and 1000 BC) the first King of Troy. Dioscorides named a medicinal herb after Teucer, and Linnaeus consolidated this in 1753; Gerard (1633) has 'Tree Germander, *Teucrium latifolium*, with Broad Leaves' and says it has the same uses as Germander, *Teucrium chamaedrys,* but less effective and little used. |
| *Teucrium marum*  L. Lamiaceae Cat Thyme Distribution: Europe. *Teucrium* is named after Teucer (who lived in the era between 1400 and 1000 BC) the first King of Troy. Dioscorides named a medicinal herb after Teucer, and Linnaeus consolidated this in 1753. Assume property is the same as Germander, *Teucrium chamaedrys.* |
| *Teucrium scorodonia* 'Crispum Marginatum' L. Lamiaceae Distribution: Europe *Teucrium* is named after king Teucer (who lived in the era between 1400 and 1000 BC) the first King of Troy. Dioscorides named a medicinal herb after Teucer, and Linnaeus consolidated this in 1753. Probably the *Scordium*  or Water Germander. It was given very similar properties. |
| *Thunbergia alata* Sims Acanthaceae. Black-eyed Susan. Tender, perennial herbaceous climbing plant. Distribution: East Africa. Named for Carl Peter (Pehr or Per) Thunberg (1743-1828), doctor, botanist, student of Linnaeus who collected plants in Japan, Sri Lanka and South Africa. He published *Flora Japonica* (1784); *Prodomus plantarum capensis* (2 vols., 1794, 1800);  *Icones plantarum japonicarum* (1805); *Flora capensis* (1807-1823) on the South African collections, and *Voyages de C.P. Thunberg au Japon par le Cap de Bonne-Espérance, les Isles de la Sonde* (1796) about his travels. He was elected a Fellow of the Royal Society in April 1788. |
| *Tiarella* L. Saxifragaceae. Cultivar 'Pinwheel'. Distribution: Asia and North America. From the Greek for a small crown, No Native American uses found. Used in herbal medicine, but not licensed as a Traditional Herbal Medicine in the UK. |
| *Heuchera* L. Saxifragaceae. Cultivar 'Silver Scrolls'. Distribution: North America. named after Johann Heinrich von Heucher (1677-1747), professor of botany and medicine at Wittenburg University (1709), Germany, and later in Dresden. He was physician to King August II of Saxony. Founder of the botanic garden in Wittenburg and author of *Novi proventus horti medici Academiae Vitembergensis* (1711, about the botanic garden). He was elected a Fellow of the Royal Society in 1729. Most cultivars are derived from *H. americana*. Neither Austin (2004), Milspaugh (1974) or Moerman (2009) record any uses by the Native Americans, but *Henrietta’s* *Herbal* website, quoting *King's American Dispensatory* (1898), says it is used to check diarrhoea, haemorrhage, skin ulcers, and as a pessary for vaginal discharge. |
| *Tigridia pavonia* (L.f.)DC. Iridaceae Distribution: Peru. These colourful, tulip-like flowers were named by De Candolle for Joseph (José) Pavón Jiménez (1754-1840), the Spanish pharmacist/botanist who accompanied Hipólito Ruiz and Joseph Dombey on their epic botanising in Peru and Chile (1777-1788) in search of quinine and medicinal plants. On the 8th April 1777, King Carlos III of Spain gave permission for the three botanists and two artists to travel from Spain to America to study the flora of Peru and Chile, then Spanish dominions. Initially around Lima, and then further afield, they collected plants which their artists painted; they wrote descriptions and pressed herbarium specimens. Apart from a year in Chile (1782-1783), about which we know little because all their specimens, diaries, descriptions and paintings for this period were destroyed in a fire, Ruiz and Pavón stayed in Peru until 31st March 1788, when they returned to Spain, landing in Cadiz on 12th September 1788. On their return to Spain they spent years cataloguing their herbarium collection and preparing manuscripts for publication. The *Florae Peruvianae, et Chilensis, Prodromus* (1794); *Systema vegetabilium Florae Peru et Chilensis* (1798) and *Flora Peruviana et Chilensis* (vol.1-3, 1798-1802) were their completed works, but even before the death of Ruiz, age 62 in 1816, the project lapsed into chaos. Pavón died in poverty in 1840 at the age of 86. Two of the remaining volumes, vol. 4 in 1954 and vol. 5 (part only) in 1959, were compiled from their manuscript notes. Volumes 6 and 7 await publication. The original name for *Tigridia pavonia* was given by Linnaeus’s son as *Ferraria pavonia* in 1782, and it was De Candolle, who had access to Ruiz and Pavón’s duplicate herbarium specimens which had been sold to Aylmer Lambert in London, who reclassified it as *Tigridia* in 1802. Ruiz records in his diary that they found a *Ferraria* in the gorge of San Mateo de Matucaan in 1779 and in the province of Canta in 1781. Ruiz, while in Chile, records finding *Ferraria lagues,* a name which appears to have been published as the homophone *Ferraria lahue* (the Spanish ‘g’ is pronounced like an English ‘h’) and that the bulbs are baked or boiled and taste of hazelnuts. However this is now in *Herbertia*. Ken Fern writes on www.pfaf.org that the corms of *Tigridia pavonia* taste like sweet potato when baked, but that they produce a burning sensation in the mouth if eaten raw which suggests that it may contain raphides of calcium oxalate. |
| *Tradescantia* L. Commellinaceae. Cultivar 'Concorde Grape'. Distribution: North America. Introduced into Britain between 1616 and 1629 by John Tradescant the Elder (d 1638) and named after him and his son. He was gardener to King Charles I and travelled, collecting plants in Russia, Algiers and Egypt, maintaining a garden and museum in London. The younger John Tradescant (1608-1662) succeeded his father as gardener to Charles I, collected mostly in America and brought back some 90 new plants. Their museum was the basis of the Ashmolean Museum in Oxford. They are buried in the churchyard of St Mary's next to Lambeth Palace, London. They would have known my great-great-great-great-great-great grandfather, Richard Oakeley (1590-1653) Solicitor and Receiver General to Westminster Abbey at the time of Charles I and the Commonwealth, sometime churchwarden at St. Mary's. |
| *Tradescantia* L. Commellinaceae 'Concorde Grape' Distribution: North America. Introduced into Britain between 1616 and 1629 by John Tradescant the Elder (d 1638) and named after him and his son. He was gardener to King Charles I and travelled, collecting plants in Russia, Algiers and Egypt, maintaining a garden and museum in London. The younger John Tradescant (1608-1662), who succeeded his father as gardener to Charles I, collected mostly in America and brought back some 90 new plants. Their museum was the basis of the Ashmolean Museum in Oxford. They are buried in the churchyard of St Mary's next to Lambeth Palace, London. |
| *Tragopogon pratensis* L. Asteraceae. Goatsbeard, Salsify, Jack-go-to-bed-at-noon. Distribution: Europe and North America. This is the *Tragopogion luteum* or Yellow Goats-beard of Gerard (1633) who recommended them boiled until tender and then buttered as being more delicious than carrots and parsnips and very nutritious for those sick from a long lingering disease. Boiled in wine they were a cure for a 'stitch' in the side. In the USA children collect the milky sap onto a piece of glass and, when dry, chew it as bubble-gum. The name 'Jack-go-to-bed-at-noon' refers to the flowers which close at noon and the spherical radiation of seed plumules which then appear. Salsify is now applied as a name for *T. porrifolius* and *Scorzonera hispanica.* |
| *Tricyrtis* Wall. Convallariaceae 'Togen' with hoverfly. Toad Lily. Distribution: Formosa, but other species from Himalayas to China, Japan, Philippines. Perennial herbaceous plant. *Tricyrtis* means 'three humped ' in Greek referring to its three part shape; *formosana* means beautiful and the island of Formosa (whose name also means beautiful). Medicinal uses not known. |
| *Tricyrtis formosana* Baker Convallariaceae subsp. *stolonifera*. Toad Lily. Distribution: Formosa, but other species from Himalayas to China, Japan, Philippines. Perennial herbaceous plant. *Tricyrtis* means 'three humped ' in Greek referring to its three part shape, *formosana* means beautiful and the island of Formosa (whose name also means beautiful. Medicinal uses not known. |
| *Trifolium rubens* L. Leguminosae. [Note the Family Leguminosae is preferred over Family Fabaceae as the former allows all the legumes to be in one Family and not three - one Family being the current consensus among botanists]. Red Feather Clover. Distribution: Europe. The white clover, *Trifolium repens*, islisted as a treatment for arthritis by Linnaeus (1782). This and *Trifolium pratense*, Red Clover, are the ones most used for pastures. All the clovers have root nodules which fix nitrogen from the air into the soil so have an important role in ensuring soil fertility. *Trifolium rubens* has the same nitrogen fixing ability, and is used as an ornamental garden plant where it still acts to improve fertility. |
| *Trillium sessile* L. Trilliaceae Distribution: North America. Various Trilliums were used by Native Americans to stop haematuria, haematemesis, menorrhagia, and to heal ulcers (Milspaugh, 1974). Roots were eaten to treat stiff muscles, and tea from the plant drunk and powdered plant put on joints for rheumatism by the Iroquois (Lewis & Elvin-Lewis, 2003). |
| *Tropaeolum* L. Tropaeolaceae cv Nasturtium. Distribution: South and Central America. As garden plants they are called nasturtiums, but the genus *Nasturtium* refers to plants, similar to watercress, in the Brassica family. The word 'nasturtium' whatever its usage comes from the Latin for a twisted nose, referring to the bitter taste that makes people's noses wrinkle. *Tropaeolum* comes from the Greek for a trophy, as Linnaeus thought the flowers climbing up columns resembled the Greek war trophies with golden helmets hanging on pillars (Stearn, 1994). The commonest horticultural species is *T. majus;* the flowers and leaves are edible, both raw and cooked, with a sharp, slightly bitter taste. This is due to a group of chemicals it shares with horseradish, wasabi, Brussels sprouts etc. called isothiocyanates, which are pest inhibitors in the living plants. *T. tuberosum* from the Andes is a root vegetable, cultivated and eaten like potatoes, also contains this chemical which means it can prosper without artificial insecticides, acaricides etc. Isothiocyanates have potential interest as adjuvants in anti-cancer treatments. Even more unusual is the reputation of *T. majus* for being an anaphrodisiac, a property that needs researching with the same enthusiasm as Marker and his colleagues showed when promoting the oestrogens and progestogens (synthesised from Mexican yams) as contraceptives. |
| *Tulipa* L. Liliaceae hybrid tulip Distribution: From Spain to China. Commercially the centre of horticultural production is the Netherlands where three billion are produced annually. Of medical interest is the sap which contains Tuliposide A, which is converted to Tulipalin A which causes an allergic dermatitis in people exposed to it (tulip farmers and florists) and is toxic to animals and man. Symptoms include abdominal pain, diarrhoea and vomiting and excess salivation proceeding if a lot has been eaten, to convulsions, coma, and death. |
| *Tussilago farfara* L. Asteraceae. Coltsfoot. Distribution: Europe, N. Africa, W & N Asia . Culpeper (1650) writes: ‘Tussilago. Coltsfoot. ... they are admirable good for coughs and consumptions of the lungs, shortness of breath etc. It is often used and with great success taken in a tobacco pipe, being cut and mixed with a little oil of Annis seeds.’ It is hepatotoxic genotoxic and carcinogenic due to the pyrrolizidine alkaloids that it contains. It should not be taken internally (Medicines Control Agency, 2002). |
| *Vaccinium corymbosum* L. Ericaceae Bilberry. Deciduous shrub. Distribution: North America. The berries are eaten and rich in Vitamin C. Native Americans used them as a dressing on acute erysipelas (Milspaugh, 1974). |
| *Valeriana officinalis*  L. Valerianaceae *Valerianus, Phu, Nardus sylvestris*, Setwal. Distribution: Europe. Popular herbalism attributes sedation to Valerian, but this is not mentioned by Coles (1657) or Gerard (1633) or Lobel (1576) or Lyte (1578) or Dioscorides (ex Gunther, 1959) or Fuchs (1553), where he quotes Pliny, Dioscorides and Galen, or Parkinson (1640), or Pomet (1712). The English translation of Tournefort (1719-1730) covers a whole page of the uses of all the different valerians, but never mentions sedation or treating anxiety. Quincy (1718) does not mention it. Because it was used in epilepsy, for which Woodville (1792) says it was useless, Haller, in his *Historia stirpium indegenarum Helvetae inchoatae* (1768) advocates it for those with irritability of the nervous system, as does Thomson's *London Dispensatory*  (1811) although he lists it as an 'antispasmodic and stimulant' and for inducing menstruation*.* Lindley (1838) notes (as many did) that the roots smell terrible and that this makes cats excited, and in man, in large doses, induces 'scintillations, agitation and even convulsions' so used in asthenic fever, epilepsy, chorea, hysteria and as an antihelminthic.'Fluckiger & Hanbury (1879) give a wonderful account of the history of its names, but give its use as 'stimulant and antispasmodic' as do Barton & Castle (1877). but by 1936 (Martindale's Extra Pharmacopoeia) its only use was 'Given in hysterical and neurotic conditions as a sedative. Its action has been attributed to its unpleasant smell'. The European Medicines Agency (2006) approves its use as a traditional herbal medicine for mild anxiety and sleeplessness for up to 4 weeks. Despite what is written continuously about its use in ancient Greece and Rome, the only reason for its use has been because it was thought, for a brief while, to be good for epilepsy and therefore might deal with persons of a nervous disposition because of its foul smell. It has been suggested that even its Greek name, '*Phu*' came from the expression of disgust which is made when one sniffs an unpleasant odour. For 1,800 years, before the last century, no-one had thought it sedative. |
| *Valeriana pyrenaica* L. Valerianaceae Distribution: Pyrenees. It has no medical use. |
| *Veratrum album* L. Melanthiaceae Distribution: Europe. Cows do not eat *Veratrum* species in the meadows, and human poisoning with it caused vomiting and fainting. In the 1850s it was found to reduce the heart's action and slow the pulse (Bentley, 1861, called it an 'arterial sedative'), and in 1859 it was used orally in a woman who was having convulsions due to eclampsia. Dr Paul DeLacy Baker in Alabama treated her with drops of a tincture of *V. viride.* She recovered. It was used thereafter, as the first choice of treatment, and when blood pressure monitoring became possible, it was discovered that it worked by reducing the high blood pressure that occurs in eclampsia. By 1947 death rates were reduced from 30% to 5% by its use at the Boston Lying in Hospital. It works by dilating the arteries in muscles and in the gastrointestinal circulation. A further use of *Veratrum* species came to light when it was noted that *V. californicum -*and other species - if eaten by sheep resulted in foetal malformations, in particular only having one eye. The chemical in the plant that was responsible, cyclopamine, was found to act on certain genetic pathways responsible for stem cell division in the regulation of the development of bilateral symmetry in the embryo/foetus. Synthetic analogues have been developed which act on what have come to be called the 'hedgehog signalling pathways' in stem cell division, and these 'Hedgehog inhibitors' are being introduced into medicine for the treatment of various cancers like chondrosarcoma, myelofibrosis, and advanced basal cell carcinoma. The drugs are saridegib, erismodegib and vismodegib. All the early herbals report on its ability to cause vomiting. As a herbal medicine it is Prescription Only, via a registered dentist or physician (UK Medicines and Healthcare Products Regulatory Agency (MHRA)). |
| *Veratrum nigrum* L. Melanthiaceae Distribution: Europe. Cows do not eat *Veratrum* species in the meadows, and human poisoning with it caused vomiting and fainting. In the 1850s it was found to reduce the heart's action and slow the pulse (Bentley, 1861, called it an 'arterial sedative'), and in 1859 it was used orally in a woman who was having convulsions due to eclampsia. Dr Paul DeLacy Baker in Alabama treated her with drops of a tincture of *V. viride*. She recovered. It was used thereafter, as the first choice of treatment, and, when blood pressure monitoring became possible, it was discovered that it worked by reducing the high blood pressure that occurs in eclampsia. By 1947 death rates were reduced from 30% to 5% by its use at the Boston Lying-in Hospital. It works by dilating the arteries in muscles and in the gastrointestinal circulation. A further use of *Veratrum* species came to light when it was noted that *V. californicum* - and other species - if eaten by sheep resulted in foetal malformations, in particular only having one eye. The chemical in the plant that was responsible, cyclopamine, was found to act on certain genetic pathways responsible for stem cell division in the regulation of the development of bilateral symmetry in the embryo/foetus. Synthetic analogues have been developed which act on what have come to be called the 'hedgehog signalling pathways' in stem cell division, and these 'Hedgehog inhibitors' are being introduced into medicine for the treatment of various cancers like chondrosarcoma, myelofibrosis, and advanced basal cell carcinoma. The drugs are saridegib, erismodegib and vismodegib. All the early herbals report on its ability to cause vomiting. As a herbal medicine it is Prescription Only, via a registered dentist or physician (UK Medicines and Healthcare Products Regulatory Agency (MHRA)). |
| *Verbena bonariensis* L. Verbenaceae. Purpletop Verbena. Distribution: South America. *Verbena* is Latin for the shoots of Laurel; *bonariensis* means 'from Buenos Aires'. *Verbena officinalis* is licensed for use in Traditional Herbal Medicines in the UK (UK Medicines and Healthcare Products Regulatory Agency (MHRA)) in compounds with other herbs for nasal congestion, mild stress symptoms and sleeplessness. |
| *Veronica officinalis* L. Scrophulariaceae Speedwell. Distribution: Europe. Gerard (1633) calls this the female Fluellen, or Speedwell and *Elantine*. Pena and Lobel (1570/1) report how a barber cured a man whose nose was being eroded off by giving him *Elantine* to drink and by applying a poultice of the crushed herb to the sore - after learned physicians and surgeons had said the only remedy was to cut the nose off. Gerard lists several Veronicabut all have a property of healing wounds. |
| *Veronicastrum virginicum* (L.)Farw. Scrophulariaceae Cultivar 'Pink Glow'. Known as Blackroot or Culver's Root. Distribution: North America. Austin (2004) calls it Black-root, also known by its synonym *Leptandra virginica*. He reports that it was used by Native Americans as a purgative and antiseptic, sudorific [to induce sweating], tonic, and that the Cherokee chewed the plant to relieve colic and made it into a tea for backache. The Menomini used it as an emetic, and for purification after being 'defiled' by being touched by a bereaved person. It was used for constipation, kidney stones, ague, to aid weak women and for labour by the Meskwaki. The crushed root was used as cathartic, and to clean scrofula (tuberculous) sores, by the Ojibwa and the Seneca. Root bitter and nauseous. Stearns (1801) advises that one teaspoon of 'Culver's root' would induce vomiting, which indicates how toxic it is. The medicine is said to gain its popular name from Dr Culver about whom nothing appears to be known. Oliver Wendell Holmes relates in his *Medical Essays* (1842-1882, p. 152, The Medical Profession in Massachusetts) about Cotton Mather, the early 18th century Calvinist at the heart of the Salem witchcraft trials, writing to John Winthrop of New London in 1716 who ' speaks of it [Culver's Root] as famous for the cure of consumption [tuberculosis], and wishes to get some of it, ... for his daughter Katherine, his eldest daughter. He gets it and gives it to the 'poor damsel' ... who dies the next month, - all the sooner, I have little doubt, for this uncertain and violent drug ...' (referencing the Mather Papers in *Hist. Coll*. 4th Series, viii:420). |
| *Viburnum japonicum* Spreng. Caprifoliaceae Evergreen Shrub. Distribution: Japan and Taiwan. No medicinal uses. The fruit is a 'famine food' eaten when all else fails. As other seeds/fruits of *Viburnum* species are listed as poisonous, and none are listed as 'edible', one can assume that the seeds/fruits of *V. japonicum* are also toxic. It does not appear vulnerable to pests or molluscs which may be due to irioid glycosides that are present in this genus produced as a defence against herbivores, fungi and bacteria. They have a bitter taste. |
| *Viburnum* x *bodnantense* Aberc. ex Stearn Caprifoliaceae. 'Dawn' is a cultivar which has the RHS Award of Garden Merit. Distribution: Garden hybrid between *V. fragrans* and *V. grandiflorum.* No medicinal uses. The fruit of *V. japonicum* is a 'famine food' eaten when all else fails. As other seeds/fruits of *Viburnum* species are listed as poisonous, and none are listed as 'edible', one can assume that the seeds/fruits of V. japonicum are also toxic. It does not appear vulnerable to pests or molluscs which may be due to irioid glycosides that are present in this genus produced as a defence against herbivores, fungi and bacteria. They have a bitter taste. |
| *Vicia faba* L. Fabaceae. Broad beans, Fava bean. Distribution: N. Africa, SW Asia. Culpeper (1650) writes: '*Fabarum*. Of Beans. Of Bean Cods (or Pods as we in Sussex call them) being burned, the ashes are a sovereign remedy for aches in the joints, old bruises, gout and sciaticaes.’ The beans are perfectly edible for the majority, but 1% of Caucasians, predominantly among Greeks, Italians and people from the Eastern Mediterranean regions, have a genetic trait in that they lack the ability to produce the enzyme glucose-6-phosphate dehydrogenase. As a consequence, eating broad beans or even inhaling the pollen, causes a severe haemolytic anaemia a few days later. This condition is known as favism. The whole plant, including the beans, contains levodopa, a precursor of dopamine, and some patients with Parkinsonism report symptomatic improvement after commencing on a diet that contains these beans regularly. A case of neuroleptic malignant-like syndrome (fever, rigidity, autonomic instability, altered consciousness, elevated creatine phosphokinase levels) consequent on abrupt discontinuation of a diet containing plenty of broad beans, has been described in a patient with Parkinsonism. This is usually seen when patients abruptly discontinue L-dopa therapy. |
| *Vinca major* L. Apocynaceae double-flowered Large Periwinkle. Distribution: Western Mediterranean. A noxious weed in many countries, and invasive even in London gardens. Vincamine, a chemical extracted from Vinca minor is available in the USA as a dietary supplement but also as a drug to increase cerebral blood flow. It is not available in the UK. |
| *Viola canina* L. Violaceae Distribution: Europe. Culpeper (1650) writes 'Violets (to whit the blew ones, for I know little or no use of the white ones in physic) ... provoke sleep, loosen the belly, resist fevers, help inflammations, ... ease pains in the head, help the roughness of the windpipe, soreness in the throat, inflammations in the breast and sides, pleurisies, open stoppings of the liver and help the yellow jaundice'. 'Violet leaves, they are cool, ease pains in the head proceeding of heat, and frenzies, either inwardly taken or outwardly applied, heat of the stomach, or inflammation of the lungs.' It still has the same reputation in modern herbal medicine, and while its safety is not known, it is regarded as edible and flowers are used to garnish salads. Larger quantities are emetic – make one vomit. Not licensed for use in Traditional Herbal Medicines in the UK (UK Medicines and Healthcare Products Regulatory Agency (MHRA)). |
| *Viola tricolor* L. Violaceae 'Black Magic'. Heartsease. Distribution: Europe. Gerard (1633) writes that it is good for fevers especially for children and infants whose convulsions and fits of the falling sickness it is thought to cure' These are presumably the febrile convulsions of childhood which stop when the fever subsides, whatever one does. He also says it is good for chest conditions, itching all over, and ulcers and 'to cure the pains of the French disease [syphilis]'. It is approved for topical use in mild seborrhoeic dermatitis because of traditional use, in Europe, but a trial of a cream containing *V. tricolor* was no more effective than the base cream without ingredients. A child with glucose-6-phosphate dehydrogenase deficiency developed haemolysis ('favism') following oral administration. It also contains salicylates so should be used with caution (European Medicines Agency, Assessment report on Viola tricolor, November 2010). |
| *Vitex agnus-castus* L. Lamiaceae var. *latifolia*  Distribution: Sicily. This buddleia-like shrub comes from Sicily but is hardy in much of the British Isles. It was known as the chaste plant, and reported by Woodville (1790) that, being ‘especially useful to those living a monastic life these seeds have been called Monks’ Pepper’ and were sprinkled on food to prevent carnal thoughts'. Lyte (1578) says it is ‘a singular remedy for such as would live chaste, for it withstandeth all uncleanliness and the filthy desire to lechery’. Nuns carried the leaves in their pockets to keep their minds pure, believing that its virtuous properties could be absorbed – like the copper in the bangles for arthritis worn to this day. Visitors to the garden of the Royal College of Physicians in London report that it is still found growing outside the monasteries of France. It continues to be used in herbal medicine for premenstrual syndromes although clinical effectiveness is not supported by controlled trials. It does have dopaminergic activity and may lower serum prolactin levels. It is licensed as a herbal medicine for minor symptoms of the premenstrual syndrome. Severe allergic reactions have been reported. No assessment of sexual activity or interest was made. (European Medicines Agency report, November 2010). No assessment of sexual activity or interest was made, but it should be noted that raised levels of prolactin (the reverse of the effect of *Vitex agnus-castus)* are associated with loss of libido in both men and women. It is licensed for use in Traditional Herbal Medicines in the UK (UK Medicines and Healthcare Products Regulatory Agency (MHRA)). |
| *Watsonia pillansii* L.Bolus Iridaceae Bugle lily, Distribution: South Africa. Named for Sir William Watson (1715-1787), British botanist and physician, sometime censor at the Royal College of Physicians, London. No medicinal uses. |
| *Westringia fruticosa* Druce Lamiaceae 'Variegata' Coast Rosemary; a variegated form. Distribution: Eastern Australia and New Zealand. Commemorates Dr Johan (John) Peter Westring (sometimes West Ring (1753-1833), also known as Johan Petter Westrin), physician to King Karl XIV of Sweden, and a keen lichenologist. He was born in Linköping, Sweden, where his father was a shoemaker. No information has been found for any medicinal use or toxicity, although horticultural suppliers note that, although called ‘Cape rosemary’, it is not ‘rosemary’ and should not be used for cooking. |
| *Westringia longifolia* R.Br. Lamiaceae. Long leaf Westringia. Shrub. Distribution: Australia. Commemorates Dr Johan (John) Peter Westring (sometimes West Ring (1753-1833), also known as Johan Petter Westrin), physician to King Karl XIV of Sweden, and a keen lichenologist. He was born in Linköping, Sweden, where his father was a shoemaker. No information has been found for any medicinal use or toxicity. |
| *Xanthorhiza simplicissima* Marshall Ranunculaceae. Yellow root. Distribution: North America, where it was discovered by the plant collector and explorer William Bartram in 1773. Yellow-root. Austin (2004) reports that of the Native Americans, the Cherokee use the crushed plant to make a yellow dye; a decoction of the root cramps, blood tonic, to treat cancer, piles, sore eyes and for a sore throat The Catawba use it for colds, stomach ulcers, jaundice. The root is poisonous if 'too much' is taken. It was used as a 'bitters' in American drinks in the early 20th century. Genus name from the Greek, *xanthos,* for 'yellow', *rhiza* for 'root'. |
| *Zantedeschia aethiopica* (L)Spreng. Calla lily, Arum lily. Half-hardy annual. Distribution: South Africa. The genus name commemorates Giovanni Zantedeschi (1773-1846) an Italian physician and botanist. Born in Molina he studied medicine in Verona and Padua. He corresponded with the German botanist, Kurt Sprengel, who named the genus *Zantedeschia i*n his honour in 1826, separating it from *Calla*, where, as *C. aethiopica*, it had been previously described by Linnaeus. He had broad interests, including the effect of different parts of the spectrum of light on plant growth, reporting in 1843, that red, orange and yellow light are heliotropically inactive. The botanic museum in Molina is dedicated to his memory. *Aethiopica*, merely means 'African'. The leaves are used as a warm poultice for headaches in ‘muthi’ medicine. It has become an invasive weed in parts of Australia. It was introduced, as a greenhouse plant, to Europe in the mid-17th century, where the long lasting flowers are popular in flower arranging and for weddings and funerals – a curious combination (Oakeley, 2012). |
| *Zinnia* L. Asteraceae cultivar Distribution: Southern USA to South America. Linnaeus (1753) named the genus *Zinnia* in honour of Dr Johann Gottfried Zinn (1727-1759), botanist, physician and anatomist. He became director of the botanical garden In Gottingen and professor of medicine.. He received the seeds of Zinnias from Mexico, where they were known as *mal de ojos* (sickness of the eyes), probably on account of their gaudy colours. He described them shortly before his death, apparently from tuberculosis, at the age of 31 (Mark, 2009). He was a great anatomist and his book *Descriptio anatomica oculi humani* (1755) was the first complete study of the anatomy of the eye. In it he described the zonule of Zinn (the suspensory ligament of the lens) and the annulus of Zinn (the annular tendon which surrounds the optic nerve as it enters the orbit, and to which some oculomotor muscles are attached) which are named after him. It has no known medicinal value but was reportedly used by the Zuni and Navajo for medicines, and is regarded as non-toxic – at least to dogs and cats. |