HERBS DIRECTORY

Aloe vera (L)

Synonyms: *Aloe barbadensis* (Mill.), Curacao aloes, Barbados aloes, first-aid plant, medicine plant

Order: Liliaceae

Description: A large succulent perennial plant growing up to 1.5 metres in height, with a strong fibrous root and a large stem supporting a rosette of narrow lanceolate leaves up to 60cm long. The leaves are whitish green on both sides and bear spiny teeth on the margins. The yellow to purplish drooping flowers grow in a long raceme at the top of the flower stalk. The fruit is a triangular capsule containing numerous seeds. It is native to East and South Africa and cultivated in the West Indies and other tropical areas.

Parts used: Aloes is the evaporated liquid exuded from the cut leaf bases. The fresh gel is also used for topical applications.

Collection: The bitter juice is obtained by mechanical or chemical means from the parenchyma tissue in the centre of the leaf, and the liquid evaporated.

Constituents: Aloes: Hydroxyanthracene derivatives of the anthrone type (principally barbaloin); 7-hydroxyaloin isomers, aloe-emodin, chrysophanol and their glycosides; chromone derivatives (aloesin and its derivatives aloeresins A and C, and the aglycone aloesone. Gel: glucomannan (a polysaccharide), steroids, organic acids, enzymes, antibiotic principles, amino acids, saponins, minerals.

Actions: Aloes: Stimulating laxative, purgative, cathartic, choleretic, emmenagogue, uterine stimulant, abortifacient, anthelmintic. Gel: soothing and healing to damaged tissues

Indications: Constipation. Topically for wounds and burns

Therapeutics and Pharmacology: Aloes is taken internally as a purgative, acting on the lower bowel. It may be used in atonic constipation although overdosage can result in diarrhoea, gastritis and nephritis. To avoid griping, it should be taken in conjunction with carminative and antispasmodic herbs. It is the 1,8-dihydroxyanthracene derivatives such as barbaloin which have a laxative effect. As glycosides They are not absorbed in the upper gut but break down to the active aglycone in the colon and rectum. Laxatives containing anthranoids induce active secretion of water and electrolytes into the lumen of the gut and inhibit the absorption of electrolytes and water by the colon. The increased volume of contents of the colon activates peristalsis.

In the past, Aloes was used as an emmenagogue, small doses increasing menstrual flow. Aloe-emodin is reported to have anti-cancer activity *in vitro*. Aloes turns the urine red. The gel is used topically to aid wound healing and to relieve burns including sunburn; it encourages skin regeneration. It is also used for colonic irrigation.

Combinations: Take in conjunction with antispasmodics or carminatives to counteract griping. Metal salts are often used to enhance its action (e.g. iron pills).

Caution: Overdosage can cause gastritis, diarrhoea and nephritis. As Aloes stimulates uterine contractions, it should be avoided during pregnancy. Also, because it is excreted in breast milk, it should be avoided during lactation as it may be purgative to the child. It should also be avoided in kidney disorders, haemorrhoids or irritable bowel conditions. Aloes should be taken for a maximum of 8-10 days.

Geranium maculatum L.

Synonyms: alumroot, storksbill, wild geranium, geranium, wild cranesbill, spotted cranesbill, wild cranesbill, alum bloom, chocolate flower, crowfoot, dove's foot, old maid's nightcap, shameface, tormentil

Order: Geraniaceae

Description: This is a perennial herb, growing up to 60cm tall, and indigenous to woodlands in Canada and the Eastern and Central United States. The stem is erect and unbranched, the leaves deeply divided and toothed. Pink to purple flowers grow in pairs on axillary peduncles from April to June, giving way to an elongated 'beaked' capsule divided into five cells with a seed in each.

Parts used: aerial parts and rhizome.

Collection: the aerial parts during the flowering; the rhizome in late summer and autumn.

Constituents: 12-25% tannins including gallic acid, with the level being highest just before flowering.

Actions: astringent, antihaemorrhagic, vulnerary, styptic, anti-inflammatory, tonic

Indications: diarrhoea, particularly in the young and old, dysentery, haemorrhoids.

Therapeutics and Pharmacology: Geranium reduces inflammation in, for example, peptic ulcer, duodenal ulcer, enteritis and bowel disease, and is gentle enough to be administered to children, the elderly and the infirm. It is also used to treat melaena, menorrhagia and metrorrhagia. Topically, it can be applied to indolent ulcers and haemorrhoids, and as a douche for leucorrhoea. It may be used as a mouthwash and gargle for disorders of the mouth, gums and throat. The root is more astringent than the herb. The powdered root is an effective blood coagulant and can be used to stem external bleeding.

Combinations: with Geum, Agrimonia or Symphytum root in duodenal ulcer. A decoction with Trillium as 5% of the total is a suitable douche for leucorrhoea. In diarrhoea, soothing herbs such as Althaea, Filipendula orPlantago should be added to ease gut inflammation.

Aniseed:

Pimpinella anisum (L)

Synonyms: *Anisum vulgare* (Gaertn.), *A. officinarum* (Moench.), Anise, Anisum, *Anisi fructus*, common aniseed

Order: Umbelliferae

Description: Pimpinella is an annual herb cultivated in many countries but indigenous to Turkey, Greece and Egypt. It grows up to 60cm in height and is umbelliferous in appearance with leaves varying in shape from heart-shaped to feathery. The fruits are covered with short hairs and each contains two dark seeds with light ribs.

Parts used: ripe fruits

Collection: The ripe dry fruits should be harvested between July and September.

Constituents: 1.5-4% volatile oil (about 80% antheole), coumarins, glycosides, fixed oils, 30% fatty oils, choline

Actions: Relaxing expectorant, spasmolytic, carminative, antiseptic, parasiticide, aromatic

Indications: Bronchial catarrh, pertussis, spasmodic cough, flatulent colic. Topically for pediculosis and scabies.

Therapeutics and Pharmacology: The volatile oil in aniseed provides the basis for its internal use to ease griping, intestinal colic and flatulence. It also has a marked expectorant and antispasmodic action and may be used in bronchitis, in tracheitis where there is persistent irritable coughing, and to reduce the symptoms of whooping cough. Externally, the oil may be used in an ointment base for the treatment of scabies and lice infestations. Aniseed's mild oestrogenic effects, thought to be due to the presence of diantheole and photoantheole, explain the use of this plant in folk medicine to increase milk secretion, facilitate birth and increase libido.

Combinations: May be combined with Mentha piperata in flatulent colic; with Marrubium, Tussilago, Symplocarpus and Lobelia in bronchitis; and with Prunus in tracheitis. Mix with equal amounts of Foeniculum and Carum for flatulent colic. The oil (1%) may be combined with oil of Sassafras (1%) in an ointment base for scabies.

Caution: Pimpinella and *Illicium verum* (Chinese star anise) should not be confused with Japanese star anise (*Illicium lanceolatum*) which is poisonous.

Avens:

Geum urbanum (L)

Synonyms and Common names: *Radix caryophyllata,* Wood Avens, City Avens, European Avens, Yellow Avens, Star of the Earth, Wild rye, Way Bennet, Herb Bennet, Colewort, Goldy star, Goldy stone, Clove root, Benedict's herb, Blessed Herb

German = Nelkenwurz, French = Herb de St. Benoit, Italian = Ambretta salvatica, Spanish = Gariofilea

Order: Rosaceae

Description: Geum is a native British perennial, also found over much of Europe and Central Asia. It grows up to 60cm tall and has an erect, slightly branched stem. The basal leaves are stalked, toothed and segmented, becoming smaller further up the stem. A few five-petalled yellow flowers arise at the tip of each branch, the pointed sepals visible between each pair of petals. Hairy hooked carpels remain as a sessile head in fruit. This herb is common in gardens, hedges, ditches, open woodland and in waste places. It flowers from May to October.

Parts used: aerial parts and root

Collection: The roots are collected in spring when they are richest in volatile oils. The aerial parts are collected in July when the flowers are at their best.

Constituents: essential oils, phenolic glycosides (including gein and eugenol), tannins, bitter principle, flavones, resin, organic acids

Actions: antidiarrhoeal, antihaemorrhagic, febrifuge, astringent, styptic, diaphoretic, antiseptic, aromatic, tonic, stomachic, anti-inflammatory. The root is a mild sedative and hypnotic.

Indications: ulcerative colitis, diverticulitis, diarrhoea, catarrhal colitis, passive uterine haemorrhage, intermittent fevers.

Therapeutics and Pharmacology: Geum combines bitter-tonic properties with the astringent effects of its tannins and the antiseptic action of its volatile oil eugenol which is also found in cloves and allspice. Its powerful astringency give Geum its role in many intestinal problems such as diarrhoea, dysentery, mucous colitis, etc. It helps to settle nausea and allay vomiting and it promotes appetite, acting as a tonic during convalescence. Eugenol increases the activity of the digestive enzyme trypsin, while the bitter component helps regulate liver and gallbladder function. Geum's astringency also explains its use as a mouthwash or gargle in the treatment of gingivitis, halitosis and sore throats. It is considered an excellent remedy for fevers and has been substituted for quinine in the past. As a douche, it is helpful in the treatment of leucorrhoea. The root may be used as a sedative, although its action is much less potent than Valeriana root.

Borage:

Biological Name: Borago officinalis (L)

Synonyms and Common names: Burrage, common bugloss, star flower, beebread, bee plant

French = bourrache, German = boretsch, Spanish = Borraja, Italian = Borrana

Order: Boraginaceae

Description: Borago is an erect bristly annual, with stalked, ovate to lanceolate basal leaves up to 20cm long, and smaller, stalkless upper leaves, about 7cm long and 3cm broad with a slightly sinuous margin, and bristles on both surfaces. The blue, star-shaped flowers, about 2cm across, are in loose arching sprays. The corolla has five spreading, lanceolate, pointed lobes; the anthers form a central cone. It tastes cucumber-like and saline and is odourless. Borago is indigenous to

Britain, Europe and North Africa, and naturalised in North America. It prefers disturbed ground well-drained open and sunny positions and its cultivation for seed oil is widespread.

Parts used: leaves, flowers, seed oil

Collection: The flowers are collected between April and September, the seeds when ripe in the autumn. The leaves should be gathered just as the plant is coming into flower, but can be harvested throughout the growing season.

Constituents: Leaves and flowers: saponins, up to 12% mucilage, tannin, vitamin C, malic acid, choline, potassium, calcium, essential oil, pyrrolizidine alkaloids (including lycopsamine, intermedine and their acetyl derivatives) Allantoin is reported to be absent. Seeds: essential fatty acids (gammalinolenic and linoleic)

Actions: Leaves and flowers: adrenal gland stimulant and restorative, galactagogue, diuretic, demulcent, emollient, antirheumatic, refrigerant, diaphoretic, expectorant, anti-depressive Seeds: antirheumatic, anti-inflammatory

Indications: pyrexia, pulmonary disease; externally as a poultice for eczema and inflammation

Therapeutics and Pharmacology: The traditional use of 'Borage for Courage' suggests that it has a supportive effect on the adrenal glands. It has since been confirmed that the plant encourages the production of adrenaline which helps the body cope with stressful situations, as well as possibly acting as a restorative agent on the adrenal cortex. It is often prescribed to restore the adrenal glands after steroid therapy. An infusion of the leaves and flowers can be taken as a tonic after stressful situations or for mental exhaustion and depression. Clinical trials have shown that borage seed oil reduces cardiovascular reactivity to stress by reducing the systolic blood pressure and heart rate and by increased task performance. A hormonal effect is indicated by a traditional belief that the leaves and seeds of the plant can increase the milk supply of nursing mothers; it is also said to improve mood in menopausal depression. Borago helps prevent inflammation of the gastrointestinal mucosa in cases of allergy and infection, and it may also assist in iron absorption. It can be used externally as a compress or poultice for inflammation, or as an eyewash to relieve irritation. A hot infusion of Borago has a diaphoretic effect in the treatment of colds and flu, and the presence of saponins is probably responsible for its expectorant action., while the mucilage in the leaves help to soothe the respiratory tract in dry, rasping coughs. It is indicated in bronchitis, catarrh, congested membranes and pleurisy, and the flowers were a traditional ingredient of cough syrups.

The pressed seed oil of Borage, rich in gammalinolenic and linoleic acid, is used in the same way as Evening Primrose oil in the treatment of menstrual problems,

eczema and other chronic skin conditions, and It is often combined with Evening Primrose oil to help reduce blood cholesterol levels.

Bearberry:

Biological Name: Arctostaphylos uva-ursi (Spreng.)

Synonyms: uva ursi, mountain cranberry, sandberry, arberry, bear's grape, kinnikinnick, mealberry, mountain box, red bearberry, sagackhomi, rockberry, upland cranberry, hogberry

Order: Ericaceae

Description: This is a small evergreen creeping shrub indigenous to Europe, Asia and the northern United States and Canada, where it grows on rocky hills. A single, long, fibrous main root sends out several prostrate or buried stems from which grow erect, branching stems up to 15cm high. The bark is dark brown or reddish. The leaves are shiny oblong, with entire margins up to 2.5cm long; the small pink to white bell-shaped flowers occur in drooping terminal racemes in groups of four to six. They give way to globular bright red berries containing several one-seeded nutlets.

Parts used: Leaves

Collection: The evergreen leaves may be collected throughout the year, but preferably in September or October.

Constituents: Hydroquinone glycosides (including 8% arbutin, methyl-arbutin and ericolin), Iridoids, 6% tannins, flavonoids, allantoin, resin (ursone), volatile oil, ursolic, malic and gallic acids.

Actions: Diuretic, astringent effect on lower digestive tract, urinary antiseptic, demulcent

Indications: cystitis, urethritis, dysuria, pyelitis, lithuria

Therapeutics and Pharmacology: Arctostaphylos has a marked antiseptic and astringent effect on the membranes of the urinary system, soothing, toning and strengthening them. It is specifically used where there is gravel or ulceration in the kidney or bladder. It may be used in the treatment of infections such as pyelitis urethritis and cystitis and is specifically indicated in acute catarrhal cystitis with dysuria and highly acid urine, where it helps to reduce accumulations of uric acid. With its high astringency it is used to treat some forms of enuresis and in diarrhoea. It is also used to treat dysuria. As a douche it may be helpful in vaginal ulceration and infection. Arbutin is the principal constituent leading to antibacterial activity, inhibiting the growth of *Citobacter, Enterobacter, Escherichia, Klebsiella, Proteus, Pseudomonas* and *Staphylococcus* (Kedzia) - and also by the breakdown of ericolin to a volatile component ericinol. There is thus a delayed-action effect which manifests only at the site of action. Arbutin is converted to glucose and the antiseptic hydroquinone in the kidney tubules, but only if the urine is alkaline. Although Arctostaphylos has long been described as a diuretic, in one pharmacological study it was actually shown to inhibit diuresis.

The high tannin content of Arctostaphylos has an astringent action on the lower digestive tract, and it is used in the management of diarrhoea and to reduce intestinal irritation.

Combinations: It may be combined with Althaea root, Agropyron, Zea and Barosma in cystitis.

Caution: Arctostaphylos is contraindicated during pregnancy due to its oxytocic properties. Large doses may lead to nausea and vomiting due to the high tannin content. Treatment should be of short duration (7 days) and an alkaline diet should be taken during treatment. Long-term use may produce toxic effects as large doses of hydroquinone are poisonous. The herb should perhaps be avoided if the kidney itself is affected. It may change the colour of the urine but this is harmless.

Beth Root:

Biological Name: Trillium erectum (L) and Trillium pendulum(Willd.)

Synonyms: birth root, wake robin, nodding wakerobin, Indian shamrock, lamb's quarters, Indian balm, ground lily, cough root, Jew's harp plant, milk ipecac, Pariswort, rattlesnake root, snakebite, three-leaved nightshade, trillium

Order: Liliaceae

Description: *T. pendulum* is an herbaceous perennial which grows in rich soils and shady woods of the central and western United States and grows to a height of 40cm.

The simple stem arises from an oblong, tuberous rootstock and bears at the top a whorl of three round-ovate acuminate leaves. In May and June a single yellow-white to reddish-white flower appears above the leaves. *T. erectum* is a stout erect perennial herb with a simple stem bearing a whorl of three broad rhombic pointed leaves and terminating in a large terminal flower with six petals, purple, pale green or pale brown. It grows in rich woodland in the central and western states of the USA.

Parts used: rhizome and roots

Collection: late summer or early autumn

Constituents: Saponin glycosides such as trillin and trillarin; tannins, fixed oil. Little work has been carried out on *T.erectum* or T.*pendulum* but the related species *T.kamtschaticum* and *T.tschonoskii,* used in Oriental medicine, contain steroidal saponins including diosgenin.

Actions: Astringent, antihaemorrhagic (with particular action on the female reproductive system), mild expectorant, uterine tonic, antiseptic, diaphoretic, emmenagogue

Indications: metrorrhagia, menorrhagia, haematuria, haemoptysis, as a douche for leucorrhoea and as a poultice or ointment for indolent ulcers.

Therapeutics and Pharmacology: Trillium contains a natural precursor of the female sex hormones, which the body may utilise or not, thereby having a normalising effect. It is used for menorrhagia and metrorrhagia and against complications arising during labour, including post-partum haemorrhage. It is considered to be a specific for excessive blood loss associated with menopausal changes, and is a palliative remedy for blood loss from the urinary tract. It is also used to treat coughs, bronchial problems and pulmonary haemorrhage, as well as gastro-intestinal bleeding, diarrhoea and dysentery. The underlying causes of any blood loss should be treated with the appropriate remedies.

Trillium may be administered as a douche for leucorrhoea or as a poultice or ointment for varicose and other ulcers. As a poultice or salve it is an effective application for insect bites and stings.

Burdock:

Biological Name: Arctium lappa (L)

Synonyms: *Arctium majus* (Bernh.), *Bardanae radix, Bardanae folium,* bardana, great burdock, hardock, hareburr, hurrburr, turkey burrseed, great bur, cocklebur, beggars buttons, cockle buttons, lappa, bardane, thorny burr, fox's clote, love leaves, personata, clotbur, happy major.

Order: Compositae

Description: Arctium is a substantial biennial plant reaching up to 2m in height, with very large ovate-cordate leaves up to 50cm across forming a rosette at ground level, with smaller versions growing up the thick flowering stem. The plant flowers in June and July and the flowers are borne in clusters at the top of the stem; they are globular in shape and covered with a dense array of stiff hooked bracts that cling to clothes on contact. The long roots grow straight down as much as 1m into the subsoil. There are several similar species of burdock and it is often difficult to distinguish one from the other. It grows on roadsides and waste places and around field boundaries throughout Britain, Europe and North America; it is cultivated in Japan.

Parts used: roots and rhizome, leaves, seeds

Collection: The roots and rhizome should be unearthed in September or October of the first year, or in the following spring when the flowers appear. The leaves should be harvested before or during early flowering, and the seeds when ripe in late summer.

Constituents: Root: up to 50% inulin, polyacetylenes, volatile acids (acetic, proprionic, butyric, isovaleric), non-hydroxyl acids (lauric, myristic, stearic, palmitic), tannin, polyphenolic acids. Seeds:15-30% fixed oils, a bitter glycoside (arctiin), chlorogenic acid and vitamins A and B2. Leaves: contain flavonoids and antibacterial substances, arctiol, fukinone and taraxasterol.

Actions: Leaves: mild laxative, mild diuretic, depurative. Root: Depurative, mild laxative, mild diuretic, bitter, diaphoretic, antirheumatic, antibiotic, orexigenic. Seeds: prevent fever, anti-inflammatory, antibacterial, reduce blood sugar levels, relaxant, demulcent, tonic.

Indications: The herb is specifically indicated as a poultice for boils and abscesses, the root for psoriasis and the dry and desquamatory phase of eczema.

Therapeutics and Pharmacology: Arctium is a valuable remedy for the treatment of dry and scaly skin conditions such as psoriasis and eczema. It cleanses the blood, and should be used gently over a period of time. It may be used as part of a wider treatment for rheumatic complaints, especially where there is associated with psoriasis. An infusion of the leaf may be applied to cracks, grazes, chapped skin and insect bites. Arctium has an antimicrobial action which has been attributed to the

polyacetylenes in the plant. This explains its reputation for treating toxic conditions resulting in skin eruptions such as boils; it is also useful in treating acne. An extract of burdock root called burdock root oil is used to stimulate hair growth in alopoecia.

Part of the action Arctium is through bitter stimulation of the digestive juices and bile secretion and it will thus aid digestion and stimulate the appetite. It has been used in anorexia nervosa and similar conditions. It can also aid kidney function. Its antimicrobial property, together with its diuretic action makes it useful for treating cystitis. Both the roots and leaves can be used to treat rheumatism and gout because they encourage the elimination of uric acid via the kidneys.

Externally it may be used as a compress or poultice to speed up the healing of wounds and ulcers. Eczema and psoriasis may also be treated in this way, although it is important to address the underlying imbalance at the same time.

Combinations: For skin problems, Arctium may be combined with Rumex, Trifolium or Galium.

Caution: Excessive use may precipitate a symptomatic crisis in severely toxic conditions or where eliminatory channels are deficient. Dosage should be cautious initially and gradually increased.

Bladderwrack:

Biological Name: Fucus vesiculosis (L)

Synonyms: Kelp, black tang, rockweed, sea wrack, kelp-ware, bladder fucus, cutweed, Quercus marina, cutweed, blasentang, seetang, meeriche

Order: Fucaceae

Description: Fucus is a common seaweed in the form of long ribbons, about 1m long and 5cm across, leathery, shiny, olive-green to yellow-brown. Down the centre of each ribbon is a midrib, on either side of which are the air-filled bladders which keep the alga floating up from its rocky anchorages. It is found on the north Atlantic and Baltic coasts, the Irish and North Seas and is often washed up on beaches after storms.

Parts used: The whole plant

Collection: It is best to collect bladderwrack from the sea in its healthy, live state than to gather it from beaches. It should be dried as soon as possible.

Constituents: Mucilage, algin and mannitol, beta-carotene and zeaxanthin; iodine, bromine, potassium, and many other minerals, volatile oil

Actions: Anti-hypothyroid, thyroactive, anti-obesic, antirheumatic, demulcent, gentle metabolic stimulant, nutritive, adaptagen, thyroid tonic, anti-inflammatory

Indications: myxoedema, lymphadenoid goitre, obesity, rheumatism, rheumatoid arthritis

Therapeutics and Pharmacology: Fucus, rich in iodine, stimulates the thyroid gland, thereby increasing basal metabolism. It is a useful remedy in the treatment of hypothyroidism, goitre myxoedema and lymphadenoid goitre. By regulating thyroid function, there is an improvement in all the associated symptoms. Fucus also appears to assist in the problem of lipid balance associated with obesity, and where obesity is associated with thyroid dysfunction, this herb may help to reduce excess weight. It has a reputation in the relief of rheumatism and rheumatoid arthritis and may be used both internally and as an external application for inflamed joints. The main phytotherapeutic use of Fucus is during debility and convalescence, and also to remineralise the body.

Combinations: Fucus combines well with Gaultheria in a paraffin base for application as a plaster to affected joints in rheumatoid arthritis.

Caution: Fucus should not be used in cases of hyperthyroidism or cardiac problems, or during pregnancy and lactation. Excessive dosage may lead to hyperthyroidism, tremor, increased pulse rate and elevated blood pressure. However, there is wide variation between individuals in susceptibility to excess iodine. Current US guidelines on iodine intake imply that 100 micrograms a day is considered safe. Like

many sea creatures, bladderwrack is at risk from heavy metal pollution, and should not be collected where levels of cadmium and mercury are known to be high.

Cayenne:

Biological Name: Capsicum minimum (Roxb.) /C.fructescens (L.)

Synonyms: *C.fastigiatum* (Bl.), African chillies, chillies, red pepper, bird pepper, capsicum, hot pepper, Tabasco pepper

Order: Solanaceae

Description: This small erect shrub is indigenous to tropical America and cultivated in South America and Africa. It is a perennial plant in its native America but is annual when cultivated outside tropical zones. Growing to a height of 1m or more, its glabrous stem is woody at the bottom and branched near the top. The leaves are ovate to lanceolate, entire and petioled. The drooping, white to yellow flowers grow alone or in pairs or threes between April and September. The ripe fruit, or pepper, is a many-seeded pod with a leathery outside in various shades of red or yellow.

Part Used: dried ripe fruit

Collection: harvested when fully ripe and dried in the shade

Constituents: an alkaloid (capsaicin), carotenoids (capsanthine, capsorubin), flavonoids, volatile oil, vitamins A, B and C, steroidal saponins (capsicidons), sugars, fatty acids.

Actions: carminative, spasmolytic, stimulant, diaphoretic; externally as a rubefacient, counter-irritant and antiseptic.

Indications: flatulent dyspepsia in the absence of inflammation, colic, insufficiency of the peripheral circulation; as a gargle for chronic laryngitis; externally for neuralgia, rheumatic pain and unbroken chilblains.

Therapeutics and Pharmacology: Capsicum is a good general tonic, specific for the circulatory and digestive system. It regulates blood flow and strengthens the heart, arteries, capillaries and nerves. It improves arterial blood supply to the tissues and toxin removal. It is a strong circulatory stimulant, appearing to reinforce the action

of certain prostaglandins, thereby increasing the flow of blood through all the tissues of the body and producing a diaphoretic effect. Capsaicin is known to mimic the effect of some of the prostaglandins. It desensitizes the sensory nerve endings to pain stimulation by depleting Substance P from the nervous system, which is the basis for its use as a local analgesic, and recent research suggests that cayenne can ease the severe pain of shingles and migraine. It is also used in digestive debility and flatulent dyspepsia in the absence of inflammation. The addition of Capsicum to a prescription will ensure that the other ingredients quickly reach all tissues even where there is poor circulation.

Applied externally it stimulates increased circulation within the subdermal tissues, reducing the need for the body to invoke the inflammatory response. It is therefore of benefit as a rubefacient for neuralgia and rheumatic pains. The ointment also helps to heal unbroken chilblains.

Caution: Should not be used in cases of hypertension, gastric hyperacidity, peptic ulceration, or on mucous membranes. The hands should be washed after handling. Prolonged application to the skin can cause dermatitis and blistering, while excessive consumption can lead to gastroenteritis and liver and kidney damage. Only small doses should be used to avoid irritating the stomach or burning the skin. The seeds can be toxic. Therapeutic doses should be avoided during pregnancy and while breastfeeding.

Combinations: Capsicum combines well with Commiphora as a gargle for laryngitis or as an antiseptic wash. It may be combined with Althaea and Filipendula for flatulence or spasm of the digestive tract.

Chamomile:

Biological Name: Chamomilla recutita (L)

Synonyms and Common names: *Matricariae flos*, *Matricaria chamomilla* (L.), *Matricaria recutita* (L.), Single chamomile, Hungarian chamomile, pinheads, scented mayweed, sweet false chamomile

German = Hundskamille, French = Camomille, Italian = Camomilla, Spanish = Camomile

Order: Compositae

Description: Chamomilla is an erect annual, up to 60cm in height, with wispy 2-3 pinnate leaves and terminal peduncles supporting single flowerheads. Yellow tubular florets without membranous bracts are implanted on a raised and hollow receptacle. This is surrounded by a single row of white ligulate florets which are often bent backwards. Chamomilla grows in fields and many other places throughout England, Europe, Russia and Asia, and is naturalised in Australia and the US.

Parts used: flowers head, essential oil

Collection: the flower heads are collected when they are mature and expanded, from June to August. They should be dried carefully in the shade and stored in a cool dark place.

Constituents: 0.3-2% volatile oil (including bisabolol); bitter glycosides (anthemic acid); flavone glycosides (anthemidin), coumarins (including umbelliferon and herniarin), phenolic carboxylic acids, polysaccharides, mucilage, choline, amino acids, tannins, malic acid. Blue chamazulene is formed from the sesquiterpene lactone matricin during steam distillation.

Actions: anti-inflammatory, spasmolytic, vulnerary, antimicrobial, mild sedative, carminative, antiseptic, anticatarrhal.

Indications: Internally for spasm or inflammatory conditions of the gastrointestinal tract, peptic ulcer, flatulent or nervous dyspepsia, travel sickness, nasal catarrh, restlessness, mild sleep disorders. Specifically indicated in gastrointestinal disturbance with associated nervous irritability in children. Topically for haemorrhoids, mastitis, leg ulcers, eczema and irritations of the skin and mucosa anywhere in the body.

Therapeutics and Pharmacology: Chamomilla has a wide range of actions. It is used in the treatment of insomnia, anxiety and nervous tension, for the relief of spasmodic pain such as dysmenorrhoea or migraine, and is a safe remedy for children's problems with a nervous component. This spasmolytic action is due to the presence of flavones, bisabolol and other constituents of the volatile oil. This herb is particularly suited to digestive problems such as nervous dyspepsia and colic. The dicyclic ether in the volatile oil relaxes the smooth muscle, regulating peristalsis, while the carminative volatile oil reduces flatulence and irritation of the gut wall.

The bitter glycosides stimulate the appetite and digestive activity, and the herb also helps relieve inflammatory conditions of the upper digestive tract.

Chamazulene and bisabolol directly reduce inflammation in tissues with which they come into contact, stimulate the formation of granulation tissue, and have an antibacterial action. Bisabalol is also protective against ulcers. The polysaccharides are have an immunostimulant action, activating macrophages and B-lymphocytes, thus demonstrating a scientific basis for the use of the herb in the topical treatment of wounds and ulcers. Chamomilla also makes an effective lotion for eczema, a mouthwash or eyewash, or as a steam inhalation for catarrh and inflamed mucous membranes.

Chamomilla has a reputation as a 'female' herb and has been used to relieve morning sickness, menopausal symptoms, dysmenorrhoea, mastitis, amenorrhoea with a psychological component (e.g. anorexia nervosa), and hysteria.

Chamomilla has a traditional use on the Continent in the treatment of asthma and hayfever, probably due to the herb's action on the mucous membranes of the upper respiratory tract. It is thought to reduce the reaction to allergens such as pollen or dust in sensitive individuals.

Combinations: Chamomilla combines well with Althaea, Filipendula, Ballota and Humulus in nervous dyspepsia, and with Valeriana, Passiflora and Humulus in restlessness.

Caution: Contact allergy is rare.

Cinnamon:

Biological Name: Cinnamonum zeylanicum (Blume)

Synonyms: cinnamon bark, Ceylon cinnamon

Order: Lauraceae

Description: A bushy tropical evergreen tree native to Sri Lanka but also cultivated in South-East Asia, South America and the West Indies. It can reach a height of 10 metres, and has thick scabrous bark. The young shoots are speckled greenish-

orange. The leaves are petiolate, entire, leathery when mature, upper side shiny green, underside lighter. The flowers occur in small white in panicles; the fruit is an oval berry rather like an acorn in its receptacle, and is bluish with white spots when ripe.

Parts used: Dried inner bark of the shoots; oil distilled from the bark and leaves.

Collection: Collected commercially throughout the tropics and harvested during the rainy season. The shoots are peeled, then rubbed to loosen the inner bark. The peels are telescoped into one another to form quills which are then dried.

Constituents: up to 10% volatile oils (including cinnamaldehyde, eugenol and phellandrene); condensed tannins, mucilage, gum, sugars, coumarins.

Actions: carminative, astringent, aromatic, local stimulant, antiseptic, spasmolytic, orexigenic, antidiarrhoeal, antimicrobial, refrigerant, anthelmintic, gentle warming digestive tonic.

Indications: dyspepsia, flatulence, nausea, diarrhoea

Therapeutics and Pharmacology: Cinammonum is predominantly used as a carminative addition to herbal prescriptions. It is used in flatulent dyspepsia, dyspepsia with nausea, intestinal colic and digestive atony associated with cold and debilitated conditions. It relieves nausea and vomiting, and, because of its mild astringency, it is particularly useful in infantile diarrhoea. It is frequentlu used in the treatment of *candidia albicans* overgrowth. Cinnamaldehyde is hypotensive and spasmolytic and increases peripheral blood flow. The essential oil is a potent antibacterial, antifungal and uterine stimulant.

Caution: Therapeutic doses, particularly of the essential oil, should be avoided in pregnancy as Cinnamonum is a potential uterine stimulant. It should be used with care in feverish conditions.

Combinations: Combines well with Filipendula, Chamaemelum, Ulmus and Althaea root in flatulent dyspepsia and gastritis. It may also be combined with Geranium, Quercus, Acorus and Acacia in diarrhoea with colic, or with Sambucus, Mentha piperata and Achillea in influenza.

Cloves:

Biological Name: Eugenia caryophyllus (Spreng.)

Order: Myrtaceae

Part used: dried flower buds and oil

Description: an evergreen topical tree up to 30 feet tall, native to the Spice Islands and the Philippines but also grown in Sumatra, Jamaica, the West Indies, Brazil and other tropical areas. It has opposite, ovate leaves more than 12cm long and its flowers, when allowed to develop, are red and white, bell-shaped, and grow in terminal clusters. The fruit is a one or two-seeded berry.

Collection: the unopened flower buds are harvested from September to February by beating the branches of the tree; they are then dried in the sun, turning a deep brown. Each tree can yield up to 30kg of cloves.

Constituents: up to 20% volatile oil, gallotannic acid, crystalline principles (caryophyllin and eugenin), gum, resin, fibre.

Actions: stimulant, carminative, aromatic, anodyne, antiemetic, antiseptic.

Indications: nausea, vomiting and flatulence.

Therapeutics and Pharmacology: A few drops of the oil in water will stop vomiting and an infusion will relieve nausea. Eugenia is a powerful local antiseptic and mild anaesthetic which may be used topically in toothache. For toothache, put a clove near the tooth and keep in the mouth, or use clove oil on a little cotton wool.

Cornsilk:

Biological Name: Zea mays (L)

Synonyms: *Stigmata maydis, Maidis stigmata,* Indian corn, maize, Yumixu (Chinese)

Order: Graminaceae

Description: Cornsilk refers to the stigmas from the female flowers of maize., fine soft threads 10-20cm long. When fresh, they are like silk threads of a light green or yellow-brown colour; when dry, they resemble fine, dark, crinkled hairs.

Parts used: Stigmas and styles

Collection: The stigmas should be collected just before pollination occurs, the timing of which depends upon climate. Zea is best used fresh as some of the activity is lost with time.

Constituents: flavonoids, chlorogenic acid, saponins, volatile oil, fixed oil, resin, sugars, phytosterols, allantoin, tannin, minerals (especially potassium)

Actions: mild diuretic, urinary demulcent, tonic, antilithic

Indications: dysuria, cystitis, urethritis, nocturnal enuresis, prostatitis.

Therapeutics and Pharmacology: As a soothing diuretic, Zea is a useful remedy in any irritation of the urinary system. It is used for renal problems in children and as a urinary demulcent combined with other appropriate herbs in the treatment of cystitis, urethritis and prostatitis. The diuretic action is in part due to the high concentration of potassium. Zea was used in the past in the treatment of gonorrhoea. French herbalists use it to thin the bile and promote bile flow, and Chinese research confirms this action. It is also believed to lower blood pressure.

Combinations: Combines well with Agropyron, Arctostaphylos or Achillea in the treatment of cystitis, and with Agrimonia and Equisetum in enuresis. It may be used with Alchemilla arvensis and Eupatorium purporeum in phosphatic or uric acid gravel.

Caution: No contraindications are known

Dandelion:

Biological Name: Taraxacum officinale (Weber)

Synonyms: *Taraxacum dens-lionis* (Desf.), *Leontodon taraxacum* (L.), pise-en-lit, pee-the-bed, lion's tooth, fairy clock, blowball, cankerwort, priest's crown, puffball, swine snout, white endive, wild endive

Order: Compositae

Description: Taraxacum is a native of western Europe where it grows in meadows, fields and fallow land. It originated in Central Asia, but now grows almost anywhere in the world, preferring moist conditions. It has a rosette of characteristic 'lion's tooth' leaves, from the centre of which arises the hollow stem bearing the yellow capitulate flowerhead made up of 200 or more ligulate bisexual florets. These give way to the familiar 'fairy clock'. The long taproot arises from a short rhizome. All the underground parts are covered with a dark brown bark, but are almost white inside and, like the stem, produce a bitter-tasting white milky sap.

Parts used: leaves and root

Collection: the leaves are collected before flowering in May. The root is unearthed in autumn for a high bitter content, or in spring for a high inulin content. The root should be collected no later than the second year.

Constituents: Leaf: bitter glycosides, carotenoids (including lutein and violaxanthin), terpenoids, choline, potassium salts, iron and other minerals, Vitamins, A, B, C, D (the vitamin A content is higher than that of carrots). Root: bitter glycosides (taraxacin), tannins, triterpenes (including taraxol and taraxsterol), phytosterols, volatile oil, choline, asparagine, carbohydrates (including inulin, up to 40% in autumn, 2% in spring; sugars), pectin, phenolic acids, vitamins, potassium.

Actions: Leaf: gentle diuretic, choleretic. Root: Bitter, mild laxative, digestive and hepatic tonic, cholagogue, diuretic, antirheumatic

Indications: Leaf: oedema, oliguria. Root: cholecystitis, gall-stones, jaundice, atonic dyspepsia with constipation

Therapeutics and Pharmacology: Taraxacum leaf is a very potent diuretic and is an excellent remedy for water retention and oedema, particularly when it is of cardiac origin, or hepatogenous oedema (ascites). Its action comparable to the drug Frusemide. The usual effect of a drug which stimulates kidney function is a loss of potassium from the body, which aggravates any existing cardiovascular problem. A high level of potassium is particularly desirable when digitalis heart drugs are being prescribed, because if potassium levels fall, the drugs will produce irritability of the heart muscle. Luckily, Taraxacum is one of the best natural sources of potassium and therefore is a perfectly balanced and safe diuretic. Taraxacum leaf may be applied to urinary disorders in general, especially where worsened by the presence of oliguria. It also has similar actions to the root, but to a lesser extent.

Taraxacum root is a gentle liver tonic and may be used to treat inflammation and congestion of the liver and gall bladder. It can be applied to gallstones, cholecystitis, hepatic and post-hepatic jaundice, congestive dyspepsia with constipation and other toxic conditions such as chronic joint and skin inflammations. The root contains bitter substances which are beneficial to the digestive process and also have an aperient effect. The sesquiterpene lactones may produce the choleretic action. The active principle is taraxacin, which is found in the whole herb, particularly the root, and stimulates bile secretion. The white sap may be applied directly to warts.

Combinations: Taraxacum may be combined with Berberis and/or Chelone in gall bladder disease, with Chamaemelum in anorexia and stomach complaints and with Agropyron or Achillea for water retention.

Caution: Taraxacum is contraindicated where there is occlusion of the bile ducts or gall bladder empyema.

Dill:

Biological Name: Anethum graveolens (L)

Synonyms and Common names: *Peucedanum graveolens* (Benth.), *Fructus anethi*, dilly, garden dill

French = Aneth, German = Dill, Spanish = Encido, Italian = Aneto odoroso

Order: Umbelliferae

Description: Anethum is an annual herb, growing up to120cm tall. It is indigenous to the Mediterranean and southern USSR, growing wild on rubbish heaps and in coastal hedgerows, but is cultivated elsewhere. The slender, spindle-shaped root is slightly branched, the stem erect, hollow, finely furrowed and branched in the upper part. The alternate leaves are divided three or four times into thin pinnate sections, and are petiolate in the lower part of the stem. The stems and branches terminate in compound umbels up to 15cm in diameter with 30-50 rays which have neither covering nor capsules. They contain small bisexual flowers with an inconspicuous calyx. The yellow petals narrow towards the top and are shallowly indented, their ends turning towards the inside of the flower. The yellowish-brown or reddish fruits develop into ovoid flattened achenes and are compressed together in pairs.

Parts used: dried ripe fruit, aerial parts.

Collection: the seeds are collected when ripe, after they have turned brown. The herb is collected during the flowering season.

Constituents: At least 2.5% volatile oil (50% carvone, plus limonene, eugenol, antheole and others), flavonoids (including kaempferol), coumarins, xanthone derivatives, triterpenes, phenolic acids, protein, fixed oil.

Actions: carminative, aromatic, stomachic, antispasmodic, galactagogue

Indications: flatulent dyspepsia; specifically indicated for flatulent pain in infants.

Therapeutics and Pharmacology: Anethum is a common ingredient in gripe water, given to relieve wind and colic in babies. The carminative volatile oil improves the appetite and aids digestion. Chewing the seeds is helpful in cases of halitosis. Anethum stimulates milk flow in lactating mothers, and is often given to cattle for this reason. An infusion of the flowering plant is recommended for urinary complaints and for coughs while soaking the hands in a decoction of the seeds is said to strengthen the nails.

Echinacea:

Biological Name: Echinacea angustifolia (D.C.) Heller

Synonyms: *Brauneria pallida* (Nutt.), *B. angustifolia*, purple coneflower, black sampson, Kansas snakeroot, Kansas niggerhead, rudbeckia, American narrow-leaved coneflower, spider flower

Order: Compositae

Description: Echinacea is a perennial herb, up to a metre in height, with simple rough stems, hollow near the base and thickening slightly close to the flowerhead. The leaves are elongated, slightly elliptical with entire margins and covered with coarse hairs and protuberances. The purple flower is in the form of a high cone surrounded by rough hairy bracts, downturned purple ray florets and greenish tubular florets. The tapering root is greyish-brown flecked with white. Echinacea is a native of the prairies of the Western USA and is cultivated in Europe.

Parts used: Root and rhizome

Collection: The roots are unearthed in the autumn after flowering. The fresh extract is more effective than the dried root.

Constituents: volatile oil (including humulene and caryophylene), glycoside (echinacoside), polysaccharides, polyacetylenes, isobutylalkamines, echinaceine, phenolics, inulin, betain, resins, sesquiterpene

Actions: immunostimulant, anti-inflammatory, antibacterial, antiviral, vulnerary, antiseptic, peripheral vasodilator, anti-microbial, antibiotic, anti-allergenic, lymphatic tonic, warming alterative, anti-infective, stimulating, inhibits hyaluronidase activity and reduces eosinophil levels

Indications: boils, septicaemia, naso-pharyngeal catarrh, pyorrhoea, tonsillitis

Therapeutics and Pharmacology: Echinacea, having both an antibacterial and antiviral action, is one of the best remedies for helping the body rid itself of microbial infections. It may be used in the treatment of boils, abscesses, carbuncles, septicaemia and other such infections and, combines with other appropriate herbs, it may be used for any infection anywhere in the body. It has been shown to improve

the body's resistance to infections such as colds and influenza; it stimulates the lymphatic vascular system and the fibroblasts. It should be taken in small, frequent doses as soon as flu-like symptoms appear. It is of particular value in laryngitis, tonsillitis, and catarrhal conditions of the nose and sinus. The tincture or decoction may be used as a mouthwash in the treatment of pyorrhoea and gingivitis. Echinacea may also be applied as a lotion to infected sores and wounds, and it promotes the healing of old wounds and ulcers. A wash of Echinacea can help relieve the itching of urticaria and this treatment is also useful for stings and bites.

Research has demonstrated that Echinacea stimulates the production of white blood cells to fight infection. The polysaccharide component has an anti-viral action, reducing the ability of pathogens to penetrate tissues. In Germany, echinacein is most often administered intravenously because polysaccharides are rapidly broken down in digestion. Echinacea is of value in the treatment of glandular fever and post-viral fatigue syndrome (myalgic encephalomyelitis), and has most recently been employed in AIDS therapy. There is evidence to show that whole plant preparations are helpful in allergies.

Combinations: Echinacea may be combined with Achillea or Arctostaphylos for cystitis; with Arctium root or Iris for boils; and with Baptisia and Commiphora resin for pharyngitis or tonsillitis.

Caution: High doses can occasionally cause nausea and dizziness.

Eucalyptus:

Biological Name: Eucalyptus globulus (Labille)

Synonyms: blue gum, stringy bark tree, Tasmanian blue gum

Order: Myrtaceae

Description: A tall evergreen tree native to Australia and Tasmania and cultivated elsewhere. The trunk, which can grow to over 100m, is covered with peeling, papery bark. The leaves on the young plant, up to five years old, are opposite, sessile, soft, oblong, pointed and a hoary blue colour. The mature leaves are alternate, petioled, leathery and shaped like a scimitar. The flowers are solitary, axillary and white, with no petals and a woody calyx. The fruit is a hard, four-celled, many-seeded capsule enclosed in the calyx cup.

Parts used: Leaves and essential oil

Constituents: Up to 3.5% volatile oil (with up to 70% eucalyptol/cineole, plus terpineole and pinene), polyphenolic acids (including caffeic and gallic), flavonoids (including eucalyptin, hyperoside and rutin), tannins, aldehydes, bitter resin.

Actions: Antiseptic, deodorant, antispasmodic, febrifuge, expectorant, stimulant, reduces blood sugar levels, vermifuge, aromatic, secretolytic, rubefacient, decongestant

Indications: upper respiratory congestion, asthma, bronchitis

Therapeutics and Pharmacology: Eucalyptus oil is a strong antiseptic and lozenges made from it are useful for lung diseases, colds and sore throats. Its expectorant properties are useful in bronchitis. It can also be used as a vapour bath or chest rub for asthma and other respiratory complaints. It is said to be useful for pyorrhoea and for burns, where it prevents infection, and it also eradicates lice and fleas. Externally, its antiseptic and deodorant qualities make it suitable for use on purulent wounds and ulcers. Diluted in sunflower oil, it can be applied to cold sores or used as massage oil for painful joints. A cold extract made from the leaves is helpful for indigestion and for intermittent fever. In traditional Australian Aboriginal medicine the leaves are used in poultices for any type of wound and inflammation.

Combinations: May be combined with Rosmarinus oil in a massage oil base for rheumatic and arthritic pain.

Caution: In large doses the oil is irritant to the kidneys, and it should not be taken internally, other than in proprietary lozenges.

Fennel:

Biological Name: Foeniculum vulgare (Mill.)

Synonyms and Common names: Fenkel, Finkle, Fennel fruit, *foeniculi fructus*

German = Fenchel, French = Fenouil, Spanish = Hinojo, Italian = Finocchio

Order: Umbelliferae

Description: Fennel is a short-lived perennial indigenous to Europe and cultivated in India, China and Egypt. It is a greyish-green, hairless plant with vertically-grooved, branched stems which smell of aniseed when crushed. The three- to four-pinnate dark green leaves have feathery lobes and the yellow flowers, appearing from July to September, occur in four to thirty simple umbels in a compound umbel. The fruits are ovoid-oblong and ridged. Fennel prefers to grow on bare ground in coastal areas.

Parts used: The fruit. The herb and fresh bulb can be cooked.

Collection: The seeds are harvested when ripe in autumn.

Constituents: up to 8% volatile oil (including about 80% antheole, up to 5% estragole, and fenchone), flavonoids (rutin, quercetin and kaempferol glycosides), coumarins (bergapten, imperatorin, xanthotoxin and marmesin), sterols, fixed oils and sugars.

Actions: stomachic, carminative, aromatic, orexigenic, anti-inflammatory, antimicrobial, diuretic, galactagogue

Indications: flatulent dyspepsia, anorexia, flatulent colic in children; topical eyewash for conjunctivitis and blepharitis; gargle for pharyngitis

Therapeutics and Pharmacology: Foeniculum is primarily used in the treatment of mild, spasmodic gastrointestinal complaints such as flatulence and colic in children, and indigestion, bloating and heartburn in adults. Both the seeds and the root are appetite stimulants and sooth the digestion. The volatile oil has both carminative and spasmolytic actions, and has been shown to increase liver regeneration experimentally.

Foeniculum is a useful remedy for upper respiratory catarrh and has a calming effect on bronchitis and coughs. It is also diuretic, and is used to treat urinary calculi. The volatile oil is bactericidal and anti-fungal, and has been shown to be effective *in vitro* against *Staphylococcus aureus* and *Candida albicans*. It is also slightly oestrogenic, and is a well-known means of promoting the flow of breast milk.

Externally, the oil relieves muscular and rheumatic pains, and the infusion may be used in a compress to treat conjunctivitis and blepharitis. The seeds have a traditional reputation as an aid to weight loss and longevity.

Feverfew:

Biological Name: Tanacetum parthenium (L)

Synonyms and Common names: *Chrysanthemum parthenium* (L), *Leucanthemum parthenium, Pyrethrum parthenium, Tanacete parthenii herba* or *folium*, Featherfew, Featherfoil, Midsummer daisy, Bachelor's buttons, Altamisa, nosebleed, flirtwort

Order: Compositae

Description: Tanacetum parthenium is a perennial which grows up to 60cm tall, with a downy erect stem. The yellowish-green leaves are alternate, stalked, ovate and pinnately divided with an entire or crenate margin. The flowers, about 2cm in diameter, are arranged in corymbs of up to 30 heads, with white ray florets, yellow disc florets, and downy involucral bracts. The taste is bitter; the odour strongly aromatic

Parts used: Leaves

Collection: The leaves may be collected throughout spring and summer, but preferably before the flowering period.

Constituents: sesquiterpene lactones (including parthenolide and santamarine), volatile oil, sesquiterpenes (including camphor, farnesene and germacrene), tannins, monoterpenes

Actions: migraine prophylactic, anti-inflammatory, vasodilatory, antirheumatic, febrifuge, digestive bitter, anthelmintic, uterine stimulant

Indications: Migraine prophylaxis, arthritic conditions

Therapeutics and Pharmacology: Although this herb has long been used in migraine prophylaxis, confirmed by clinical studies, the precise mechanism of the action is not yet fully understood. It is thought that the prophylactic action is due to serotonin (5-HT) inhibition, possibly via the neutralisation of sulphydryl groups on specific enzymes that are fundamental to platelet aggregation and secretion. Abnormal platelet behaviour with the release of 5-HT has been implicated in migraine. Parthenolide also interferes with both the contractile and relaxant mechanisms in blood vessels. Many of the patients involved in the clinical trials for migraine prophylaxis also reported that feverfew helped their depression. It helps ease tinnitus and dizziness, and allays nausea and vomiting.

Tanacetum parthenium has long been reputed to help relieve arthritis, particularly in the painful active inflammatory stage. The sesquiterpene lactones, and particularly parthenolide, have been shown to inhibit human blood platelet aggregation and secretory activity in platelets and polymorphonuclear leucocytes (increased secretion is a feature of rheumatoid arthritis). However, a double-blind, placebo-controlled study over six weeks on 40 females with rheumatoid arthritis showed no beneficial effects.

T. Parthenium has been used in the treatment of dysmenorrhoea and sluggish menstrual flow, and an infusion may be taken to cleanse the uterus after childbirth. Antimicrobial properties against Gram-positive bacteria, yeasts and filamentous fungi *in vitro* have been documented for parthenolide; Gram-negative bacteria were not affected.

Caution: The fresh leaves can cause mouth ulceration or gastric disturbance so it is recommended that those taking the fresh leaf for migraine prophylaxis should take it with some bread. Contact allergy is rare. The herb is contraindicated in pregnancy due to its stimulating action on the uterus.

Ginger:

Biological Name: Zingiber officinale (Roscoe)

Synonyms: Jamaica ginger, African ginger, black ginger, race ginger

Order: Zingiberaceae

Description: Zingiber is a creeping perennial plant native to tropical south-east Asia and cultivated in the West Indies, Africa and India. The aromatic, knotty rootstock is thick and fibrous, and whitish or buff in colour. It produces a simple, leafy stem covered with the leaf sheaths of the lanceolate-oblong to linear leaves, and reaches a height of 1.25m. The leaves areup to30cm long and the sterile flowers are white with purple streaks and grow in small dense spikes.

Part used: rhizome, preferably fresh; oil.

Collection: the rhizome is collected after the leaves have dried.

Constituents: Volatile oil (including zingiberine, zingiberole, phellandrene, borneol, cineole and citral); phenols (gingeole, zingerone), shagaol, starch, mucilage, resin, and a possible alkaloid.

Actions: Peripheral circulatory stimulant, carminative, antiflatulent, antitussive, antiemetic, rubefacient, diaphoretic, anti-inflammatory, spasmolytic, adjuvant, sialagogue, expectorant, antiseptic.

Indications: Poor circulation, chilblains and cramp, nausea

Therapeutics and Pharmacology: In feverish conditions Zingiber's diaphoretic action promotes perspiration. As a carminative it promotes gastric secretion and is used in the treatment of dyspepsia, flatulence and colic. It is also a useful remedy in diarrhoea where there is no inflammation. It is stimulant to the gastro-intestinal tract, increasing peristalsis and the tone of the intestinal muscle. As an antiemetic it can be used in cases morning sickness. It is also said to be useful for suppressed menstruation. The fresh rootstock may be chewed to stimulate the flow of saliva or to soothe a sore throat. As a gargle it can also relieve a sore throat. Extracts of ginger stimulate the vasomotor and respiratory centres.

Externally, Zingiber is the basis of many fibrositis and muscle strain treatments. In China the fresh root, *sheng jiang*, is used to promote sweating and as an expectorant for colds and chills. It is also roasted in hot ashes and used to treat diarrhoea or to stop bleeding. The dried root, *gan jiang*, is used to warm and stimulate the stomach and lungs, and is an effective *yang* restorative.

Contraindications: High doses should be avoided if the stomach is already hot and over-stimulated, as in peptic ulceration. It should be used with care in early pregnancy, although it can be safely taken in small doses (1g dried root) for morning sickness.

Ginseng:

Biological Name: Panax ginseng (Meyer)

Synonyms: *Panax schinseng* (Nees), schinsent, ninjin, jintsam, ren shen, Korean ginseng, Chinese ginseng, oriental ginseng, wonder of the world

Order: Araliaceae

Description: Panax is a perennial plant indigenous to the mountainous forests of the northern temperate zone of Eastern Asia and is cultivated in China, Korea and Japan. It has a thick, spindle-like brown-yellow root, often divided at the end. The simple glabrous stem bears a whorl of three or five palmately compound leaves consisting of five oblong-ovate, finely double-serrate leaflets. From June to August it is topped with a single umbel of greenish-yellow flowers. The fruit is a small edible drupe-like pale red berry. The activity of young cultivated roots is said to be up to half that of old roots grown in the wild. Commercially produced Panax is either grown as undergrowth in shady forests, or shaded by mats in the

open. Two forms are available, - 'white' Ginseng (often with the outer skin peeled off) and 'red' ginseng, prepared by steaming the root before drying. Red ginseng contains all the saponins so far isolated from white ginseng, and others which are probably formed during the steaming process.

Parts used: Dried root

Collection: Commercially grown roots take at least seven years to reach a weight of 60-100g at which point they can be harvested. The wild plant achieves that weight only after 150-200 years.

Constituents: steroidal glycosides known as panaxosides or ginsenosides which, on extraction or drying, may be hydrolysed and the aglycones converted to panaxadiols and panaxatriols. At least 25 ginsenosides have been identified: triterpene glycosides (hormone-like saponins). Also acetylenic compounds: panaxynol (falcarinol), panaxytriol (falcarintriol), panaxydol and others; peptidoglycans (panaxans A-E); sesquiterpenes, including b-elemene; amino acids, peptides, volatile oil, sugars, sterols, starch, pectin, choline, fats, vitamins B1, B2 and B12, and minerals (zinc, copper, magnesium, calcium, iron, manganese, vanadium). The wild root, but not the cultivated one, is said to contain oestrogenic principles.

Actions: thymoleptic, adaptagenic, stimulant, tonic, demulcent, stomachic, cardiotonic, hypoglycaemic, reputed aphrodisiac

Indications: physical or mental exhaustion, stress, inadequate resistance to infections, neurasthenia, neuralgia, insomnia, hypotonia. Specifically indicated in depressive states associated with sexual inadequacy.

Therapeutics and Pharmacology:

Panax is an adaptagenic herb - it enhances the body's resistance to external stresses and improves physical and mental performance. It acts on the central nervous, cardiovascular and endocrine systems, promotes immune function and metabolism, and has biomodulation actions. The hormone-like substances in the plant account for its simultaneous sedative and stimulating (adaptogenic) effect on the central nervous system. Panax improves the responses of the adrenal cortex in secreting the stress hormones possibly by interacting with receptor sites at the cortex and at the hypothalamus, variously stimulating and relaxing the central nervous system, affecting hepatic metabolism and glycogen utilisation by skeletal muscle. . It has been found to have a beneficial effect on carbohydrate tolerance in diabetic patients. In general, Panax improves the balance of functions in the body. It is a valuable general plant drug for geriatric care. In China, it is also used during labour. As a demulcent, it is helpful for coughs, colds and various chest problems. Enhanced blood alcohol clearance has also been demonstrated.

Combinations: Panax may be combined with Turnera and Serenoa in glandular weakness. In China, it is rarely used on its own, but is usually combined with liquorice or Chinese dates.

Caution: No significant toxicity or drug interactions are known but excessive use can lead to sleeplessness, hypertension, headaches, oestrogenic effects, irritability or other side effects. It should not be used in pregnancy, menstrual irregularities, acute illness, hypertension, or in conjunction with other stimulants (including caffeine-containing drinks). It should not be taken continuously - occasional use or courses of 1 month followed by a 2 month interval are recommended

Heartsease:

Biological Name: Viola tricolor (L)

Synonyms and Common names: Wild pansy, love-lies-bleeding, love in idleness, live in idleness, Herb Constancy, bullweed, bird's eye, herb trinity , Johnny jumper, stepmother

German = Dreifarbiges veilchen, Spanish = Pensamiento, Italian = Pensiero, French = Pensee

Order: Violaceae

Description: an annual or perennial herb common on disturbed, sandy soils in Britain and Western Europe and which grows up to 40 cm in height. It has a semi-creeping or ascending stem, usually richly branched, growing from a spindle-shaped simple root. The alternate, stalked leaves have large stipules, deeply lobed and with an oval terminating section. The lower leaves are almost round, the upper ones oval and coarsely to sparsely toothed at the edges. The bisexual symmetrical flowers, 1-2.5cm across, grow individually from the leaf axils on long stalks which bend into a hook at the top with a small stipule. The five tapering and pointed sepals have a round or oval appendix at the base. The corolla is light yellow and the upper petal and spur usually purplish. The five stamens have short filaments. The superior ovary matures into an oval capsule with light brown seeds.

Parts used: aerial parts

Collection: The herb should be harvested during the growing season from March to August.

Constituents: Flavonoids (including violanthin, rutin), salicylic acid and salicylates, saponins, unidentified alkaloid, tannins, mucilage, gums, resin

Actions: expectorant, diuretic, anti-inflammatory, antirheumatic, laxative

Indications: Pertussis, acute bronchitis, cystitis, polyuria and dysuria, capillary fragility. cutaneous affections. Specifically indicated in eczema and skin eruptions with serous exudate, particularly when associated with rheumatic symptoms.

Therapeutics and Pharmacology: Viola tricolor can be used both internally and as a compress or ointment in the treatment of eczema, psoriasis and acne and it is a suitable remedy for clearing cradlecap in babies. It is also to treat gout and rheumatoid arthritis, where the salicylates and rutin exert an anti-inflammatory action. It can be used to treat a variety of respiratory disorders such as catarrhal bronchitis. The saponins account for its mild expectorant action and the mucilage is soothing to the respiratory tract. The herb is also diuretic and can be used as part of a treatment for polyuria and dysuria. It is reputed to be of benefit in nocturnal enuresis in children.

The flowers contain a high concentration of rutin which helps prevent bruising and heals broken capillaries. It also reduces fluid build-up in the tissues and helps prevent atherosclerosis, thereby lowering blood pressure.

Hops:

Biological Name: Humulus lupulus (L)

Synonyms and Common names: *Lupuli strobilus*, Humulus, Lupulus

German = Hopfen, French = Houblon, Spanish = Hombrecillo, Italian = Luppolo, Chinese = Lei-mei-ts'ao

Order: Cannabinaceae

Description: Humulus is a native British climbing perennial. The annual stems twist in a clockwise direction, growing up to 6m in length and giving rise to 3-5-lobed sharply-toothed leaves with a very rough surface. The smaller leaves are single lobed. The flowers are dioecious: the small male flowers occur in loose panicles in the upper leaf axils, the female ones in closely-stacked, cone-like catkins made up of bracts with tiny flowers tucked into the axils. The cones grow threefold after fertilisation, up to 5cm in length, and change colour from pale greenish-yellow to yellow-brown. This herb is found Europe to Asia and favours hedgerows, thickets and open woods.

Parts used: The dried strobiles from the female plant.

Collection: The strobiles are collected before they are fully ripe in August and September and dried carefully in the shade They should not be stored for longer than a year because the lupulin is prone to oxidation.

Constituents: Up to 1% volatile oil (humulene, myrcene, caryophylline, farnescene); 15-25% resinous bitter principles and phloroglucinol derivatives known as alpha acids (humulone, cohumulone, adhumulone, valerianic acid) and beta acids (lupulone, colupulone, adlupulone); condensed tannins and phenolic acids, flavonoid glycosides (astralagin, quercitin, rutin), fats, amino acids, unidentified oestrogenic substances, choline, asparagin. The oil and bitter resins together are known as lupulin.

Actions: Sedative, soporific, visceral spasmolytic, aromatic bitter, digestive tonic, hypnotic, astringent, diuretic, anti-oxytocic, male anaphrodisiac; topically bactericidal, locally antiseptic

Indications: Neuralgia, insomnia, excitability, priapism, mucous colitis, anorexia; topically for crural ulcers. Specifically indicated in restlessness associated with nervous tension headache and/or indigestion.

Therapeutics and Pharmacology: Humulus is a central nervous system relaxant used extensively to treat of insomnia, and hop pillows are very popular. The volatile oils are active here, although the valerianic acid bitter component also contributes to this action. Hop pillows induce relaxation by acting on the olfactory centre and thus on the central nervous system through the limbic system. Humulus helps relieve tension and anxiety and may be used where tension results in restlessness, headache and indigestion. Alcoholic extracts of Humulus show a strong spasmolytic action on smooth muscle and is of benefit wherever there is visceral tension, for example, in nervous dyspepsia, nervous colitis, palpitations, nervous or irritable coughs, and asthma. It reduces the effects of the nervous system on the digestive system, whilst at the same time gently stimulating the digestion.

Its relaxing and astringent actions can be applied to mucous colitis as well as tense bowel states such as irritable bowel syndrome, diverticulitis or Crohn's disease. Humulone and lupulone have an anti-inflammatory action. These constituents are also antibacterial, particularly affecting gram-positive bacteria, in a mechanism thought to involve primary membrane leakage. The herb’s antiseptic action is used in the treatment of infections of the upper digestive tract, ulcers, skin eruptions and wounds. The resistance of Gram-negative bacteria to the resin acids is attributed to the presence of a phospholipid-containing outer membrane, as humulone and lupulone are inactivated by serum phospholipids. Antifungal activity has been demonstrated towards *Candida albicans*, and the flavone constituents show activity against *Staphylococcus aureus*.

The oestrogenic substances in Humulus may cause loss of libido in men. It has been used with some success in the treatment of premature ejaculation and priapism. Recent research suggests an anti-oxytocic property, supporting the claims for its use in dysmenorrhoea and amenorrhoea (particularly when associated with anorexia nervosa).

In popular healing Humulus is used as a diuretic, for bladder inflammation, jaundice and other liver complaints, and is believed to have a hypotensive effect. Asparagin contributes to the plant's diuretic action.

Irish Moss:

Biological Name: Chondrus crispus (L)

Synonyms: carragheen, pearl moss, carrahan

Order: Gigartinaceae/Rhodophyta

Description: Chondrus is a seaweed or red alga, purple to green when fresh but dried to yellow-brown translucent forked fronds or thalli, 5-25cm long. It is found on the Atlantic coasts of Ireland, Europe and the United States.

Parts used: dried thallus

Collection: Chondrus may be collected from the rocky coasts of north-west Europe at low tide all year round.

Constituents: up to 80% mucilage, polysaccharide complexes (carrageenans - up to 80%), protein, iodine, bromine, iron, sulphur, other mineral salts, vitamins A and B1.

Actions: demulcent, nutritive, relaxing expectorant, antitussive, emollient

Indications: convalescence, cachexia, dyspepsia, gastritis, bronchitis, cystitis; topically as a lotion for chapped hands and dermatitis.

Therapeutics and Pharmacology: The large quantity of mucilage in Chondrus makes it a valuable remedy for the treatment of digestive conditions where a demulcent is required, such as gastritis and ulcers. Carrageenan is reported to reduce gastric secretions. It is traditionally given as a nourishing food for invalids and can be boiled with milk and made into a dessert. Its main use is in respiratory problems such as bronchitis, and it has been used in the past to treat tuberculosis.

Indian Tobacco:

Biological Name: Lobelia inflata (L)

Synonyms: lobelia, bladderpod, emetic herb, emetic weed, gagroot, vomitroot, vomitwort, pukeweed, wild tobacco, asthma weed, bladderpod, eyebright

Order: Lobeliaceae

Description: This annual or biennial herb is indigenous to the eastern US and grows in meadows, pastures and cultivated fields. The erect, angular stem, growing up to 1m high, is hairy and contains a milky sap. The thin, light green leaves are alternate, hairy, ovate, and bluntly serrate. Numerous small, two-lipped, blue flowers grow in spike-like racemes from July to November. The fruit is a two-celled capsule filled with small brown seeds.

Parts used: dried aerial parts, and seeds.

Collection: after flowering, when the lower fruits are nearly ripe and dried (between August and September), the entire aerial plant including the seed pods should be collected.

Constituents: Piperidine alkaloids (including lobeline, isolobinine, lobelanine, lobelanidine), carboxylic acids, bitter glycoside (lobelacrin), pungent volatile oil (lobelianin), resin, gum, fats, chelidonic acid

Actions: respiratory stimulant, anti-asthmatic, spasmolytic, expectorant, diaphoretic, nervine, emetic, relaxant.

Indications: spasmodic asthma with secondary bronchitis; chronic bronchitis; spastic colon, spastic muscle conditions; topically for myositis, rheumatic nodules.

Therapeutics and Pharmacology: Lobelia's primary use is as an antispasmodic remedy in bronchitic asthma and bronchitis. In the past, it was also used to induce vomiting. The alkaloids have a paradoxical effect on the respiratory system - lobeline is a powerful respiratory stimulant whilst isolobelanine is an emetic and respiratory relaxant, stimulating catarrhal secretions and expectoration whilst relaxing the muscles of the respiratory system. At therapeutic levels, lobeline acts on the chemoreceptors of the glomus caroticus, causing reflex stimulation of the respiratory centre. Since it is rapidly metabolised, its effects are transitory when taken orally and topical application is often more effective. It has many of the pharmalogical properties of nicotine, first stimulating the central nervous system and then subsequently strongly depressing it. Lobelia has a relaxing and diffusive influence in inflamed, febrile, hypersensitive and irritable conditions; it has a generally depressant action on the central and autonomic nervous system and on neuro-muscular action.

Juniper:

Biological Name: Juniperis communis (L)

Synonyms and Common names: Genevrier, Ginepro, Enebro, *Baccae Juniperi*

Order: Cupressaceae

Description: Juniper is an evergreen coniferous shrub or small tree occurring throughout the northern hemisphere from Europe to Siberia and grows up to 10m in height; it can be either prostrate or erect. Its preferred habitat is heath, moorland and chalk downs, but is also found as undergrowth in mixed open forests. It is

particularly common in pastures where sheep graze as they eat the berries and distribute the seeds in their faeces. As its botanical name suggests, Juniperis communis often occurs in groups. The bark is chocolate-brown tinged with red. The leaves, 5-20mm long, are needle-like and stalkless, occurring in whorls of three, and are pale green below and dark shiny green on the other three sides. The male plant bears a cone 1cm long, the female a much smaller one; the fruit, about 1cm in diameter, appears on the female plant. Initially green, it turns purplish-black with a greyish bloom in the second and third year and has a triangular indentation at the apex. Flowering takes place in April and May and the fruits ripen in September and October of the following year.

Parts used: berries

Collection: The berries are harvested in the autumn of their second year when they are bluish-black in colour. They should be dried carefully to preserve the volatile oil. The fresh berries can be made into a syrup.

Constituents: up to 2% volatile oil (including pinene, myrcene, terpinene, thujone, sabinene, limonene and camphine), up to 10% resin, up to 33% sugar, flavone glycosides, condensed gallotannins, bitter substance (juniperin), anti-tumour agent (podophyllotoxin), organic acids, vitamin C, tannins.

Actions: Diuretic, increasing the elimination of acid metabolites; urinary antiseptic, carminative, stomachic, antirheumatic, uterine stimulant, anti-inflammatory

Indications: specifically indicated in cystitis, in the absence of renal inflammation.

Therapeutics and Pharmacology: Juniperus is primarily used in the treatment of urinary tract infections such as cystitis and urethritis. The antiseptic volatile oil is excreted in the urine, disinfecting the urinary tract as it passes through. This action is enhanced by a diuretic effect which dilutes the urine. The volatile oil component, terpinen-4-ol, is reported to increase the glomerular filtration rate of the kidneys. Juniperus is also applicable to urinary calculi.

It is a useful remedy for gastric conditions resulting from an underproduction of hydrochloric acid and is also of benefit in gastrointestinal infections, inflammations and cramps. The bitter action aids digestion and relieves flatulent colic.

Juniperus is often used in the treatment of rheumatism, arthritis and gout, and other arthritic conditions associated with the accumulation of acid waste. Here, it promotes the excretion of uric acid at the kidney. Applied externally, the diluted essential oil penetrates the skin to help relieve joint and muscle pain and neuralgia. It warms the tissues by perfusing them with blood. The undiluted oil is irritant and is likely to cause inflammation and blisters.

As a vapour bath, Juniperus is helpful in the treatment of bronchitis and lung infections. when chewed, the berries freshen the breath and help heal infected gums. Anti-viral activities exhibited by the volatile oil have been partially attributed to the flavonoid amentoflavone.

Juniperus stimulates uterine muscle and so can be used in delayed menstruation, but it must never be used during pregnancy.

Lesser Celandine:

Synonyms and Common names: *Ficaria ranunculoides* (Moench.), pilewort, small celandine, smallwort, figwort, brighteye, butter and cheese

Order: Ranunculaceae

Description: Ranunculus ficaria is a common perennial indigenous to Britain, Europe and western Asia. The leaves are mostly radical, the petioles up to 15cm long, and the lamina up to 4cm long and 5cm broad, ovate, cordate or reniform. Bright yellow solitary flowers on long peduncles appear in spring, and have three sepals and 8-12 lanceolate petals, each with a nectary at the base. The fleshy roots, up to 3cm long, are oblong or club-shaped.

Parts used: the tubers and sometimes the whole plant

Collection: the tubers are unearthed in May and June.

Constituents: Saponins (based on hederagenin and oleanolic acid), anemonin and protoanemonin, tannin

Actions: astringent, locally demulcent

Indications: haemorrhoids. Specifically indicated for internal or prolapsed piles with or without haemorrhage by topical application as an ointment or suppository.

Therapeutics and Pharmacology: As suggested by this herb's common name, it has a traditional use in the treatment of piles, both as an internal remedy and in the form of an ointment or suppository. Nowadays, it is used only externally because of its acrid nature. The saponins are locally anti-haemorrhoidal, an action enhanced by the astringent tannins. The saponins have a fungicidal action. Protoanemonin in the fresh plant is antibacterial and a strong local irritant but it is not found in the dried material where its dimer anemonin is inactive.

Marigold

: Calendula officinalis (L)

Synonyms and Common names: Pot marigold, Mary bud, Mary gold, gold bloom, Garden marigold, holigold, golds, ruddes, ruddles, Mary Gowles, *Oculus Christi*

Description: Calendula is an annual plant with angular branched stems and prominent pale green spatulate or oblanceolate sessile leaves with widely spaced teeth. The whole plant stands 30-60cm high. The bright orange or yellow flowers are borne on a crown-shaped receptacle and, as the petals drop off, a circular corona of seeds remains. It is a native of Egypt and the Mediterranean, but has become naturalised throughout temperate regions of the world, often in previously cultivated land. Many cultivated varieties of marigold come from completely different genera and these should be distinguished from *Calendula officinalis*.

Parts used: dried flower heads or petals

Collection: The whole flower tops or just the petals are collected between June and September. To prevent discolouration, they should be carefully dried in the shade and stored in well-sealed containers.

Constituents: Triterpenoid saponins (sapogenin: oleonolic acid), carotenoids (pro-vitamin A), bitter glycosides, a yellow resin calendulin, volatile oil, sterols, flavonoids, mucilage, carotenoid pigments

Actions: Spasmolytic, mild diaphoretic, anti-inflammatory, antihaemorrhagic, non-tannin astringent, styptic, vulnerary, local tissue healer, antifungal, antiseptic, cholagogue, emmenagogue, menstrual regulator.

Indications: inflammations of the skin and mucosa

Therapeutics and Pharmacology: Calendula is an extremely effective herb for the treatment of skin problems and can be used wherever there is inflammation of the skin, whether due to infection or physical damage; for example, crural ulceration, varicose veins, haemorrhoids, anal fissures, mastitis, sebaceous cysts, impetigo or other inflamed cutaneous lesions. It is also specifically indicated in enlarged or inflamed lymphatic nodes. It may be used externally for any wound, bruising or strains and is of particular value in the treatment of slow-healing wounds and skin ulcers or as a first aid treatment of minor burns and scalds. Calendula has been shown to promote blood clotting and to reduce capillary effusion. As an eye lotion, it can be used to treat conjunctivitis. Topical application may be as a lotion, poultice or compress. As an ointment, it is an excellent cosmetic remedy for repairing minor damage to the skin such as subdermal broken capillaries or sunburn. The sap from the stem is reputed to remove warts, corns and calluses. Isolated polysaccharides from the flowers were found to stimulate phagocytosis of human granulocytes *in vitro*. Although it contains no tannins, Calendula is locally astringent, due to its resin component and probably to other water-soluble constituents as well.

The plant acts against fungal, protozoal, bacterial and viral infections. Antifungal activity has been demonstrated *in vitro* with a 10% methanol extract, and a 70% hydro-alcoholic tincture had high virucidal activity against influenza viruses and suppressed the growth of *herpes simplex* virus. The oxygenated terpenes are active against *trichomonas*. Tincture of Calendula tincture, particularly when combined with Commiphora, is an effective local treatment for fungal and other infections of the vagina, or for fungal skin conditions.

Taken internally, Calendula is of benefit in digestive inflammation, for example, gastric or duodenal ulcers. It is indicated in unresolved infection or erosion of the upper digestive tract, particularly where there is evidence of bleeding into the gut (i.e. the dark stools of melaena). As a cholagogue it helps relieve gallbladder problems and to aid the digestion generally.

As an emmenagogue, Calendula can be of benefit in the treatment of delayed menstruation and dysmenorrhoea. The hormonal influences are likely to stem from the sterol fraction.

Nettle:

Biological Name: Urtica dioica (L)

Synonyms and Common names: *Urticae herba, Urticae radix*, Stinging nettle, common nettle

German = Grosse brandnetel, French = Grande ortie, Spanish = ortiga, Italian = Grande ortica

Order: Labiatae

Description: Urtica dioica is a native British perennial growing in damp forests or wherever land has been disturbed by Man. It has a richly-branched yellow rhizome, which spreads which over large areas, and from which grow numerous erect, quadrangular stems. These are up to 120cm tall and are covered with long stinging hairs and short bristly hairs. The opposite, stalked, cordate or lanceolate leaves are serrated at the margin and covered on both sides with stinging hairs. The flowers are unisexual, the plants dioecious, although monoecious ones do occur. The flowers are arranged in drooping panicles, growing in groups from the upper leaf axils. The male inflorescences are erect and shortly branched, with four perianth segments and four stamens. The female flowers have two perianth segments and a superior ovary with a stalkless stigma. The fruit is an achene.

Parts used: the leaves or aerial parts of young plants; roots

Collection: the leaves are collected from June to October during the flowering period, the roots in spring and autumn.

Constituents: Leaves: Flavonoids (isoquercitin, rutin); acrid components, particularly in the stinging hairs (including histamine and 5-hydroxytryptamine, formic acid, volatile and resinous acids); silica, glucoquinone, tannins, ascorbic acid and other minerals and vitamins in appreciable levels. Root: polysaccharides, sterols

and sterol glucosides, lignans, ceramides, fatty acids, monoterpene diols and glucosides

Actions: mild diuretic, astringent, tonic, haemostatic, dermatological agent; extracts are reported to have hypoglycaemic properties.

Indications: rheumatic conditions, uterine haemorrhage, cutaneous eruptions, infantile and psychogenic eczema, epistaxis, melaena. Specifically indicated in nervous eczema. The root is indicated in the symptomatic treatment of micturition disorders such as nocturia, pollakisuria, dysuria and urine retention and in benign prostatic hyperplasia.

Therapeutics and Pharmacology: Urtica is rich in iron and vitamin C, making it a useful remedy in anaemia and other debilitated states, the presence of the vitamin C ensuring that the iron is properly absorbed. The herb has an important effect on the kidney and on fluid and uric acid excretion, so is of benefit in gout and other arthritic conditions, particularly if there is an element of anaemia. The painful, irritant effect of the sting is lost on drying or heating with water, but if preserved in cold alcoholic tincture the irritant action is preserved. A tincture of the fresh leaf applied locally to an inflamed joint will induce counter-irritation and produce reddening over the joint. Blood is thus flushed through the area and out to the surface of the skin, where the toxins may even be taken off in the fluid of a burst blister.

Urtica is also of benefit in chronic skin conditions such as eczema, helping to cleanse the body of accumulated toxins. An infusion of the dried leaf is effective in helping to control dandruff and hair loss on the scalp. As a haemostatic and astringent, Urtica helps check wound bleeding and to treat menorrhagia; it is also used for haemorrhoids and can be taken internally to treat gastric and intestinal problems. The powdered leaves were traditionally used as a snuff to arrest nosebleeds.

Urtica is known to stimulate milk flow in nursing mothers, and is often used in this way by farmers for their stock. It has been shown experimentally to have both hypoglycaemic and hyperglycaemic properties, the hypoglycaemic component being 'urticin'.

In a clinical trial, men with benign prostatic hypertrophy (Stages I and II) were treated with a dried standardised Urtica root extract for 20 weeks. A morphologically relevant effect on the prostate adenoma cells was found that may be due to competitive inhibition by the extract of the binding capacity of SHBG (sex hormone binding globulin). An increased binding capacity of SHBG to testosterone and dihydrotestosterone results in hyperplasia as a compensation for a decrease in hormones. Other clinical trials have reported improvements in urinary flow, and reduced urinary frequency, nocturia and residual urine after six months treatment.

Oats:

Biological Name: Avena sativa (L)

Synonyms: Groats, oatmeal, common oat

Order: Graminaceae

Description: This is an annual cereal grass with a fibrous root producing a smooth, hollow, jointed stem, growing up to 120cm tall, with more or less rough pale green, narrow flat leaves. The flowers are arranged in a loose terminal panicle from 15-30cm long consisting of two-flowered spikelets up to 2.5cm long. The hairy, grooved grain is narrow with almost parallel sides. Avena has a wide distribution as a cereal crop.

Parts used: The whole flowering plant (oatstraw) and the seed

Collection: The straw is collected in midsummer, the seed usually in August.

Constituents: Saponins (including avenacosides A and B), alkaloids (including indole alkaloid, gramine, trigonelline, avenine), sterol (avenasterol), flavonoids, silica (particularly in the straw), starch (50% in the seeds), protein (including gluten), minerals (calcium, iron, phosphorus, copper, magnesium, zinc), vitamins B1, B2, D and E, carotene, fat, fixed oil

Actions: antidepressive, thymoleptic, cardiac tonic, nervous system restorative, nutritive, demulcent, vulnerary

Indications: depression, melancholia, menopausal neurasthenia, general debility.

Therapeutics and Pharmacology: Avena is a nourishing herb applicable to any state of debility and exhaustion and during convalescence. It is particularly suited as a long-term treatment in nervous debility, making gradual but sustained progress in fighting off shingles and other forms of herpes, neuralgia, neuritis and even chronic depression. It is also of benefit as part of a regime for people attempting to withdraw from an addiction to alcohol, smoking, tranquillizers or other drugs. The mild sedative and hypnotic properties are due to the indole alkaloid gramine. The alkaloid avenine stimulates the central nervous system and is the component which causes horses fed on large quantities of oats to become highly excitable.

Oatbran and, to a lesser extent, oatmeal, are rich sources of inositol, important for the proper metabolism of fats and for reducing blood cholesterol levels, while the silica content has local healing effects which can help skin problems when applied locally. It may be applied as a poultice for wounds, burns and neuralgia. Oatstraw can be used for thyroid and oestrogen deficiency, for degenerative diseases such as multiple sclerosis, and for colds, especially if recurrent or persistent. Regular use of oats as a food will help to correct constipation.

Peppermint:

Biological Name: Mentha piperata (L)

Synonyms: brandy mint, lamb mint

Order: Labiatae

Description: Mentha is a perennial herb up to 60cm tall, with smooth leaves which are often purplish, and purple labiate flowers. The plant is a hybrid of *M.aquatica* (water mint) and *M. spicata* (spearmint), the latter being a hybrid of *M. longifolia* and *M. suaveolens*. The first known cultivation of *M. piperata* was in Mitcham in 1750. It is widely grown in temperate areas of the world, particularly in Europe and the USA.

Parts used: aerial parts, distilled essential oil

Collection: just before the flowers open, from the end of July to the end of August.

Constituents: up to 1.5% volatile oil (at least 45% free menthol); monoterpenes (menthone, menthofuran, menthyl acetate, cineole and limonene; sesquiterpenes (viridoflorol); flavonoids (luteolin, menthoside, isorhoifolin, rutin, hesperidin); phenolic acids (caffeic, chlorogenic and rosmarinic); triterpenes (squalene, a-amyrin, ursolic acid, sitosterol); flavonoids; phytol; tocopherols; carotenoids; choline; betaine; azulenes; rosmarinic acid; tannin; minerals

Actions: spasmolytic, carminative, choleretic, diaphoretic, aromatic, nervine, antemetic, peripheral vasodilator with a paradoxical cooling effect, cholagogue, bitter. Locally antiseptic, antiparasitic, analgesic and antipruritic.

Indications: intestinal colic, vomiting of pregnancy, flatulent dyspepsia, biliary disorders, common cold, dysmenorrhoea.

Therapeutics and Pharmacology: Specifically indicated in flatulent digestive pains, Mentha has a notable action on the lower bowel. Externally, peppermint oil or menthol is used in pain-relieving balms, massage oils and linaments. Menthol is cooling and anaesthetic when applied to the skin, increasing blood flow to the area over which it is applied. It may be used to relieve itching and inflammations. Inhalations of the herb and oil in boiling water are effective against upper respiratory or bronchial catarrh. Inhaled, it has a drying effect on the mucous membranes and ingested it has a settling effect on the gastric and intestinal mucosa. It is a useful remedy to increase concentration. It reduces nausea and is helpful in travel sickness. It promotes sweating in fevers and influenza. As a nervine it acts as a tonic, easing anxiety, tension and hysteria. In dysmenorrhoea it relieves the pain and associated tension.

The pharmacological actions of Mentha are largely due to the volatile oil, which is carminative and a potent spasmolytic, acting locally to produce visceral muscle relaxation. The volatile oil acts as a mild anaesthetic to the mucous membrane of the stomach, relieving nausea and the desire to vomit. It reduces the tone of the cardiac sphincter and relaxes the gastro-oesophageal sphincter, allowing expulsion of air in flatulent dyspepsia. It relieves colonic spasm and bowel irritability. Chronic disease of the pancreas also responds well to peppermint, as do abnormal fermentation processes in the intestine, for example, when the bowel flora is abnormal. Menthol is bactericidal and antiparasitic. Dissolved in alcohol, it is effective against ringworm and other fungal infestations. It is also four times as powerful an antiseptic as phenol. The flavonoids contribute to the spasmolytic activity, and flavonoids and phenolic acids to the choleretic activity - it promotes liver and gallbladder function.

Combinations: Mentha may be combined with Sambucus and Achillaea or Eupatorium perfoliatum in influenza.

Caution: Prolonged use of the essential oil as an inhalant should be avoided as Mentha can irritate the mucous membranes Do not give any form of mint directly to young babies. It can reduce milk flow, so should be taken with caution during lactation.

Queen’s Delight:

Biological Name: Stillingia sylvatica (L)

Synonyms: Queen's root, yawroot, cockup hat, marcory, silver root, silver leaf, pavil

Order: Euphorbiaceae

Description: Stillingia is a perennial, growing up to 1.5m tall in acid and sandy soils in the southern United States of Florida, Virginia and Texas. It has alternate leathery, sessile leaves and a terminal spike of yellow flowers. The fruit is a three-lobed capsule.

Parts used: root (not more than two years old)

Collection: the root is unearthed after flowering in July

Constituents: volatile oil (up to 4%), acrid resin (sylvacrol), acrid fixed oil, tannins (10-12%), calcium oxalate, cyanogenic glycosides, starch

Actions: sialagogue, expectorant, alterative, dermatological agent, diaphoretic, astringent, antispasmodic, circulatory stimulant, laxative, cathartic in large doses.

Indications: bronchitis, laryngitis, laryngismus stridulus, cutaneous eruptions, haemorrhoids, constipation

Therapeutics and Pharmacology: Stillingia is of value in the treatment of chronic exudative skin conditions such as eczema and psoriasis, and is specifically indicated where there is lymphatic involvement. Treatment is likely to be fairly long-term. It is also used to treat bronchitic congestion and laryngitis, especially when accompanied by loss of voice (laryngismus stridulus); it may also be used to treat croup when the cough is harsh (the herb helps promote the flow of saliva). It will help to relieve constipation and, as an astringent, it is particularly of benefit for haemorrhoids.

Combinations: For the treatment of skin problems Stillingia combines well with Arctium, Rumex, Fumaria, Galium and Iris. It may also be used with Lobelia, Sanguinaria, Pimpinella and Eucalyptus in laryngismus stridulus and bronchitis.

Caution: Large doses of Stillingia can irritate the skin and mucous membranes, and it is a powerful sternutatory herb. It can also be cathartic and emetic and should always be used with care. It should not be stored for more than two years.

Raspberry:

Biological Name: Rubus idaeus (L)

Synonyms: Garden raspberry, European red raspberry, raspbis, hindberry (from Anglo-Saxon *Hindbeer*), bramble of Mount Ida

Order: Rosaceae

Description: A thorny perennial bush found in woods throughout Britain, Europe and northern Asia and cultivated in most temperate areas. It has a creeping rootstock and biennial, slightly prickly flowering stems up to 1.5m high. The leaves are divided into three to five pointed and toothed leaflets, light green above and whitish underneath; the long panicles of white flowers with short, narrow petals give way to the familiar red fruit.

Parts used: leaves and fruit

Collection: the leaves are collected throughout the growing season but before the fruit ripens; the fruit is collected when ripe.

Constituents: flavonoids (including kaempferol and quercetin), tannins, polypeptides, volatile oil, pectin, citric acid, malic acid, fragarine (uterine tonic). The fruit contains vitamins A, B, C, E, sugars, iron, calcium, phosphorus and volatile oil.

Actions: astringent, tonic, refrigerant, parturient, uterine stimulant, digestive remedy. The fruit is diuretic, laxative, diaphoretic and cleansing.

Indications: diarrhoea, pregnancy, stomatitis; as a gargle for tonsillitis or an eye lotion for conjunctivitis

Therapeutics and Pharmacology: Rubus leaves have a long tradition of use during pregnancy to strengthen and tone uterine tissue, assisting contractions and checking haemorrhage during labour. For this action to occur the herb should be drunk regularly throughout the last trimester of pregnancy and during labour. The infusion also enriches an encourages the flow of breast milk. As an astringent, Rubus may be used in the treatment of diarrhoea, stomatitis and leucorrhoea, and as a gargle for tonsillitis, a mouthwash for mouth ulcers, bleeding gums and inflammations, and as an eyewash for conjunctivitis. The leaves are sometimes included in rheumatic remedies where they have a diuretic action, and in France they are regarded as a tonic for the prostate gland. The diluted tincture may be applied to wounds and inflammations or as a mouthwash for ulcers and gum inflammations. The berries are traditionally taken for indigestion and rheumatism. They are rich in nutrients and iron and help combat anaemia.

Combinations: With Agrimonia and Geum in diarrhoea. With Salvia as a mouthwash or gargle. With Euphrasia as an eye lotion.

Caution: Avoid high doses of the leaves during early pregnancy as they can stimulate uterine contractions.

Rosemary:

Biological Name: Rosmarinus officinalis (L)

Synonyms and Common names: Polar plant, Compass weed, Compass plant

French=Romarin or Encensier, German = Rosmarin, Spanish = Romere, Italian = Rosarine

Order: Labiatae

Description: Rosemary is an evergreen shrub indigenous to Southern Europe, particularly on the dry rocky hills of the Mediterranean region. The numerous branches have an ash-coloured scaly bark and bear opposite, narrow, revolute, leathery, thick leaves which are lustrous and dark green above and downy white

underneath. They have a prominent vein in the middle and margins which are rolled down. The pale blue, sometimes white, labiate flowers grow in short axillary racemes and appear between April and June, slightly later in cooler climates.

Parts used: leaves and twigs, oil

Collection: The leaves can be harvested at any time although they are at their best during the flowering period.

Constituents: About 1% volatile oil (containing 2-5% esters, mainly borneol acetate and 10-18% free alcohols including borneol and linalol), camphor, camphene and cineole; flavonoids (diosmin, apigenin, diosmetin, genkwanin, 6-methoxygenkwanin, hispidulin, sinensetin, luteolin and derivatives), phenolic acids (rosmarinic and others); diterpenes such as carnosilic acid , picrosalvin (carnosol), and rosmariquinone; triterpenic acids (ursolic and oleanic acids and derivatives); carnosic acid (rosmaricine)

Actions: carminative, stomachic, aromatic, spasmolytic, thymoleptic, antiseptic, anti-inflammatory, diaphoretic, stimulant to the peripheral circulation, sedative, antidepressive, relaxant, restorative to the nervous system, reputed cardiac tonic, cholagogue, diuretic, emmenagogue, antimicrobial. Topically rubefacient, mild analgesic and parasiticide

Indications: Flatulent dyspepsia associated with psychogenic tension, migrainous, vasoconstrictive or hypertensive headaches. Topically for myalgia, sciatica and intercostal neuralgia.

Therapeutics and Pharmacology: Rosmarinus is specifically indicated in depressive states accompanied by general debility and indications of cardiovascular weakness and is of value as a tonic for elderly people with weak circulation, particularly after a debilitating illness such as influenza and pneumonia. The flavonoid diosmin improves the circulation and strengthens fragile blood vessels. Diosmin is reported to be more effective in decreasing capillary fragility than rutin. The herb is of benefit in palpitations and other signs of nervous tension which affect the circulation. The camphor has a general tonic effect on the circulation and nervous system, especially the vascular nerves, making it an excellent drug for all states of chronic circulatory weakness including hypotension.

Rosmarinus is beneficial in dyspeptic conditions with flatulence and signs of liver inadequacy. It is of particular value in atonic conditions of the stomach where there is also generally poor circulation. The herb reduces flatulence and is stimulating to the digestion, liver and gallbladder, increasing the flow of bile; as rosmaricine breaks down in the body it stimulates the smooth muscle of the digestive tract and gallbladder. An infusion makes a good mouthwash for halitosis.

Externally, Rosmarinus is used to ease muscular pain, sciatica and neuralgia, and the oil is a component of liniments used for rheumatism. A salve made from the oil can be applied to sores, eczema, bruises and wounds. The anti-inflammatory action of the herb is thought to be due to rosmarinic acid, ursolic acid and apigenin.

It is an excellent remedy for headache, taken either as an infusion or by applying the oil to the temples. Rosemarinus can also be applied locally as a wash for dandruff and scurf, or added to a bath for a stimulating effect. It has been used since ancient times to improve and strengthen the memory.

The oil also possesses antibacterial and antifungal properties, and antimicrobial activity has been documented towards moulds and Gram-positive and Gram-negative bacteria including *Staphylococcus aureus, Staphylococcus albus, Vibrio cholerae* and *Escherichia coli*. Carnosol and ursolic acid inhibit a range of food spoilage bacteria

Sage:

Biological Name: Salvia officinalis (L)

Synonyms and Common names: narrow-leaved sage, garden sage, Spanish sage, *Salviae folium*

German = Salbei, French = Sauge, Spanish = Salvia, Italian = Salvia grande

Order: Labiatae

Description: Salvia is a perennial herbaceous to shrubby herb growing up to 50cm in height. It is native to the Balkans and the Mediterranean, but is grown widely elsewhere as a garden and pot herb. It prefers dry chalky soils in sunny areas, but will thrive in a rich loamy soil with good drainage. It has a woody stem and lower branches which give way to the labiate square stem which is green or purplish in colour and covered in a fine down. The stalked and opposite leaves are oblong to lanceolate with a leathery texture, covered in fine down. The leaf margins are delicately toothed. The blue flowers, which appear in June and July, occur as whorls in a spike at the end of the stems.

Parts used: the leaves or the entire soft annual shoots; essential oil

Collection: It is usually harvested in May and June, just before flowering. The leaves can be harvested a second time in September.

Constituents: 1-2.5% volatile oil (containing salvene, pinene, camphor, cineole, borneol, 30% thujone, salvene esters and sesquiterpenes), saponins, diterpene bitter principle, flavonoids, phenolic acids, salviatannin (a condensed catechin), oestrogenic substances, resin

Actions: aromatic, carminative, spasmolytic, antiseptic, astringent, antihidrotic

Indications: flatulent dyspepsia, pharyngitis, uvulitis, stomatitis, gingivitis, glossitis, taken internally or as a gargle or mouthwash; hyperhydrosis, galactorrhoea. Specifically indicated in inflammations of the mouth, tongue or throat.

Therapeutics and Pharmacology: The thujone in the volatile oil has an antiseptic and antibiotic action and, when taken as a mouthwash, Salvia deals effectively with throat infections, dental abscesses, infected gums and mouth ulcers. It can also be applied to external wounds. The essential oil, heated in a vaporiser, will disinfect sick-rooms. The phenolic acids in Salvia are particularly potent against *Staphylococcus aureus* . *In vitro*, sage oil has been shown to be effective against both gram-positive and Gram-negative bacteria including *Escherichia coli* and *Salmonella species*, and against filamentous fungi and yeasts such as *Candida albicans*. Salvia also has an astringent action due to its relatively high tannin content and can be used in the treatment of infantile diarrhoea. Its antiseptic action is of value where there is intestinal infection. Rosmarinic acid contributes to the herb's anti-inflammatory activity.

Salvia has an antispasmodic action which reduces tension in smooth muscle, and it can be used in a steam inhalation for asthma attacks. It is an excellent remedy for helping to remove mucous congestion in the airways and for checking or preventing secondary infection. It may be taken as a carminative to reduce griping and other symptoms of indigestion, and is also of value in the treatment of dysmenorrhoea. Its bitter component stimulates upper digestive secretions, intestinal mobility, bile flow, and pancreatic function, while the volatile oil has a carminative and stimulating effect on the digestion. The thujone has a vermifuge action. There also seems to be a more general relaxant effect, so that the plant is suitable in the treatment of nervousness, excitability and dizziness. It helps to fortify a generally debilitated nervous system.

Salvia has a strong antihydrotic action, and was a traditional treatment for night sweats in tuberculosis sufferers. Its appreciable oestrogenic effect make it particularly beneficial for the night sweats of the menopause (it should never be used to suppress perspiration in fevers). Its oestrogenic effects may also be used to treat some cases of dysmenorrhoea and menstrual irregularity or amenorrhoea. It is effective in reducing milk production, and can be used during the process of weaning an infant off the breast.

Tea:

Biological Name: Camellia sinensis (L)

Synonyms: *C. thea* (Link.), *Thea sinensis* (Sims.), *C. theifera* (Griff.)

Order: Theaceae

Description: This small evergreen shrub is cultivated in Ceylon, Java, Japan and elsewhere where climate allows. It grows to a height of 2.5m when cultivated, but may reach 30m in the wild. The dark green lanceolate or elliptical leaves grow on short stalks. They are blunt at the apex, with a tapering base and serrate margins. The young leaves are hairy, the older ones glabrous. The flowers can be solitary, or two or three occur together on short branchlets in the leaf axils. They droop from short stalks. The fruit is a smooth, flattened, rounded, trigonous three-celled capsule with a solitary seed in each cell.

Parts used: dried and rolled leaf buds and very young leaves. Oolong tea is partially fermented; black tea is fully fermented.

Constituents: alkaloids (including caffeine and theobromine), tannins (polyphenols), catechins, volatile oil

Actions: stimulant, astringent, diuretic, mildly analgesic, antioxidant, antibacterial; some varieties reduce blood cholesterol levels; anti-tumour properties reported in green tea.

Indications: diarrhoea, dysentery

Therapeutics and Pharmacology: Black tea is used in the treatment of diarrhoea and dysentery and for the relief of neuralgic headaches. It is also a traditional Cantonese remedy for hangovers. The Chinese use tea as an astringent remedy to clear phlegm, and as a digestive remedy. Research has demonstrated that the tannins in some green teas appear to reduce the risk of stomach cancer. Japanese research suggests that oolong tea can reduce high blood pressure and help prevent arterial disease. Green tea is rich in fluoride and so can reduce the risk of tooth decay. It is also useful for insect bites and to stem bleeding. A weak infusion of tea can be used as a cooling wash for sunburn and used teabags can be applied to tired eyes.

Vervain:

Biological Name: Verbena officinalis (L)

Synonyms and Common names: European vervain, Enchanter's plant, Herb of the Cross, Holy herb, Juno's tears, Pigeon's grass, Pigeonweed, Simpler's joy, Herb of Grace

German = Eisenkraut, French = Verveine, Spanish and Italian = Verbena

Order: Verbenaceae

Description: Verbena is a slender perennial herb, 30-90cm tall, with a woody stalk and several stiffly erect stems. The lower leaves are obovate, deeply divided and stalked, the upper ones lanceolate, slender, sessile and toothed. Tiny blue flowers appear in long slender spikes in the axis of a bract, becoming denser higher up each spike. The fruit comprises four cylindrical nutlets enclosed in the calyx. Verbena is indigenous to England, central and southern Europe, North Africa and Asia, and has been introduced into North America. It grows in waysides and waste places.

Parts used: the aerial parts

Collection: The herb is collected just before the flowers open, usually in July, and dried quickly.

Constituents: Iridoid glycosides (verbenin, verbenalin, bastatoside), bitter principle, tannin, volatile oil (including citral, geraniol, limonene, verbenone), mucilage, unidentified alkaloid, saponin

Actions: Sedative, relaxant, nerve tonic, thymoleptic, spasmolytic, mild diaphoretic, hepatic, reputed galactagogue

Indications: Depression, melancholia, hysteria, generalised seizures, cholecystalgia, jaundice, early stages of fevers. Specifically indicated in depression and the debility of convalescence after fevers, especially influenza.

Therapeutics and Pharmacology: Verbena strengthens the nervous system whilst relaxing tension and stress. It is used in the treatment of depression and melancholia, particularly following a debilitating illness such as influenza. It is used as a relaxant and antispasmodic remedy in asthma, migraine, insomnia and nervous coughing. Verbenalin, one of the constituents, has a direct action on smooth muscle

and also has a potential hypotensive effect. As a diaphoretic, the herb is indicated in the early stages of fever.

The glycosides also have a reputed galactagogue and emmenagogue action, and the Chinese use Verbena to treat migraines associated with female sex hormone fluctuations. The galactagogue properties are attributed to aucubin. A luteinising action has been reported, and attributed to inhibition of the gonadotrophic action of the posterior lobe of the pituitary gland. Verbena has been documented to possess weak parasympathetic properties, causing slight contraction of the uterus, and verbenalin exhibits uterine stimulant activity.

Verbena is used on the Continent for liver conditions, jaundice and gallstones, and as a gentle but effective laxative. It is a traditional remedy for infected gums and tooth decay, halitosis and tonsillitis. This is supported by the discovery that the glycoside verbenin has a direct effect on glandular secretions, suggesting an effect on the production of saliva.

A poultice of the herb may be applied to insect bites, sprains and bruises, and the ointment is used to treat eczema, wounds, weeping sores and painful neuralgia.

Wild Cherry:

Biological Name: Prunus serotina (Ehrh.)

Synonyms: Virginian prune, black cherry, black choke, choke cherry, rum cherry

Order: Rosaceae

Description: Prunus is a large tree, up to 30m tall, and is widely distributed in woods throughout North America, especially in the Northern and Central states. It produces alternate stiff oblong or ovate leaves with serrated margins and small white flowers growing in lateral racemes. The bark is rough and nearly black on older trunks, but that used is younger, smooth, glossy and reddish brown with white lenticels and underlying greenish-brown cortex. The fruit is a nearly spherical, purple-black drupe, around 1.5cm in diameter, ripening in late summer and autumn.

Parts used: dried bark

Collection: from young plants in the autumn when it has its highest prussic acid content.. The outer bark is stripped off and the inner bark dried in the shade. It should be protected from light.

Constituents: cyanogenic glycosides including prunasin; volatile oil, benzaldehyde, coumarins, benzoic acid, gallitannins, resin, an enzyme (prunase).

Actions: antitussive, expectorant, mild sedative, astringent, digestive bitter, tonic, pectoral, stomachic

Indications: irritable and persistent cough of bronchitis, pertussis, cough due to increased irritability of respiratory mucosa. Nervous dyspepsia.

Therapeutics and Pharmacology: Prunus is an important cough remedy. The cyanogenic glycosides are hydrolysed in the body to glucose, benzaldehyde and hyanocyanic acid, otherwise known as prussic acid. Prussic acid is rapidly excreted via the lungs where it first increases respiration and then sedates the sensory nerves which provoke the cough reflex. Due to its powerful sedative action, it is used primarily in the treatment of irritating and persistent coughs when increasing expectoration is inappropriate, and thus has a role in the treatment of bronchitis and whooping cough and in the racking cough of debility or convalescence. It can be combined with other herbs to control asthma. Both the cyanogenic glycosides and volatile oil help to improve the digestion, and Prunus may be used as a bitter where digestion is sluggish. The cold infusion of the bark may be used as a wash in eye inflammation and as an astringent in diarrhoea.

Yarrow

Biological Name: Achillea millefolium (L)

Synonyms and Common names: Milfoil, Millefoil, Nosebleed, Staunchgrass, Thousand-leaf, Soldier's woundwort, Sanguinary, Bloodwort, Noble yarrow, Old Man's Pepper, Knight's Milfoil, Herbe Militaris, Thousand Weed, Carpenter's Weed, Staunchweed, Devil's Nettle, Devil's Plaything, Bad Man's Plaything, Yarroway, Angel flower

French = Millefieulle, achillee, German = Schafgarbe, Italian = mille foglio

Order: Compositae

Description: A native perennial upright, aromatic herb, with tough, erect, furrowed woody stems up to 50cm high, growing from a creeping rhizome. The finely-divided alternate leaves are 5-12cm long, bi- and tri-pinnate, accounting for its Latin name meaning 'thousand-leaf'. The composite flowers are arranged in dense flat-topped terminal corymbs, white to pink, each flower being about 4-6mm in diameter and with a characteristic odour. It is common in pastures, grassy banks, hedgerows and waste places in dry sunny positions throughout most of Europe, but is rare in the Mediterranean. Plants with only white flowers grow on calcium-rich soils, but pink-flowered yarrow may grow on acid soils. Plants grown on acid soils contain greater quantities of the active constituent azulene.

Parts used: dried aerial parts, essential oil

Collection: during the flowering period, between June and September. The leaves may be collected throughout the growing season.

Constituents: Up to 0.5% volatile oil (containing up to 51% of the blue oil azulene, borneol, terpineol, isoartemisia ketone, cineol, eugenol, thujone, pinene, camphor, achillin, sabinene), lactones, cyanogenic glycosides, aconitic and isovalerianic acid, salicylic acid, asparagin, triterpenes, sterols, flavonoids (apigenin, rutin, luteolin, quercetin, kaempferol), bitters (including

ivain), tannins, hydroxycoumarins, saponins, sugars, cyanidin, amino acids, fatty acids, glycoalkaloid (achilleine), resins, fluorescent substance.

Actions: Diaphoretic, antipyretic, hypotensive, peripheral vasodilator, astringent, haemostatic, diuretic, urinary antiseptic, anti-inflammatory, spasmolytic, aromatic bitter, digestive stimulant, emmenagogue, restorative and regulator for menstrual system. The essential oil is anti-inflammatory, anti-allergenic and antispasmodic.

Indications: Fevers, common cold, essential hypertension, digestive complaints, loss of appetite, amenorrhoea, dysentery, diarrhoea. Specifically indicated in thrombotic conditions with hypertension, including cerebral and coronary thromboses. Used topically for slow-healing wounds and skin inflammations.

Therapeutics and Pharmacology: Achillea is a valuable diaphoretic herb and is the central ingredient in any fever-management programme. It prevents the body temperature from rising too high but has a minimal suppressant effect on the course of the fever.

The flowers are rich in chemicals that are converted by steam distillation into anti-allergenic compounds, of use in the treatment of allergic catarrhal problems such as hayfever. The dark blue essential oil, azulene, is generally used as an anti-inflammatory, or in chest rubs for colds and influenza.

Achillea lowers high blood pressure by dilating the peripheral vessels, and it also tones the blood vessels. It is considered to be a specific in thrombotic conditions associated with high blood pressure. Used externally, its astringent properties will aid in the healing of wounds, and it has been used to treat haemorrhoids and varicose veins. The leaves encourage blood clotting, so can be used fresh for nosebleeds. However, inserting a leaf in the nostril may also start a nosebleed. Achillea has also been used in the treatment of heavy and painful periods, and the presence of steroidal constituents may help to explain this activity.

The spasmolytic action of Achillea is attributed to its flavonoid content. The flavonoids help to dilate the peripheral arteries and are also believed to help clear blood clots. The flavonoid apigenin is anti-inflammatory, spasmolytic and anti-platelet; salicylic acid is anti-inflammatory, as is azulene, which also stimulates the formation of granulation tissue in wound healing. The volatile oil eugenol has local anaesthetic activity, while cineol has antiseptic and expectorant properties. The alkaloid achilleine has been shown to be haemostatic, reducing clotting time without toxic side-effects. It has also been reported to lower blood pressure. Cyanidin is anti-inflammatory and also influences the vagus nerve, slowing the heart rate. The bitter action of Achillea stimulates the digestion and the tannins have an astringent effect both internally and externally. The diuretic, expectorant and digestive stimulant action can be explained by the volatile oil content of the plant. The cyanogenic glycosides and isovalerianic acid have a sedative action and asparagin is a potent diuretic. Central nervous system depressant activity has been documented for the

volatile oil, and antimicrobial properties are ascribed to the sesquiterpene lactone fraction. Moderate antibacterial activity has been documented for an ethanolic extract of Achillea against *Staphylococcus aureus, Bacillus subtillus, Mycobacterium smegmatis, Escherichia coli, Shigella sonnei* and *Shigella flexnii*.