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RARITY, CONSERVATION, IMPORTANCE AND ETHNOPHARMACOLOGICAL KNOWLEDGE OF THE GREEK FLORA

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RARITY

Greece does not yet have a completed Flora. The production of a modern and critical Flora for Greece is the aim of the *Flora Hellenica* project, which has planned to result in the publication of 10 volumes at c.24 months intervals. It will be the first comprehensive survey of the Greek flora since that of Halacsy (Strid & Tan 1992). Based on botanical exploration to date, the currently estimated number of plant taxa in Greece is 6310 species and subspecies (c.5500 species). This is the largest number amongst all the European countries of similar and even larger size. This can be compared to a total of c.1500 species in the United Kingdom that has an area twice that of Greece, or to a total of c.3500 species in France (551 500 km^2), Belgium (33 100 km^2), and Switzerland (41 290 km^2) combined, with an area five times that of Greece (131 990 km^2). But most important is the fact that a large proportion of them have very restricted geographical distributions, prospering in remote mountain peaks in vertical calcareous rocky slopes in any of the thousands gorges, or islets of Greece, and in numerically small populations. The number of Greek endemic taxa, is 1282 or 20.31% of the total Greek flora (IATROU, unpublished), although an earlier estimate by Iatrou (1986) was only 1225 taxa.

This richness and great diversity of the Greek flora, especially in endemic taxa, may be exdplained by the following factors:

(1) The eventful geological history of Greece (Kiskyras 1959, Greutzburg 1963, 1966) that resulted in the dissected topography of the Greek continent and the creation of the large number of isolated areas, mountains and islands, and also of biotopes with a special ecology. All of the above have contributed, without doubt, to the survival of old relict plant taxa and

also to the preservation or the creation new endemic taxa through mechanisms such as polyploidy, genetic drift, or adaptive radiation, often in small populations.

(2) The enrichment of the native Greek flora element with: (a) old floral elements, which had their closest relatives (often ancestors) in Anatolia (W.Asia), through two main plant migratory routes - that of the 'Central Aegean' and that of the 'South Aegean' . This influence was in an east to west direction and took place in older geological periods(early Miocene), when the Greek continent and Asia minor were still in contact through the land which was called Aegeis (Turrill 1929, Iatrou 1986); (b) floral elements of Central and North Europe through the 'Alpine' plant migratory route. This migration was in a north to south direction and took place later than the previous one (Turrill 1929). Here it must be emphasised that flora of Greece has only been marginally affected by the glaciations that wiped out plant life in northern Europe.

In addition to all the above factors, it is very important to mention that even today, many plant taxa are discovered and described as new for science, from several parts of Greece. During the last decade (1985–1995) more than 25 new plant taxa have been described from the Peloponnisos (S. Greece) alone (Iatrou & Tzanoudakis 1995).

CONSERVATION

The conservation status of the Greek flora may be expressed by the **Plant species directives 92/43** of the European Union.

Of the above-mentioned number of the Greek plant taxa, whether endemic or not, a restricted number is is found in a vulnerable status, and only a few of them may be considered as endangered and even fewer are really threatened witgh imminent extinction. Despite the fact that only 35 taxa present in Greece are listed and commented on in Annex II 'Comments and statistics of Directive 92/43', there are in fact 39: one Bryophyte, two Pteridophytes and the remaining 36 Spermatophytes. These 39 taxa represent 9.04% of the total 431 taxa listed, for the whole of Europe, in Annex II plant species list. 26 of them are priority taxa, representing 16.04% of the total number of priority taxa (162), and 13 are non-priority taxa, representing (4.83%) of the total number of the non priority taxa (269). It is very important to note that 31 of the above 39 taxa are Greek endemic plants, mostly local endemics, while three more are subendemic and the remainng five are widespread outside Greece, but very rare and localised in Greece. Considering their conservation status, 22 taxa are Endangered (E) , 14 considered to be Vulnerable(V) and the three remaining of uncertain status, not yet properly estimated. The expression 'considered to be' is used to emphasise that continuous monitoring of the populations and also recent field-observations have to carried out in order to determine accurately the status of these plant taxa. We have also to emphasise that another plant species listed in Annex II of Directive 92/43/EEC, under the code no 1682 and named *Thymus cephalotos* L. (and also declared as a priority taxon) has neither been taken into consideration, nor listed amongst the Greek taxa, since it is a synonym of *Coridothymus capitatus* L., the common thyme which is the most frequent constituent of all the phrygana ecosystems throughout Greece. Probably this reference in Annex II is a misprint for *Thymus lotocephalos* Lopez & R.Morales, a plant endemic to Portugal and perhaps needs protection there.

Despite all these considerations, for anyone familiar with floristic problems and plant species conservation in Greece, the above number of the 39 Greek taxa , included in Annex II of the directive 92/43, raises an enormous question mark, if this is intended to express the richness of botanical diversity in Greece and the need for protection of its rare, endemic, vulnerable and endangered plant taxa. The present day irrational management of natural ecosystems by humans, increases the threats and the immediate dangers for the endemic plants, so a percentage of 12% -15%

of the total Greek endemic plants could be considered as threatened in one way or another and this is quite different from the number of the 39 plants listed in directive 92/43EEC (Iatrou 1996).

IMPORTANCE

The Greek people, living in such a remarkably diverse country, rich also in indigenous plants, recognized the uniqueness of the flora since ancient times, and came to know their uses, both for food (eaten raw, consumed after cooking, dried before use or consumed after processing), and for their non-food properties (medicinal, aromatic, dye, and ornamental plants).

Soon remarkable habitats, like the Samaria gorge and the Lefka Ori (White Mountains) in S.W. Crete, the Langada gorge and the mountains of Taygetos and Parnon in S Peloponnisos, Mount Olympus in Thessaly and the Vikos gorge in S.W. Greece, amongst others , became famous not only because of their rich and rare flora (very rich in local endemics) but also for the medicinal uses that most of the unique plants possessed.

It is to Theophrastus that we owe the classical theories on the medicinal uses of the wild plants, and it is also well known that Dioscorides had studied, recognised, and classified more than 500 wild plants that had effects on several different illnesses of the human body. Plants like peonies (*Paeonia* spp.), hellebore (*Helleborus* spp.), henbane (*Hyoscyamus* spp.), hemlock (*Conium maculatum*), mandrake (*Mandragora officinalis*), meadow saffron (*Colchicum autumnale*), St. John's wort (*Hypericum* spp.), are just a few of the well known wild plants used as medicaments since antiquity and in use even today.

ETHNOPHARMACOLOGICAL KNOWLEDGE

For the above reasons, a systematic recording of the plants from the area of Vikos-Aoos (Zagori) that have a traditional and therapeutic use, has been initiated. The traditions and uses of local plants in the local medicine remain active even today. (Malamas & Marcelos 1992). A second more systematic recording of plants and their traditional and therapeutic uses was then undertaken as shown at the Table 1 (Vokou *et al.* 1993). The table shows the uses of the different plants grouped according to the part of the body treated, and specific effects on certain conditions.

In order to evaluate the information obtained, this work has been continued with phytochemical screening. The screening was performed for four main groups of compounds: alkaloids, saponins, (Hanlidou *et al.* 1996) and essential oils and flavonoids (Hanlidou 1996). 114 taxa have been examined in total and 53 taxa have been found to contain saponins; it should be noted that in 44 taxa the presence of saponins has been recorded for first time. 46 taxa contained alkaloids while the presence of alkaloids was recorded for first time in 27 taxa. 23 taxa had both saponins and alkaloids. The essential oil content of 29 taxa from the families *Lamiaceae* and *Asteraceae* has been estimated. Flavonoids have been found in 66 taxa (Shinoda test) for first time.

This systematic ethnopharmacological study which includes phytochemical screening for the four main groups of compounds will continue in other Greek regions that maintain the traditional use of plants for therapeutical purposes.

TABLE 1. PLANT USES ARRANGED IN GROUPS ACCORDING TO THEIR PROPERTIES AND CONDITIONS TREATED

Respiratory ailments

Adiantum capillus-veneris L.
Bryonia cretica L. subsp. *dioica* (Jacq.) Tutin
Conium maculatum L.
Ephedra fragilis Desf, subsp. *campylopoda* (C.A. Meyer) Ascherson & Graebner
Hypericum perforatum L.
Mentha spicata L.
Plantago lanceolata L.
Sambucus nigra L.
Sideritis raeseri Boiss. & Heldr.
Verbascum phlomoides L.

Emollient and expectorant
Acanthus balcanicus Heywood & I.B.K. Richardson
Agrimonia eupatoria L., also for gargling, in chronic pharyngitis
Ceterach officinarum DC.
Cydonia oblonga Miller
Hedera helix L.
Hypericum perforatum L.
Lamium album L.
Malva pussila Sm.
Orchis sp.
Ophrys sp.
Plantago lanceolata L.
Psoralea bituminosa L.
Sambucus nigra L.
Teucrium polium L.
Verbascum phlomoides L.
Viola odorata L.

In coughs and colds
Aesculus hippocastanum L.
Althaea officinalis L.
Chamomilla recutita (L.) Rauschert
Orchis sp.
Ophrys sp.
Salvia sclarea L.
Sambucus nigra L.
Sideritis raeseri Boiss. & Heldr.
Tilia tomentosa Moench, also against chronic and acute catarrh, pneumonia

Against asthma
Juniperus oxycedrus L.
Marrubium sp.
Ephedra fragilis Desf. subsp. *campylopoda* (C.A. Meyer) Ascherson & Graebner

Against bronchitis
Althaea officinalis L.
Ilex aquifolium L., also for spasmodic coughs
Lamium album L.
Urtica dioica L., also for gargling

Against pleurisy
Ilex aquifolium L.
Prunus spinosa L.
Tilia tomentosa Moench

Other uses
Chelidonium majus L., spasmolytic of bronchi
Digitalis lanata Ehrh.: agaist spasmodic cough, pneumonia
Salvia officinalis L.: against infections of pharynx
Tanacetum parthenium (L.) Schultz: in throat infections

Cardiovascular system ailments and blood diseases

Blood cleaning
Castanea sativa Miller
Melittis melissophyllum L.
Prunus spinosa L.
Salvia sclarea L.
Taraxacum officinale group

Haemostatic
Aesculus hippocastanum L.
Plantago lanceolata L.
Teucrium chamaedrys L.
Urtica dioica L.

Against haemorrboids
Aesculus hippocastanum L., also in varicose veins and other arterial diseases
Aristolochia clematitis L., also stimulates blood circulation
Centaurium erythraea Rafn.
Ceterach officinarum DC.
Cichorium intybus L.
Sedum acre L.
Taraxacum officinale group
Teucrium chamaedrys L.

Against thrombosis
Hedera helix L.
Teucrium polium L.

Against spleen complaints
Acer pseudoplatanus L.
Ceterach officinarum DC.

Against hypertension
Ilex aquifolium L.
Mentha spicata L.
Sedum acre L.
Teucrium polium L.
Urtica dioica L.

In anaemia
Achillea millefolium L., also as antispasmodic of the circulatory system, against apoplexy, nose bleeding
Leonurus cardiaca L., also regulates heart function and against vessel complaints in general
Urtica dioica L.

Other uses
Agrimonia eupatoria L.: on varicose veins, phlebitis
Chamomilla recutita (L.) Rauschert: stimulates blood circulation, in heart disorders
Chelidonium majus L.: stimulates cardiac function, increases blood pressure
Crataegus monogyna Jacq.: regulates heart function
Dictamnus albus L.: heart stimulant
Digitalis lanata Ehrh.: against heart disorders, aneurysm
Melissa officinalis L.: regulates heart function
Origanum vulgare L.: against cardiac pains
Sambucus nigra L.: against heart disorders

Digestive system ailments

Castanea sativa Miller
Gentiana sp.
Verbascum phlomoides L.

Against diarrhoea and dysentry
Aesculus hippocastanum L.
Althaea officinalis L.
Chamomilla recutita (L.) Rauschert
Cornus mas L.
Cydonia oblonga Miller
Ilex aquifolium L., also as emetic
Leonurus cardiaca L.
Origanum vulgare L.
Plantago lanceolata L.
Potentilla pedata Nestler, also in stomach inflammations
Salvia officinalis L.
Sambucus nigra L.
Urtica dioica L.

Hepatic
Bryonia cretica L. subsp. *dioica* (Jacq.) Tutin
Castanea sativa Miller
Centaurium erythraea Rafn.
Cichorium intybus L.
Crataegus monogyna Jacq.
Daphne laureola L.
Frangula rupestris (Scop.) Schur
Fraxinus ornus L.
Globularia alypum L.
Hedera helix L.
Helleborus cyclophyllus Boiss.
Ilex aquifolium L.
Prunus spinosa L.
Rosa canina L.
Rubus fruticosus L.
Sedum acre L., also stimulates the digestive system
Sambucus nigra L.
Viola odorata L.

Anthelminthic
Adiantum capillus veneris L., also in intestinal complaints
Artemisia absinthium L.
Buxus sempervirens L.
Castanea sativa Miller
Centaurium erythraea Rafn.
Ceterach officinarum DC.
Dictamnus albus L.
Gentiana sp.
Hedera helix L.
Helleborus cyclophyllus Boiss.
Hypericum perforatum L.
Hyssopus officinalis L.
Juniperus oxycedrus L.
Marrubium sp.
Nigella damascena L.
Ruta graveolens L.
Valeriana officinalis L.

Stimulating appetites
Agrimonia eupatoria L.
Malva pusilla Sm.
Melissa officinalis L.
Valeriana officinalis L.

For indigestion
Acanthus balcanicus Heywood & I.B.K. Richardson, also in inflammations of the digestive system
Agrimonia eupatoria L.
Artemisia absinthium L.
Chamomilla recutita (L.) Rauschert
Centaurea cyanus L.
Foeniculum vulgare Miller, also in stomach and intestine weakness
Laurus nobilis L.
Malva pussila Sm.
Ruta graveolens L.
Salvia officinalis L.

Sideritis raeseri Boiss. & Heldr.
Tanacetum parthenium (L.) Schultz
Taraxacum officinale group
Tilia tomentosa Moench

Against abdominal pains
Achillea millefolium L.
Chamomilla recutita (L.) Rauschert
Teucrium polium L.

Against stomach aches and diseases
Chelidonium majus L.
Cichorium intybus L.
Conium maculatum L.
Melissa officinalis L.
Sisymbrium officinale (L.) Scop.
Tanacetum parthenium (L.) Schultz
Teucrium polium L.

Antiemetic
Mentha spicata L.
Rosa canina L.

Other uses
Ceterach officinarum DC. against spleen complaints
Calystegia sepium (L.) R.Br.: regulation of the digestive system
Digitalis lanata Ehrh.: irritates the stomach

Hepatic complaints

Liver complaints
Acer pseudoplatanus L.
Agrimonia eupatoria L.
Conium maculatum L.
Salvia officinalis L.

Jaundice
Artemisia Absinthium L.
Gentiana sp.
Marrubium sp.
Chelidonium majus L.

Regulating bile secretion
Chamomilla recutita (L.) Rauschert
Chelidonium majus L., also in liver spasms, epidemic hepatitis
Urtica dioica L., also in chronic hepatitis

Urinary system complaints

Arctostaphylos uva-ursi (L.) Sprengel
Equisetum hyemale L.
Elymus repens (L.) Gould.
Lamium album L.
Rosa canina L.
Salvia officinalis L.
Teucrium polium L.
Solidago virgaurea L.

Diuretic
Agrimonia eupatoria L.
Alliaria petiolata (Bieb.) Cavara & Grande
Asparagus acutifolius L.
Bryonia cretica L. subsp. *dioica* (Jacq.) Tutin
Centaurium erythraea Rafn.
Ceterach officinarum DC.
Cichorium intybus L.
Chelidonium majus L.
Dictamnus albus L.
Digitalis lanata Ehrh.
Frangula rupestris (Scop.) Schur.
Fraxinus ornus L.
Fumaria officinalis L.
Hypericum perforatum L.
Ilex aquifolium L.
Juniperus oxycedrus L.
Marrubium sp.
Melittis melissophyllum L.
Nigella damascena L.
Prunus spinosa L.
Rosa canina L.
Rubus fruticosus L.
Salvia sclarea L.
Sambucus nigra L.
Sedum acre L.
Sisymbrium officinale (L.) Scop.
Solidago virgaurea L.
Teucrium polium L.
Tilia tomentosa Moench, also in incontinence of urine
Urtica dioica L.
Verbascum phlomoides L.
Viola odorata L.

In kidney complaints
Capsella bursa pastoris (L.) Medicus, also in urinary system bleeding
Ceterach officinarum DC., also in bladder complaints
Cichorium intybus L.
Fraxinus ornus L.

In urinary system infections
Hypericum perforatum L.
Juniperus oxycedrus L.

In prostate complaints
Conium maculatum L.
Ilex aquifolium L.

Other uses
Cydonia oblonga Miller: against cystitis

Taraxacum officinale group: against retention of urine

Female genital complaints

Capsella bursa-pastoris (L.) Medicus
Centaurium erythraea Rafn.
Dictamnus albus L.
Ruta graveolens L.
Solidago virgaurea L.
Tilia tomentosa Moench

Emmenagogue
Acer pseudoplatanus L.
Aristolochia clematitis L.
Bryonia cretica L. subsp. *dioica* (Jacq.) Tutin
Conium maculatum L., also in swellings of genital glands
Hedera helix L.
Helleborus cyclophyllus Boiss.
Lamium album L.
Leonurus cardiaca L.
Marrubium sp.
Prunus spinosa L.
Ruta graveolens L.
Tanacetum parthenium (L.) Schultz
Valeriana officinalis L.

Abortifacient
Bryonia cretica L. subsp. *dioica* (Jacq.) Tutin
Ruta graveolens L.
Sedum acre L.
Teucrium polium L.

Skin diseases

Agrimonia eupatoria L.
Aesculus hippocastanum L. (ulcers and boils)
Asparagus acutifolius L. (swellings)
Bryonia cretica L. subsp. *dioica* (Jacq.) Tutin
Castanea sativa Miller
Chelidonium majus L. (fistulae, herpes, foot corns)
Clematis vitalba L. (ulcers)
Conium maculatum L. (swellings, skin ulcers)
Daphne laureola L.
Helleborus cyclophyllus Boiss.
Juniperus oxycedrus L.
Laurus nobilis L., also on swellings
Malva pusilla Sm.
Ruta graveolens L.
Sambucus nigra L. (swellings)
Solidago virgaurea L.
Tilia tomentosa Moench (on freckles and wrinkles)
Viola odorata L.

On wounds
Acanthus balcanicus Heywood & I.B.K. Richardson, also on swellings
Alliaria petiolata (Bieb.) Carava & Grande, also on scalds
Aristolochia clematitis L., also in inflammations, swellings
Althaea officinalis L.
Aristolochia clematitis L.
Centaurium erythraea Rafn., also as antiinflammatory
Chamomilla recutita (L.) Rauschert, also as antiinflammatory
Fraxinus ornus L.
Genziana sp.
Helleborus cyclophyllus Boiss., also on scalds, herpes
Hypericum perforatum L., also on scalds, herpes
Melittis melissophyllum L.
Plantago lanceolata L., also on fistulae
Psoralea bituminosa L.
Salvia officinalis L., also on ulcers
Salvia sclarea L.
Teucrium polium L., also against inflammations
Urtica dioica L., also on swellings
Verbascum phlomoides L.

Mental diseases

Helleborus cyclophyllus L.

Against hysteria
Chamomilla recutita (L.) Rauschert
Laurus nobilis L.
Mentha spicata L.
Ruta graveolens L.
Valeriana officinalis L., also against stress

Against melancholy
Artemisia absinthium L.
Valeriana officinalis L.

Against mania
Conium maculatum L.
Lamium album L.
Digitalis lanata Ehrh.

Against insomnia
Lamium album L.
Tilia tomentosa Moench

Nervous diseases
Tilia tomentosa Moench

Against neuralgia

Chamomilla recutita (L.) Rauschert

Conium maculatum L.
Leonurus cardiaca L.
Taraxacum officinale group
Tilia tomentosa Moench
Valeriana sp.
Verbascum phlomoides L.

Against epilepsy
Conium maculatum L.
Ilex aquifolium L.
Leonurus cardiaca L.
Valeriana officinalis L.

Against vertigo
Achillea millefolium L.
Conium maculatum L.

Other uses
Origanum vulgare L.: stimulates the nervous system
Urtica dioica L.: against paralysis

Fever

Diaphoretic
Adiantum capillus-veneris L.
Alliaria petiolata (Bieb.) Cavara & Grande
Aristolochia clematitis L.
Chamomilla recutita (L.) Rauschert
Hedera helix L.
Ilex aquifolium L.
Prunus spinosa L.
Ruta graveolens L.
Salvia officinalis L.
Sambucus nigra L.
Sideritis raeseri Boiss. & Heldr.
Tanacetum parthenium (L.) Schultz
Tilia tomentosa Moench

In fever and malaria
Artemisia absinthium L.
Chamomilla recutita (L.) Rauschert
Cornus mas L.
Fraxinus ornus L.
Gentiana sp.
Ilex aquifolium L.
Salix alba L.
Salvia officinalis L.
Sambucus nigra L.
Teucrium chamaedrys L.
Teucrium polium L.
Valeriana officinalis L.
Verbascum phlomoides L.

In puerperal fever
Aristolochia clematitis L.
Chamomilla recutita (L.) Rauschert

Analgesics-sedatives-antispasmodics
Chamomilla recutita (L.) Rauschert
Crataegus monogyna Jacq.
Chelidonium majus L., also as topical anaesthetic
Conium maculatum L.
Cornus mas L.
Foeniculum vulgare Miller
Ilex aquifolium L.
Lactuca serriola L.
Laurus nobilis L.
Melissa officinalis L.
Melittis melissophyllum L.
Mentha spicata L.
Prunus spinosa L.
Ruta graveolens L.
Salix alba L.
Sambucus nigra L.
Sideritis raeseri Boiss. & Heldr. (slightly narcotic)
Tanacetum parthenium (L.) Schultz
Tilia tomentosa Moench
Valeriana officinalis L.

Against toothache
Conium maculatum L., also as narcotic
Daphne laureola L.
Helleborus cyclophyllus L.
Melissa officinalis L.
Origanum vulgare L.

Against earache
Achillea millefolium L.
Melissa officinalis L.

Against headaches
Taraxacum officinale group
Valeriana officinalis L., also against migraine

As tonic and stimulant

Acanthus balcanicus Heywood & I.B.K. Richardson
Acer pseudoplatanus L.
Achillea millefolium L.
Adiantum capillus-veneris L.
Alliaria petiolata (Bieb.) Cavara & Grande
Aristolochia clematitis L.
Artemisia absinthium L.
Buxus sempervirens L.
Castanea sativa Miller
Centaurium erythraea Rafn.
Chamomilla recutita (L.) Rauschert (of the digestive system)
Chelidonium majus L.
Cichorium intybus L.
Dictamnus albus L.

Foeniculum vulgare Miller
Fraxinus ornus L.
Fumaria officinalis L.
Helleborus cyclophyllus L.
Ilex aquifolium L.
Juniperus oxycedrus L.
Laurus nobilis L.
Marrubium sp.
Melissa officinalis L.
Mentha spicata L. (of the nervous system)
Origanum vulgare L.
Prunus spinosa L.
Rosa canina L.
Ruta graveolens L.
Sambucus nigra L.
Sideritis raeseri Boiss. & Heldr.
Tanacetum parthenium (L.) Schultz
Taraxacum officinale group
Teucrium chamaedrys L.
Teucrium polium L.
Valeriana officinalis L. (especially of the nervous system, also against general weakness)
Viola odorata L.

Venereal diseases

Against gonorrhoea
Arctostaphylos uva-ursi (L.) Sprengel
Tilia tomentosa Moench

Against syphilis
Daphne laureola L.
Sedum acre L.

Against leucorrhoea
Lamium album L.
Prunus spinosa L.

Infections and infectious diseases

Tuberculosis
Achillea millefolium L.
Aesculus hippocastanum L.
Agrimonia eupatoria L.
Digitalis lanata Ehrh.
Lamium album L.
Rosa canina L.
Teucrium polium L.
Valeriana officinalis L.

Antiseptic
Arctostaphylos uva ursi (L.) Sprengel
Hypericum perforatum L.
Salvia officinalis L., also in mouth infections
Teucrium polium L.

In whooping-cough
Conium maculatum L.
Hypericum perforatum L.

Against eye infections and inflammations
Malva pusilla Sm.
Viola odorata L.

Other uses
Chamomilla recutita (L.) Rauschert: agaisnt mouth infections
Dictamnus albus L.: in plague and other epidemic diseases
Ilex aquifolium L.: against smallpox
Ruta graveolens L.: against gangrene
Sambucus nigra L.: against influenza

Vitamin deficiencies

Fragaria vesca L.

Against scurvy
Alliaria petiolata (Bieb.) Cavara & Grande
Sisymbrium officinale (L.) Scop.

Against rachitis
Castanea sativa Miller

Various other medicinal uses

In rheumatism and arthritis
Aesculus hippocastanum L.
Asparagus acutifolius L.
Bryonia cretica L. subsp. *dioica* (Jacq.) Tutin
Castanea sativa Miller
Cichorium intybus L.
Daphne laureola L.
Fragaria vesca L.
Fraxinus ornus L.
Hedera helix L.
Ilex aquifolium L.
Juniperus oxycedrus L.
Melissa officinalis L.
Origanum vulgare L.
Ruta graveolens L.
Salvia officinalis L.
Sambucus nigra L.
Solidago virgaurea L.
Tanacetum parthenium (L.) Schultz, also on fractures
Taraxacum officinale group
Teucrium chamaedrys L.
Tilia tomentosa Moench
Verbascum phlomoides L.

As astringent
Agrimonia eupatoria L.

Capsella bursa pastoris (L.) Medicus
Castanea sativa Miller
Cornus mas L., also against thirst, refreshing
Cydonia oblonga Miller
Fraxinus ornus L.
Hedera helix L.
Hypericum perforatum L.
Hyssopus officinalis L.
Lamium album L.
Laurus nobilis L.
Rubus fruticosus L.
Salvia officinalis L.
Teucrium polium L.
Verbascum phlomoides L.

Against dropsy
Artemisia absinthium L.
Asparagus acutifolius L.
Capsella bursa pastoris (L.) Medicus
Digitalis lanata Ehrh.
Juniperus oxycedrus L.
Prunus spinosa L.

On sore eyes
Chamomilla recutita (L.) Rauschert, also reducing weight
Foeniculum vulgare Miller
Salvia sclarea L.
Sambucus nigra L.

As insecticide
Castanea sativa Miller
Ruta graveolens L.

In diabetes
Rosa canina L.
Salvia officinalis L.

Other uses:
Coronilla varia L.: drastically toxic, fatal if used
Corylus avellana L.: against snake bites

Animal diseases

Animal colics
Aesculus hippocastanum L.
Ceterach officinarum DC.

Other uses
Helleborus cyclopyllus L.: to animals in case of reduced milk production

Non-medicinal uses

As a dye
Althaea officinalis L.
Sambucus nigra L.

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