

## *Anacyclus pyrethrum* L. Compositae (Asteraceae)



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### ■ Morphological Description

It is a perennial, procumbent herb, resembling chamomile. Stems lie on the ground for part of their length, before rising erect. Each bears one large terminal flower, the disk being yellow and the rays white, tinged with purple beneath. The leaves are smooth, alternate, and pinnate, pale green, with deeply cut segments. Fruit obovate achene.

The root is almost cylindrical, very slightly twisted and tapering and often crowned with a tuft of grey hairs. Externally it is brown and wrinkled, with bright black spots. The fracture is short, bark with 1-2 circles of resin ducts, closely adhering to yellowish radiate porous wood in which occur 1-3 rows of resin ducts; odor distinct; taste sweetish, pungent, very acrid, tingling, sialagogue effect.

Flowering period: April-June

### ■ Geographical Distribution

**Local:** Largely distributed in the country, found in the forests, rangeland from 400 to 3100 m.

**Regional:** Morocco and Algeria

**Global:** A native of North Africa, it has been grown on an experimental scale in Himalayan regions from seeds imported from Algeria.

### ■ Ecology

Spontaneous in Morocco and Algeria, reported to be cultivated in Mediterranean countries, Himalayas and India.

### ■ Cultivation

Planting may be done in autumn, but the best time

## *Anacyclus pyrethrum* L.

*Anacyclus pyrethrum* D.C.; *Anthemis pyrethrum*; *Anacyclus officinarum* Hayne; *Anacyclus pyrethrum* (L.) Link; *Anacyclus pyrethrum* Link; *Anacyclus depressus* Maire; *Anacyclus freynii* Porta & Rigo; *Pyrethrum radix*; *Pyrethrum officinarum*; *Matricaria Pyrethrum*.

**Arabic:** 'Aud el-'attas, 'Akkar Karha, Aqarqarha  
عود العطاس - عاقر قرح

**Berber:** Igendass, Gendass, Ignens, Tigendaste.

**English:** Pyrethrum, Pellitory (Root), Spanish Pellitory, Pellitory of Spain, Bertram, Roman Pellitory.

**French:** Pyrethre, Pyrèthre d'Afrique, Pirèthre salivaire, Œil de bouc, Pariétaire d'Espagne.

is about the end of April.

Any ordinary good soil is suitable, but better results are obtained when it is well-drained, and of a stiff loamy character, enriched with good manure.

Propagation is done in three ways: by seed, by division of roots and by cuttings.

### ■ Status

Not IUCN threatened species

### ■ Part Used

**Root:** The root of the wild plant is collected during the period from May to June depending on the stage of growth of the plant.

### ■ Constituents

The chemical analysis of the roots shows that they contain three fatty acids, one sterol and ten unsaturated amides, more specifically: pellitorine, anacycline, phenylethylamide, enetriyne alcohol, N-(2'-p-hydroxy phenylethyl)-deca-, dodeca- and tetradeca trans-2, trans-4-dienamides, inulin, polyacetylenic amides I-IV, and sesamin. The plant contains also tannins, gum and essential volatile oil. Pyrethrine, an alkaloid, yielding pyrethric acid, is stated to be one of the active principles.

### ■ Pharmacological Action and Toxicity

Polyunsaturated alkamides isolated from *Anacyclus pyrethrum*, and other species, were shown to possess inhibitory activity in vitro cyclooxygenase

(sheep seminal microsomes) and 5-lipoxygenase (porcine's leukocytes) assays.

Organic extracts of the roots were shown to have some antibacterial activities but did not have anti-fungal properties and they are active against yeast. The drug is not completely inoffensive. Mild to severe toxicological effects were reported such as inflammation of gastro-intestinal mucous membrane and skin. In fact, the root was reported as a powerful irritant to the skin.

The emanations of the plant were reported to cause headache, gastric pain, nausea, and in some cases loss of consciousness.

Dermatitis can also occur on the hands of persons who handle the plant material. The root of the plant contains sesamin, which is one of the compounds involved in sesame oil contact dermatitis.

### ■ Traditional Medicine and Indigenous Knowledge

The powder of the root is well known as sternutatory, diaphoretic, and used for many ailments. Showing the root is considered to be sialagogue (increase saliva flow), and to relieve toothache. In liver diseases: one teaspoon of powder every morning is recommended. Mixed with olive oil it is used in rheumatism, sciatic, colds, neuralgia, and paralysis. The powder trapped in a piece of cotton is scratched against gum in toothache. Roots are also used as insecticide and anti-mycosis. In mixture with cade oil, the powder is used against moth or ringworm.

The oleat prepared by mixing the powder of the root with olive oil is used to treat phthiriasis and vermin of the head and pubis.

Infusion of the roots is used for asthma. The powder of the root mixed with milk or honey is considered as aphrodisiac, and renders fertility to women.

### ■ History

The pillitory was mentioned under the name Tagendest, and Akkarkarha, by IBN ALYTAR (LECLEC, 1877-1883, n° 400, 959, 1507, 1570), La 'Aumdat At -talib (n° 286, 1601), AL WAZIR AL GHASSANI (n° 217) and Tuhfat al-ahbab (n° 301). ABDEREZAQ In Ayurvedic medicine, the root is considered tonic, and is used to treat paralysis and epilepsy.

### ■ Modern treatment

Several preparations and formulations are available

using the root powder or its extracts alone or in combination with other herbs or drugs.

In European herbal medicine, it is regarded as having a restorative action on the kidneys, supporting and strengthening their function. It has been prescribed for nephritis, pyelitis, cystitis, and edema.

Its ability to promote salivation has made it of use for dry mouth and throat, and an excellent remedy for toothache.

It is also occasionally taken as a laxative. It combines well with parsley or wild carrot seed or root. It counteracts mucus and is useful for chronic coughs. The leaves may be applied as poultices.

### ■ Other indications

The roots have a slight aromatic smell and a persistent, pungent taste, exciting a remarkable flow of saliva. When chewed or taken as a decoction, they stimulate the salivary glands, promoting a flow of viscid humors and relieving toothache, headache, lethargy and palsy of the tongue.

A gargle of Pellitory infusion is prescribed for relaxed uvula and for partial paralysis of the tongue and lips. To make a gargle, two or three teaspoonfuls of Pellitory should be mixed with a pint of cold water and sweetened with honey if desired. The decoction may also be used as a gargle to soothe sore throats.

Patients seeking relief from some rheumatic or neuralgic infections of the head and face, or for palsy of the tongue, have been advised to chew the root daily for several months.

Being a rubefacient and local irritant, when sliced and applied to the skin, it induces heat, tingling and redness.

The powdered root forms a good snuff to cure chronic catarrh of the head and nostrils and to clear the brain, by exciting a free flow of nasal mucous and tears.

The powdered herb or root snuffed up the nostrils produces sneezing and eases headache.

Made into an ointment with hog's grease, it helps both the gout and sciatica.

### ■ Diseases

Speech disorders, respiratory edema, laryngitis, sickle cell anemia, epilepsy, depression, hearing disorders, phobias, anxiety, allergic asthma, saliva-

tion, low esteem, headache, rheumatism, neuralgia, toothache, paralysis of tongue or throat, relaxed uvula, chronic catarrh.

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