Cupressus sempervirens L.
Cupressaceae

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Cupressus sempervirens L.
Sp. Pl.: 1002. 1753
Cupressus fastigiata DC

Arabic: serouel
French: cyprès toujours vert, cyprès d'Italie
English: evergreen cypress, Italian cypress

Morphological description
Cupressus sempervirens is a tall tree (usually 15-20 m. high but can reach 30-40 m.) with a well-developed trunk (may be 3 m. in circumference); it grows quickly until the age of 20 and can live to be 500. Its leaves are evergreen, dark green, either acicular (in young stages) or very small, scale-like and overlapping in four ranks. The female cones are globular (2-4 cm.), shiny, with 6-12 woody, peltate, unequal scales, opposed crosswise on a short axis. The ovuliferous scales bear many ovules. The seeds are jagged, shining brown and narrowly winged. Flowering takes place in spring; the cones mature the following spring.

The *Cupressus genus* includes, for the sake of convenience, an aggregate called *Cupressus sempervirens* aggr., formed by a group of three species that are often confused and usually very close to each other (Greuter et al., 1984). *Cupressus atlantica* Gaussen, a Moroccan endemic; *Cupressus dupreziana* A. Camus, an Algerian endemic (= *Cupressus lereddei* Gaussen); and *Cupressus sempervirens* L. (= C. fastigiata DC; C. horizontalis Miller; C. pyramidalis Targ.-Tozz). For the last species, three forms differing in the direction of the branches are signalled in Tunisia (Cuenod, 1954; Nabli, 1989; Neffati et al., 1999; Gammar 1998): the *stricta* Maire = *C. pyramidalis* Targ. form with vertical branches parallel to the trunk the *horizontalis* (Mill.) Maire form with spreading, widely spaced branches the *numidica* Trab. form with a very special appearance: the branches start *horizontally* like those of horizontalis but quickly rise and grow vertically. This particular appearance gives this form a more voluminous top than the *stricta* form. The *numidica* Trab. form is exclusively Tunisian, and considered as a Tunisian endemic taxon.

Geographical distribution
Local: In Tunisia, only the *numidica* Trabut form grows wild (three small stations in the Kessara massif, the Tunisian dorsal ridge); the other *pyramidalis* and *horizontalis* forms are cultivated.
Regional: Intermittently distributed in North Africa: Tunisia, Algeria, Morocco (a 6,000-ha. massif in the High Atlas). Species also present in Cyrenaica.
Global: A wild, or very anciently naturalised, species around the entire Mediterranean. North Africa, Greece, Crete and western Asia.

Ecology
Cupressus sempervirens in its numidica form grows in Tunisia at an altitude of between 520 and 1,080 m., in the upper semi-arid regions of the cool variant where the average annual rainfall is between 470 and 600 mm. In Makthar it forms a tree-dotted matorral, sometimes mixed with Aleppo pine, or it is associated at a low altitude with *Olea europaea*, *Crataegus monogyna*, etc.

Status, conservation and culture

The evergreen cypress is a forest tree that was naturalised very long ago in the whole of the Mediterranean; it is used in reafforestation programmes, and grown as a wind-break or as an ornamental tree.

Part used

The leaves and cones.

Constituents

The branches of the cypress contain biflavonoids, essential oils (0.3-0.8%) rich in monoterpenic carbides, sesquiterpenics and diterpenics. The cones contain 0.5% of H. E. rich in apinene, diterpenic acids, tannins and proanthocyanidolic oligomer derivatives.

Traditional medicine

A decoction of the cones and leaves of *Cupressus sempervirens* is used in a sitz bath three times a day for one week for haemorrhoids; no beef or eggs must be taken.

Pharmacological action and toxicity

The proanthocyanidolic oligomers have an angioprotective action; they are inhibitors of the angiotensine conversion enzyme and inhibitors of elasatasis and of tryptic activity. Aqueous preparations and hydroalcoholic extracts of the cones and leaves do not present toxicity; the essential oil, however, should be used with precautions.

Use in herbal medicine

The cones and leaves are used internally as an astringent. Externally, the extract of the cypress is incorporated in preparations (ointments and suppositories) used to treat haemorrhoids and varicose veins; it is excellent for venous circulation disorders.

The essential oil is an antiseptic and an antispasmodic for stubborn coughs.

Medicines with a cypress cone basis are traditionally used for subjective evidence of venous insufficiency, such as heavy legs, and in haemorrhoidal symptomatology.

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