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CAPPARIS SPINOSA AND ITS HEALING PROPERTIES

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Abstract

Capparis spinosa, the caper bush, also called Flinders rose, is a perennial plant that bears rounded, fleshy leaves and large white to pinkish-white flowers.
The plant is best known for the edible flower buds (capers), used as a seasoning, and the fruit (caper berries), both of which are usually consumed pickled. Other species of Capparis are also picked along with C. spinosa for their buds or fruits. Other parts of Capparis plants are used in the manufacture of medicines and cosmetics.

Keywords: Capparis spinosa, polyphenol, orientalis

Capparis spinosa is native to almost all the circum-Mediterranean countries, and is included in the flora of most of them, but whether it is indigenous to this region is uncertain. The family Capparaceae could have originated in the tropics, and later spread to the Mediterranean basin.
The taxonomic status of the species is controversial and unsettled. Species within the genus Capparis are highly variable, and interspecific hybrids have been common throughout the evolutionary history of the genus. As a result, some authors have considered C. spinosa to be composed of multiple distinct species, others that the taxon is a single species with multiple varieties or subspecies, or that the taxon C. spinosa is a hybrid between C. orientalis and C. sicula.
The shrubby plant is many-branched, with alternate leaves, thick and shiny, round to ovate. The flowers are complete, sweetly fragrant, and showy, with four sepals and four white to pinkish-white petals, and many long violet-colored stamens, and a single stigma usually rising well above the stamens.

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The caper bush requires a semiarid or arid climate. The caper bush has developed a series of mechanisms that reduce the impact of high radiation levels, high daily temperature, and insufficient soil water during its growing period.

The caper bush has a curious reaction to sudden increases in humidity; it forms wart-like pock marks across the leaf surface. This is apparently harmless, as the plant quickly adjusts to the new conditions and produces unaffected leaves.[citation needed]

It also shows characteristics of a plant adapted to poor soils. This shrub has a high root/shoot ratio and the presence of mycorrhizae serves to maximize the uptake of minerals in poor soils. Different nitrogen-fixing bacterial strains have been isolated from the caper bush rhizosphere, playing a role in maintaining high reserves of that growth-limiting element

The caper bush has been introduced as a specialized culture in some European countries in the last four decades. The economic importance of the caper plant led to a significant increase in both the area under cultivation and production levels during the late 1980s. The main production areas are in harsh environments found in Iraq, Morocco, the southeastern Iberian Peninsula, Turkey, the Greek island of Santorini and the Italian island of Pantelleria and the Aeolian Islands, especially Salina. Capers from Pantelleria and Aelian island are recognized as European PGI products. This species has developed special mechanisms to survive in the Mediterranean conditions, and introduction in semiarid lands may help to prevent the disruption of the equilibrium of those fragile ecosystems.

A harvest duration of at least three months is necessary for profitability.[clarification needed] Intense daylight and a long growing period are necessary to secure high yields. The caper bush can withstand temperatures over 40°C in summer, but it is sensitive to frost during its vegetative period. A caper bush is able to survive low temperatures in the form of stump, as happens in the foothills of the Alps. Caper plants are found even 3,500 m above sea level in Ladakh, though they are usually grown at lower altitudes. Some Italian and Argentine plantings can withstand strong winds without problems, due to the plant's decumbent architecture and the coriaceous consistency of the leaves in some populations.

The known distributions of each species can be used to identify the origin of commercially prepared capers.

The caper bush is a rupicolous species. It is widespread on rocky areas and is grown on different soil associations, including alfisols, regosols, and lithosols. In

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different Himalayan locations, C. spinosa tolerates both silty clay and sandy, rocky, or gravelly surface soils, with less than 1% organic matter. It grows on bare rocks, crevices, cracks, and sand dunes in Pakistan, in dry calcareous escarpments of the Adriatic region, in dry coastal ecosystems of Egypt, Libya, and Tunisia, in transitional zones between the littoral salt marsh and the coastal deserts of the Asian Red Sea coast, in the rocky arid bottoms of the Jordan valley, in calcareous sandstone cliffs at Ramat Aviv, Israel, and in central west and northwest coastal dunes of Australia. It grows spontaneously in wall joints of antique Roman fortresses, on the Western Wall of Jerusalem's Temple Mount, and on the ramparts of the castle of Santa Bárbara (Alicante, Spain). Clinging caper plants are dominant on the medieval limestone-made ramparts of Alcudia and the bastions of Palma (Majorca, Spain). This aggressive pioneering has brought about serious problems for the protection of monuments.

Canned capers contain polyphenols, including the flavonoids quercetin (173 mg per 100 g) and kaempferol (131 mg per 100 g),as well as anthocyanins.

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