

# The Cretan flora. Trees and shrubs

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<http://www.explorecrete.com/nature/flora.html>

<http://www.we-love-crete.com/flora-of-crete.html>

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## Wooded Areas

White Mountains range in west Crete. The wooded **Samaria Gorge** can be considered as an image from the past of Crete.

2. The south flanks of Mt Idi in Vorizia, Kamares and Zaros area
3. The south flanks of the Dikti Mountains in Selakano and Pefkos in Vianos area

Common trees in Crete are the **tamarisk** (*Tamarix cretica*), **oak**-, **chestnut**-, **pine**-, **cypress**- and the evergreen **plane** tree (*Platanus orientalis*)

The wide altitudinal range of this ecoregion results in several forest zones.

The **lowest elevations** are distinguished by the predominance of

sclerophyllous evergreen and

semi-deciduous oak forests (*Quercus coccifera*, *Q. brachyphylla* → renamed: ***Quercus pubescens*** ),

"maquis" of carob (*Ceratonia siliqua*),

junipers (*Juniperus phoenicea*), and

tree-spurge (*Euphorbia dendroides*).

Phoenix teophrasti,

one of the two Mediterranean palm species and endemic to Crete and the Datca Peninsula in south-western Turkey, occurs in a few ravines of the easternmost coastal part of the island (e.g. Vai bay).

# Coastal

- grasses
- Tamarisk Trees (Salt Cedar)
  - found in Sfakia (shore)
- plane tree
- palm tree
- carob tree (southern coast)



(Malia, Crete)



Elafonisi cedar



**Marram Grass** or beach grass (*Ammophila*),

Crete, Greece, Europe

Beach grass MISSIRIA Rethymnon

Crete Greece





# Maquis shrubland

typically consisting of densely growing **evergreen shrubs**.



## Mastica Bush *Pistacia lentiscus*

a dioecious evergreen shrub or small tree  
growing up to 4 m (13 ft) tall  
growing in dry and rocky areas

-- cultivated





**tamarisk** (*Tamarix cretica*)

Salt Cedar

usually grows as a woody shrub or tree in areas  
where water is at or near the surface

Cretan shores



## Juniper (Juniperus macrocarpa)

Juniperus macrocarpa is a special kind of juniper, which grows in the Mediterranean.

This evergreen conifer often forms scrub-like growths **in sand dunes along the coast.**

In rare cases it can develop into a small tree. It is a pioneer plant that can grow in poor soil where sea fog would kill other plants.



## Phoenician Juniper (*Juniperus phoenicea*)

This juniper is a large shrub or small tree up to 12 meters. Found throughout the Mediterranean region from Morocco to Turkey.

This juniper usually grows in **coastal areas at low altitudes**, but can survive up to 2.400 meters above sea level.



**Carob Tree** *Ceratonia siliqua*

The carob tree (*Ceratonia siliqua*) is a species of flowering evergreen tree in the pea family,

the largest natural grove with carob trees in Europe

an evergreen tree up to about 10 meters high.

- carob grove of Tris Ekklisies.
- Southern coast, east of Matala
- The area around Villa Talea has many carob tree





## Kermes oak (*Quercus coccifera*)

Kermes-oak (*Quercus coccifera*) are **found in areas with maquis**. It is an evergreen tree or shrub. In Crete the tree can reach a height of up to 12 meters. The leaves have green upper surface and grayish underside. They are thick with thorns on the edge. As other oaks Kermes oaks grow acorns, which are eaten by goats.



Q. brachyphylla → renamed:  
***Quercus pubescens*** ),

the **downy oak** or **pubescent oak**

Downy oaks typically grow in dry, lime-rich  
soils.



***Euphorbia dendroides***, also known as **Tree Spurge**,  
is a small [tree](#) of the [Euphorbiaceae](#) family that grows in [semi-arid](#) and [mediterranean](#) climates.  
it only grows on protected and sunny mountainsides in hilly areas.





## Cretan Date Palm (*Phoenix theophrasti*)

Europe's only indigenous palm forest at **Vai lies on the eastern coast of Crete.**

Another palm forest is located **south of Villa Talea at Preveli beach.**

The Cretan date palm grows up to 15 meters with a trunk diameter of up to 35 centimeters. It makes a dense crown of long, spiky leaves that have a silvery blue-green color when they are mature. The pinnate leaves can be up to four meters long.

**Vai Palm** *Phoenix Theophrasti*





# Shrubland -- coastal

*phrygana*

The term **phrygana** is used for an open dwarf scrub dominated by low, often cushion-shaped, spiny shrubs.



These shrubs are extremely high temperature- and drought-tolerant and they grow at low altitudes. Several phrygana are aromatic and well known for their medicinal purposes, as they are being used in herbal medicine since ancient times.

The most common phryganic species are:

**thyme** (*Coridothymus capitatus*, *Thymus* sp.),

cistus (*Cistus creticus*, *Cistus salviifolius*),

St. John's wort (*Hypericum empetrifolium*),

sage (*Salvia triloba*),

thorny burnet (*Sarcopoterium spinosum*),

heather (*Erica manipuliflora*),

hairy thorny broom (*Calicotome villosa*),

asparagus (*Asparagus acutifolius*), garden horehound (*Ballota acetabulosa*), common asphodel (*Asphodelus aestivus*), shrubby globularia (*Globularia alypum*) etc.

## Strawberry Tree (Arbutus unedo)

The Strawberry Tree (Arbutus unedo) is an evergreen tree, which originates from the Mediterranean region but is found all the way up to the south of Ireland.

In Crete it grows **in clearings and forest edges** - like in the oak forests of Psiloritis slopes. The tree has white, bell-shaped flowers in October-november and the fruits that are formed from the previous years flowering ripens from October to November. The round berries change color as they ripen. From green to yellow to red. The ripe berries look like small strawberries.



**Weaver's Broom** (*Spartium junceum ginesta*)

**Along the roads of Crete** and several other places where there is sun and dry, sandy soil, one can find this beautiful deciduous shrub.

It is typically 2-4 meters high with many straight branches on which only a few leaves are sitting.

In late spring the shrub is covered with fragrant yellow flowers.

The seed boxes open later in summer with small snaps and throw the seeds away from the parent plant. The flexible branches can be used for basketry.



## Snowdrop Bush (*Styrax officinalis*)

The Snowdrop Bush is found in southern Europe and the Middle East. It is a 5-7 meter tall deciduous shrub that grows in sun or partial shade. It has dark green, elliptical leaves on the thin, reddish branches. It has white flowers that smell like honey. Later they develop into round, white or yellowish fruits.





## Lentisk (*Pistacia lentiscus*)

The Lentisk grows near the coast on dry, rocky soil. It is an evergreen shrub or small tree up to 2-3 meters.



## Chase tree

Vitex (chaste tree, *Vitex agnus-castus*)  
blooms from late spring until early fall  
with long, upright spikes of pink, l  
ilac and white flowers



Sage *Salvia pomifera*



herbs of Crete



Myrtle *Myrtus communis*

rows on moist ground and under favorable conditions can become a big tree. Its leaves and its white aromatic flowers have been used in perfumery.

Locality:



## Thyme (Thymus capitatus)

Thyme is an evergreen shrub found in many places in Crete. the shrub grows in full sun to on dry or slightly moist soil. From June to August it flowers with fine purple flowers.

### wild herbs of Crete

Dittany *dictamo* or in Cretan *erondas*  
*Origanum dictamnus*  
*Origanum dictamnus*



Chamomile *Chamomilla recutita*





Cretan Mountain Tea *Sideritis syriaca*





The wide altitudinal range of this ecoregion results in several forest zones.

**At medium altitudes,**

mesophyllous pine forests (*Pinus brutia*) and  
holly oak (*Quercus coccifera*) woodlands are widely spread.

Olive trees

## Orange trees



## Chestnut trees





Olive Trees

-- cultivated





## Cretan plane tree (*Platanus orientalis* var. *Cretica*)

The Cretan plane tree is a subspecies of the oriental plane tree. But whereas all other plane trees are deciduous, the Cretan plane tree is evergreen. The evergreen plane tree is found only in Crete and there are only approx. 50 trees scattered around the island. The trees can become very large and are often used as shade in small squares and plazas in the villages. The most famous Cretan plane tree can be found at the archaeological excavations at Gortyn. It is said that it was under this tree that Zeus and Europe made love and that's why the tree has retained its leaves ever since.



A **huge plane tree**, or platanos in Greek, can be seen at **Topolia** village in **west Crete** on the road from **Kissamos** (Kastelli) to **Elafonissi**.

Another **famous plane tree** is the one in **Krasi village** on the way from Heraklion to the Lassithi Plateau

This **grows close to water** and it can grow up to 30 meters high. It is also quite often found in the village squares,



# Pine tree

Calabrian pines (*Pinus brutia*)

-- also called:

**Turkish pine, Calabrian pine,  
East Mediterranean pine and Brutia pine.**

generally occurs at low altitudes, mostly from sea level to 600 metres (2,000 ft), up to 1,200 metres (3,900 ft) in the south of its range.

a medium-size **tree**, reaching 20–35 metres (66–115 ft) tall and with a trunk diameter of up to 1 metre (3.3 ft), exceptionally 2 metres (6.6 ft). The bark is orange-red, thick and deeply fissured at the base of the trunk, and thin and flaky in the upper crown. The **leaves** (needles) are in pairs, slender, mostly 10–16 cm long, bright green to slightly yellowish green.



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The **highest elevations** host impressive  
cypress (*Cupressus sempervirens*) woodlands  
endemic evergreen maple (*Acer sempervirens*)

In the high mountain elevations, extensive thorny cushion shrublands occur and support many endemic species.



# Cypress tree

Cypress, *Cupressus sempervirens* var. *Horizontalis*.



## Cretan Maple (*Acer sempervirens*)

It is a partly deciduous tree up to 10 meters, which grows in the forests of Crete's mountains

**between 800 and 1500 meters above sea level.**



# MOUNTAINS

Lefka Ori (White Mountains)

Herb:

***Bupleurum kakiskalae*** -- grows on a few **calcareous cliffs at 1450-1500m**

## ***Bupleurum kakiskalae***

This perennial herb occurs in crevices of steep limestone rocks.

a species of **flowering plant** in the **Apiaceae** family.

Plants produce a single, **monocarpic** rosette of narrow oblanceolate, blue-green leaves which flowers after 3–12 years. The flower stem is branched and up to 1m tall, with numerous heads of yellow flowers in late summer.

*Bupleurum kakiskalae* is endemic to the mountain range of **Levka Ori**

at Kakoskalo in the mountain range of **Levka Ori**, in the Samaria gorge.

A second location at **Melindaou Mt**





## ***Nepeta sphaciotica***

The Micro-Reserve of *Nepeta sphaciotica* is located on **north side of the Svourichti summit**

**Lefka Ori Mts** (NATURA 2000, GR 4340008) and encompasses the entire, single population of the species.

The total surface of the micro-reserve is 5.2 ha and occurs at an altitude of 2250-2300 m. The micro-reserve is located on a rocky slope with high inclination and semi-stabilized screes with sparse, low vegetation

The plants are small tufted perennials about 10 to 20 cm tall with hairy leaves flowering in July and August.



Nepeta sphaciotica - Click to enlarge

## Cretan Zelkova (*Zelkova abelicea*)

This 3 to 5 meters high tree is found only in Crete, where it grows in 17 different places **in the mountains**.

In total, it is estimated that there are 50 to 100 mature trees. It is therefore registered as an endangered species by the International Union for Conservation of Nature (IUCN).

Cretan Zelkova grows on rocky, calcareous soils and on rocky hillsides. It is found in forest, scrub and heathland scattered among other tree species. One such place is the **Rouvas forests on Psiloris' slopes south of Villa Talea**. Zelkova has a highly branched, dense crown. The leaves are small and green with serrated edges and the tree has small, fragrant f



## Samaria Gorge

The upper gorge flora includes Cypresses, Kermes oaks, Creten maples

lower gorge flora is dominated by Calabrian pines (*Pinus brutia*), olive and Plane trees, Oleander and Chaste Tree shrubs.





Oleander *Nerium oleander*



www.alamy.com - AD1W5M



# Rare Plants

# ***Anthemis glaberrima***

endemic to the islets of Agria Gramvousa and Imeri Gramvousa near Crete.

at an area of 3 ha and the population of Imeri Gramvousa hosts c. 500 individuals at an area of 0.3 ha.

a species of flowering plant in the Asteraceae family

Its natural habitats are Mediterranean-type shrubby vegetation and rocky shores.

grows among calcareous coastal rocks on the islets of Imeri and Agria Gramvousa and nowhere else in the world. These islets are located along the NW corner of Crete.

