

Introduction

The Cyprus Cedar belongs to the family of Pinaceae and it is the only endemic tree species which grows in Cyprus. The genus of *Cedrus* is represented by four species, which are clearly very closely related and it is believed that they have their origin from a species which is distributed from the Himalayas in the East to the Atlas mountains in the West. The fossil record gives evidence to support this theory. Fossils were discovered in Western Kazakhstan, Southern Europe, Central Europe and the Ahaggar Massif in central Sahara, but the fossil record is too poor to give an answer to the question whether the *Cedrus* ever had a continuous distribution along this path.

Cedrus brevifolia is found only in Cyprus, *C. libani* occurs in Turkey, Syria and Lebanon, *C. deodara* in the Hindu Kush, Karakoram and the Indian Himalayas and *C. atlantica* is found on the Atlas mountains of North Africa.

History - Legend

The Cyprus Cedar was well-known by ancient authors and it was first mentioned by Theophrastus and Pliny as an important forest tree while its high ecological and economic values have been reported by a number of authors.



However, the species has been limited to a few small stands and scattered trees due to uncontrolled felling, fires and grazing through the last centuries. It was only in 1879, when the Forestry Department was established, that measures for its protection were taken, recognizing thus its importance as a natural resource and the danger of its extinction. Therefore, since 1879 the Forestry Department has implemented a number of conservation measures for the protection of its genetic resources. The Cedar is also known as Holy Mary's pine because, according to a local story, during the Virgin Mary's visit to Kykkos Monastery, the pine trees knelt down as she was passing by in order to honour her, and she rewarded them by changing their shape into these beautiful cedars.

Description

The Cyprus Cedar is a tall (30-35 m), usually large, evergreen, oleo-resinrich tree with usually a monopodial, sometimes forked above two thirds, heavy, columnar, cylindrical stem and spreading branches, often forming distinct horizontal layers in mature specimens. The crown in young trees is narrowly conical, becoming open and flat-topped in old trees. It is known as the short-leaf cedar, because it has the shortest leaves as compared with the other species of cedar.

It is a monoecious plant with unisexual flowers. Male flowers terminal on short, cylindrical 3-5 cm long shoots, at first pale green, ripening to pale brown, with yellow pollen. Female flowers terminal on short, erect, ovoid, 1-1,5 cm long shoots, at first green, maturing to pale green with sometimes a purplish hue, ripening to light brown. The cones are barrel-shaped, 8-11 cm long and 5-6 cm wide, pale or rather dark greyish-brown.

Its wood has a strong smell and does not get attacked by moths. It was used in building construction, for making furniture, ships etc.

Ecology

The Cyprus Cedar occurs in five small neighbouring regions at Pafos Forest covering an area of about 700 ha on stony mountain sides of igneous formation at elevations between 900-1.400m. The exceptional ability of cedar to grow on a wider range of soils, to withstand extreme climatic conditions and pests have been reported by a number of authors.

It grows either in pure stands or in mixtures with *Pinus brutia*, *Quercus alnifolia*, *Platanus orientalis*, *Acer obtusifolium*, *Arbutus andrachne*, *Cistus* spp. and other shrubby and herbaceous plants. Some important endemic plants like the *Ranunculus kykkoensis*, which is included in Appendix I of the Bern Convention, the *Cyclamen cypricum*, *Thymus integer*, *Arabis purpurea* and *Pterocephalus multiflorus* also grow in the same area.

Management

The Cyprus Cedar has been restricted to a few small stands and scattered trees in Pafos Forest. In 1879, the Forestry Department established conservation measures for its protection, thus recognizing its importance as a natural resource and the danger of its extinction.

The utilization of the Cyprus Cedar's genetic resources for monetary profit is not in the policy of the present management. However, the species has been used successfully in afforestation programmes in mountainous regions of Cyprus and it has been introduced into other Mediterranean countries for experimental and ornamental purposes.

The main part of the Cyprus Cedar natural stands, was designated a Nature Reserve area after a decision of the Council of Ministers in 1984. In addition, the area has been included in the European Natura 2000 network and the *Cedrus brevifolia* forests have been proposed and accepted as a priority habitat of Community Interest (*Cedrus brevifolia* forests – *Cedrosetum brevifoliae* – code 9590*). Cyprus has therefore the oblig-

ation to manage and protect these forests in a way that they are in perpetuity at a “favorable conservation status” as will be verified through continuous and systematic monitoring.

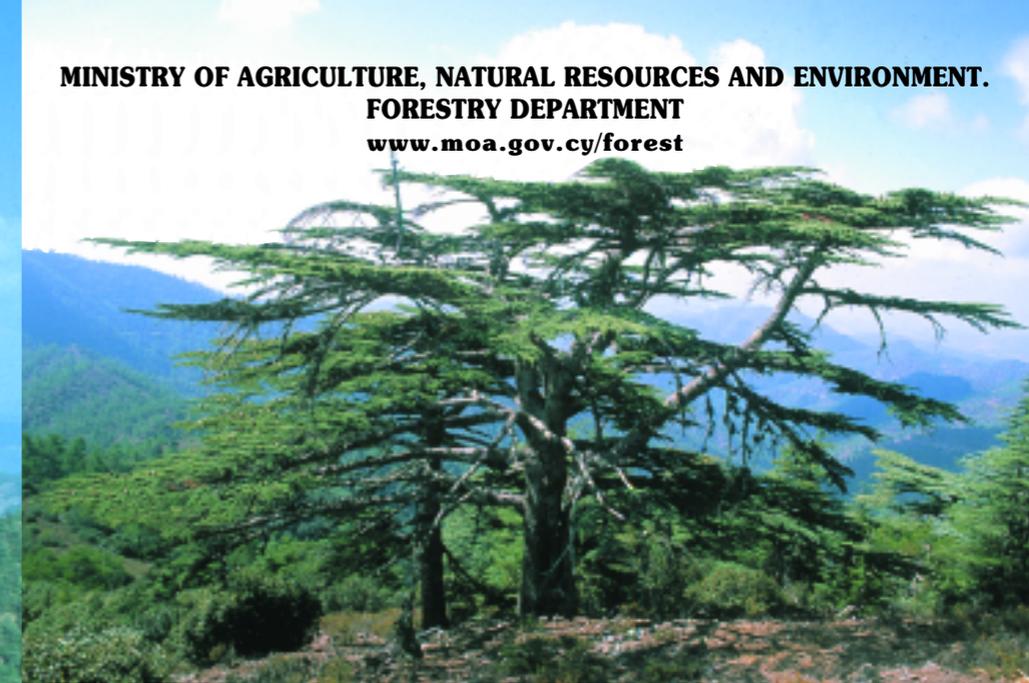
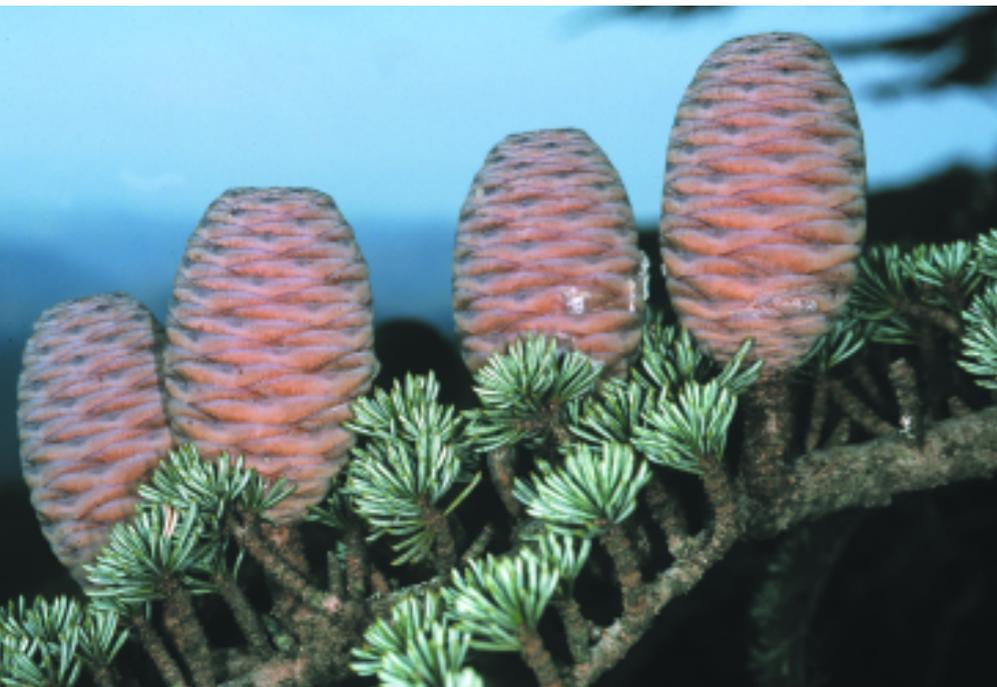
Fellings are not allowed in the area, but there are still serious threats for the Cyprus Cedar forests, the main being forest fire and climate change. The Department of Forests takes all necessary fire protection measures and is working on the elaboration of a medium term plan to alleviate influences of climate change on cedar stands.

Among the measures already taken are, extensive reforestations of cedar in the Pafos and Troodos Forests and the establishment of a bank gene (*ex situ* conservation) in the Amiantos asbestos mine in Troodos Forest.

The economic and ecological importance of the Cyprus Cedar’s genetic resources have been verified by research. Recent research revealed high variability while rare and unique genes have been detected. These attributes permit adaptation to new environmental conditions and its use as an exotic species for the rehabilitation of deteriorated mountainous ecosystems.

Conclusion:

The Cyprus Cedar occurs in five small neighbouring regions at Tripylios, which are the remnants of formerly more extensive forests. The economic and ecological importance of the Cyprus Cedar’s genetic resources has been verified by research. These genetic resources must be protected and preserved at any cost.



**MINISTRY OF AGRICULTURE, NATURAL RESOURCES AND ENVIRONMENT.
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CYPRUS CEDAR *(Cedrus brevifolia)*



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