

Plant Profile

Abies cephalonica (Greek Fir)

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Greek fir is a promising candidate for use as a landscape tree and has potential as a Christmas tree in Pennsylvania. While the attributes of the species look good on paper, they become even more attractive when observing actual specimens thriving in the Northeast and Mid-Atlantic regions of the United States. Greek fir is altogether too rare in cultivation and deserves a heightened status within the conifer market. The case for Greek fir is both compelling and convincing.

Based upon the location of existing specimens, Greek fir has demonstrated hardiness throughout USDA zone 6. It has also proven adaptability to various soil pH levels. While most native stands of Greek fir in the Mediterranean region grow on calcareous soils that are basic, it can be found growing well in the Mid-Atlantic region on acidic soil. Based upon field observations and available literature Greek fir is able to readily adapt to soils in the pH range of approximately 6 to 7.5.

In addition to being hardy and adaptable, Greek fir has a number of outstanding ornamental attributes. Greek fir has dark green foliage that may have a slight bluish tint. Its needles are thick and lustrous, with rounded or pointed tips. On the bottom side of the needle the characteristic white bands normally seen on fir needles are present. Needles are directed forward slightly, and are usually radially arranged. On cone-bearing branches almost all needles face upward, which is facilitated by a twisted base on the lower needles. The needles are slightly aromatic, though the fragrance is very subtle.

The bark of Greek fir is smooth when the tree is young, and it is normally grayish colored with pink or brown highlights. As the tree ages the highlights and the smoothness are lost. The bark becomes fissured and rough, dividing into plates and becomes primarily gray in color.

Young branches are a primary means of identifying this species. They have reddish brown bark that is often glabrous and they also have unique striations. The striations on the young branches become wide at the bases of needles, forming a small pad that the needle extends from, and then narrow down between the needles. The resulting effect is a chain-like appearance running down the young branches.

Buds of Greek fir are conical or ovoid in shape. They are reddish in color, and are often covered in lightly colored resin. The cones of Greek fir are usually 4 to 6 inches in length and 1 to 2 inches in width. Tapering is normally seen at both ends of the cone, with an acute tip on the far end. Mature cones are brown and often covered with lighter colored resin blisters.

Greek fir is usually branched to, or very near, the ground. The canopy is narrow and pyramidal, sometimes bordering on cylindrical, and the trunk is usually very straight. Architecturally the plant is very pleasing, bringing a stately bearing to the landscape. The growth rate of Greek fir is described as moderate to fast. Mature Greek firs may exceed 100 feet in height, and at least one specimen of this size may be found in Pennsylvania at the Morris Arboretum in Philadelphia. Additional specimens of note in the region are located in the New York Botanical Garden, on the Pennsylvania State University Main Campus, and the Graver Arboretum near Bath, PA.

Greek fir has received some attention from authors, researchers, and growers in the past. While almost every recorded account is favorable, production of Greek fir has remained uncommon. A few cultivars of Greek fir are recorded, yet rarely seen for sale. Use of Greek fir as a cut Christmas tree has not been studied extensively. However, in one published report, post-harvest quality was shown to be good-excellent when the trees were displayed in water, but decreased significantly when the trees were displayed dry.

The ornamental qualities, demonstrated hardiness, and wide adaptability of Greek fir make it a prime candidate for use in Pennsylvania. Growers and consumers should become more familiar with this exceptional plant.

Name: *Abies cephalonica*

Common Name: Greek fir

Hardiness: USDA Zone 6 (5?)

Mature Height: 100 feet to 120 feet

Mature Spread: 25-35 feet

Classification: Evergreen tree

Potential Use: Specimen, screening, group planting, Christmas tree, bough for wreaths

Growth Rate: Moderate

For Further Reference:

Farjon, A. Pinaceae drawings and descriptions of the genus *Abies*, *Cedrus*, *Pseudolarix*, *Keteleeria*, *Nothotsuga*, *Tsuga*, *Cathaya*, *Pseudotsuga*, *Larix*, and *Picea*. 1990
Liu, T.S. A monograph of the genus *Abies*. 1971
Vidakovic, M. (trans M. Soljan) Conifers: morphology and variation. 1991



Mature Greek fir growing in the Mediterranean region.