

# An African Fir Grows in Boston

*Kyle Port*

The Arnold Arboretum's Conifer Collection offers visitors an opportunity to explore gymnosperms collected from around the world. While Eastern Asian, European, and North American species dominate the collection, a solitary Moroccan fir, *Abies pinsapo* var. *marocana*, stands as an exceptional North African taxon.

Grown from seed collected by former Arboretum plant propagator Rob Nicholson on Mt. Tisouka near Chefchaouen, Morocco, in 1982, specimen 1435-82-A has thrived undamaged in the landscape for 15 years. It is one of two plants of accession 1435-82 that were moved from the Arboretum's Dana Greenhouse to the grounds on September 21, 1993. One plant did not survive transplantation and was noted as dead in the spring of 1994. The lone survivor, which was approximately 4.3 feet (1.3 meters) at the time of transplant, is now a stunning exemplar at 28 feet (8.5 meters) tall with a DBH (diameter at breast height) of 12.6 inches (32 centimeters).

Conical in youth, the tidy habit of this specimen has opened slightly over the years to reveal smooth gray bark. Radially arranged needles persist for 11 to 13 years, giving even older branches an armored appearance. The dark green needles are streaked with 7 to 11 silvery stomatic lines on the upper surface; the lower surface is marked with two pronounced stomatic bands on either side of the midrib. Unlike the characteristically soft-to-the-touch foliage of most *Abies*, the needles of *Abies pinsapo* var. *marocana* have sharply pointed apices, making the foliage far less friendly to fingers. The upright cylindrical cones typical of the species have not yet been observed on this specimen but can be expected soon; sexual maturity for Moroccan fir is typically reached when the trees are between 25 and 35 years old.

Described by French botanist Louis Charles Trabut in 1906 as *A. marocana*, the Moroccan fir is confined to the Rif Mountain Range of Morocco, growing at altitudes between 4,600 and 6,900 feet (1,400 to 2,100 meters). The calcareous soil of this region supports associated taxa, and notes from the Arnold Arboretum's collecting trip detail an open fir forest containing *Cedrus atlantica*, *Acer* (*A. opulus* ssp. *hispanicum*, *A. campestre*, *A. monspessulanum*), and *Paeonia* (*P. coriacea* var. *maroccana*).

Rare in cultivation, the International Union for Conservation of Nature and Natural Resources considers *Abies pinsapo* var. *marocana* to be a "near threatened" species, an indicator that it could become threatened in the wild in the near future. Human activities (logging, expansion of cultivated areas, population growth) and climate change may further restrict the range of this taxon. However, preservation efforts are ongoing and the establishment of the Talassemtane National Park, which contains the only remaining Moroccan fir forest, was celebrated by conservation organizations in 2004.

## Related species:

*Abies pinsapo* 'Glauca', blue Spanish fir, is also represented in the Arboretum's collection (accession 192-42-A, obtained from W.B. Clarke and Company, San Jose, California). Planted in the fall of 1954, this blue-hued cultivar is topped with dozens of cones this year. Separated from the Moroccan fir by the Straits of Gibraltar, the Spanish Fir (*Abies pinsapo* var. *pinsapo*) is endemic to the Sierra de Ronda in Southern Spain.

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