

Renaissance of America's Elms

70 new elms begin an elm renaissance in California.

What Once Was

The majestic arching canopies of America's elm trees were dominant features along the streets of many American cities during the early 20th century. Generations of families grew up under their stately shade. But beginning in the 1930s, Dutch elm disease began taking its toll, and by the 1970s the disease had swept across the country killing most of the elms.

The Elm is Back

The cries of timber were accompanied by sighs of despair by those who knew that no other species could duplicate the grace, stature, and adaptability of this native. For many years, it was as if the elm was extinct. Now, an elm revival is underway. New disease resistant trees have been propagated and are being planted once again. For example, 80 "new" elms were recently planted along Pennsylvania Avenue in front of the White House in Washington, D.C.

UC Davis is Testing 14 Varieties

As part of this national renaissance, researchers, teachers, students, and grounds crews planted 70 elms at the Bowley Plant Science Teaching Center on the campus of UC Davis during May 2005. The trees, provided by Schmidt Bros. Nursery in Oregon, consist of 14 different varieties selected because of their potential to be good performers in Northern California. They include the disease tolerant American elm cultivar 'Valley Forge' and hybrids such as 'Accolade,' mostly of Asian heritage, whose vase-shape duplicates the American elm. Other promising cultivars have the added advantage of elm leaf beetle resistance, ornamental bark, and a wide range of environmental tolerances.

Evaluation Period

The trees, planted every 20-ft in four rows at the Bowley Center plot, will be measured and evaluated annually for five years, then transplanted to various sites on campus and monitored for another five years. Students are assisting with annual evaluations.

The elm is back. 14 different varieties, currently being evaluated on the campus of UC Davis, are poised to again arch over California streets and parks.



The Elms Educational Role

The elm tree plot plays an important role as an outdoor laboratory for two plant identification courses. Also, urban forestry courses will use the site for discussions on the importance of planting a diverse mix of species and selecting trees that are well-adapted to local growing conditions. Seeing these concepts in the field will help students become managers of more sustainable urban forests in the future.

The Role of Research

UC Davis and Forest Service researchers will compare the trees' performance in terms of growth, health, and fall color. Others will test resistance to elm leaf beetle and Dutch elm disease. Their root architecture will be examined using air-spades that expose roots with minimal disturbance. This technology makes it possible to identify cultivars with deep and shallow rooting patterns, thereby reducing future conflicts between tree roots and sidewalks.

The Future

Cities in the Bay area and Sacramento Valley may once again see elms arching over their streets and parks. This partnership between UC Davis Plant Science Department, Grounds Division, and USDA Forest Service, Center for Urban Forest Research is providing new information that will spur reintroduction of what was the crown jewel of many California cities—the elm tree.