

Dawn Redwood, a Living Fossil

By Susan Camp

I read with some sadness last week that the Pioneer Cabin Tree in California's Calaveras Big Tree State Park toppled from age, human interference, and heavy rains. The giant sequoia (*Sequoiadendron giganteum*) had been a tourist attraction since the late 19th century. Giant sequoias are the largest trees on earth, some attaining a trunk diameter of 30 feet and a height of 250 feet. They survive in a few groves on the western slopes of California's Sierra Nevada mountains. The tallest trees in the world are the California redwoods (*Sequoia sempervirens*), which can achieve a height of 360 feet with a trunk diameter of 24 feet. These majestic redwoods grow along the coast of Northern California.

Although we have plenty of tall trees in the eastern half of the United States, we can't compete with the west in sheer size. In the southeast, though, a very special tree has been growing and thriving for about 75 years. The dawn redwood (*Metasequoia glyptostroboides*) was discovered in 1941 as a fossil in China. In 1944, a living dawn redwood was found in Hubei Province. Dawn redwood has remained morphologically unchanged for 65 million years and, like the ginkgo, is considered a "living fossil." It is the only living species of the genus *Metasequoia*. More than twenty species of *Metasequoia* fossils have been discovered at numerous sites in the Northern Hemisphere. *Metasequoia*'s distant cousin is the slow-growing bald cypress (*Taxodium distichum*), which it superficially resembles.

In recent years, dawn redwood has grown in popularity as a specimen tree for planting in large, open areas. It can be placed in groups, if sufficient space is left for it to spread. We are fortunate to have several dawn redwoods growing on our land, planted by the previous owners. I had read a little about their history, but since they are virtually trouble-free, I never paid much attention to them until the news of the demise of the giant sequoia.

The dawn redwood is a deciduous conifer. It loses its foliage in the fall, something we generally don't expect to see with conifers. This fast-growing tree can reach a mature height of 75 to 100 feet with a spread of 20 feet. The shape is conical, with soft feathery foliage that emerges in the spring as light green and deepens in color during the summer. The ½ inch needle-like leaves turn reddish-brown in the fall and drop soon after the first frost. A property owner will occasionally cut down a dawn redwood during the winter because he believes the tree has died.

Dawn redwood bark is a cinnamon-brown color. It is papery and peels easily, resembling the bark of other redwoods. As the tree ages, the bark develops characteristic fissures and flaring at the base that provide striking visual interest. Dawn redwood is monocious, which means that both male and female cones grow on the tree. Female cones are small and brown; the inconspicuous male cones look like pale green pearls.

Dawn redwood grows in USDA Hardiness Zones 4 to 8. It likes full sun and well-drained, moderately moist, acid soil with a pH of 4.5 to 5. It is tolerant of drought, standing water, air pollution, and deer. There is evidence that dawn redwoods will not reach full height potential if planted too closely to other trees or buildings, or if the location is too shady.

Few diseases attack dawn redwood, although fungal canker infections can occur. No chemical controls for canker exist, so pruning out diseased twigs and branches and disposal of debris to prevent spreading the fungus is the only option.

Virginia Cooperative Extension (VCE) Publications 3010-1474 “Dawn Redwood: *Metasequoia glyptostroboides*” provides information on growing dawn redwood. VCE Publications 450-450 “Problem-free Trees for Virginia Landscapes”; 430-026 “Wet and Dry Sites”; 426-604 “Selecting Landscape Plants: Rare and Unusual Trees”; 426-043 Urban Water-Quality Management: Rain Garden Plants” offer suggestions for use of this majestic, historically significant tree.

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