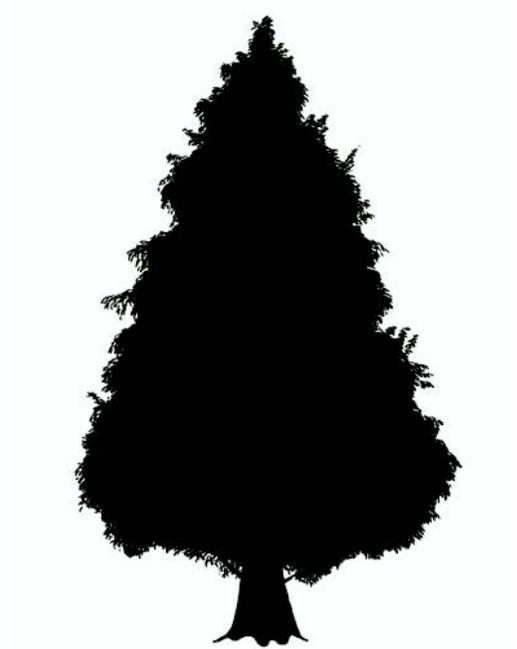


DAWN REDWOOD

COMMON NAME

Metasequoia glyptostroboides

SCIENTIFIC NAME



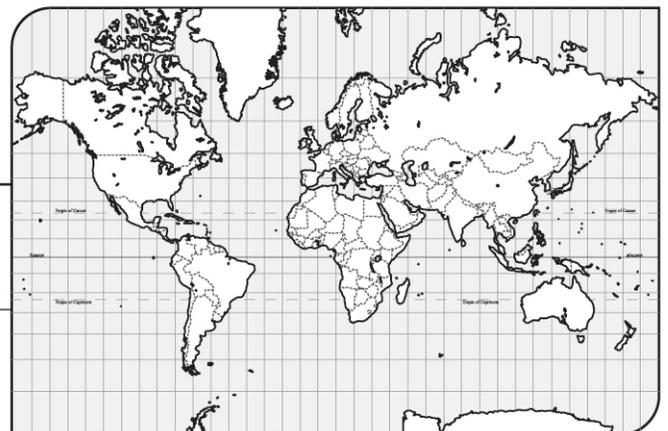
Importance

This tree is another success story of botanical exploration. Though fossil records showed that this tree once grew throughout Eastern Asia and parts of the United States, the dawn redwood was thought to be extinct until the 1940s. In 1941, a Chinese botanist, T. Kan, of the National Central University, discovered a living specimen near the village of Modaoqi, south-east of Wanxian, in Sichuan, China. Specimens of this tree were subsequently located by other botanists, and the tree was reintroduced into the United States in 1948 through a collaboration of Chinese botanists and botanists from the Arnold Arboretum, where it caused a sensation in the botanical community.



Photo Credit: Richard Carter

The dawn redwood is another example of a “living fossil” tree. Fossils found of this tree date back nearly 100 million years, to the late Cretaceous period of the Mesozoic era, when dinosaurs still walked the earth. Known as water fir, water larch, and *shui shan* in China (literally, water fir). This tree closely resembles the American species bald cypress, but can be distinguished by the opposite buds.



Cypress family (*Cupressaceae*)

FAMILY

Critically Endangered

RED LIST CATEGORY

Today, the dawn redwood is highly valued as a landscape specimen for its beauty, hardiness, adoptability, and resistance to pests and diseases, and several horticultural selections have been made. The tree is extensively planted as a street tree in China. However, the success of the species depends on the continued survival of trees in natural populations. The few currently remaining wild trees are disappearing as forests are cleared to create farmland.

Description

Form: Dawn redwood has a very straight, single trunk with numerous branches forming a narrow conical crown. The young trees grow rapidly and this tree is capable of reaching heights well over 100 feet (30 m) tall. This tree can develop a buttressed trunk, with a tapered base exhibiting a braided, fluted structure and a wide, shallow, and aggressive root system.

Leaf: The leaves of this tree are opposite flat linear needles, lying flattened along both sides of the twig. This conifer is usually deciduous, dropping its needles in the fall. The leaf and deciduous branchlet structure resembles a feathery compound leaf, with the green to yellow-green needles directly opposite each other. The needles turn a unique pinkish tan to reddish bronze color in the fall before dropping.

Flower: Dawn redwood is monoecious, with male and female flowers on the same tree. The male flowers are a light yellow brown, in narrow hanging clusters up to 12 inches (30 cm) long. The female flowers are yellow-green, solitary and upright with fused scales.

Fruit: The elongated or rounded cones tend to be box-like, with four sides. The cones hang on long stalks, are a whitish blue when young,

growing to 0.5 to 1 inch (1.2 to 2.5 cm) long and becoming brown when mature. The flat, shields-shaped scales contain small, winged seeds which mature in late fall.

Bark & Twigs: The bark of the dawn redwood is an attractive, fibrous reddish brown color, with bark that exfoliates in strips to develop an irregular fluted pattern. Twigs are slender, light reddish brown in color, smooth, with short, buff colored, opposite, cylindrical buds protruding at right angles.

Habitat and Ecology

Native to China, this tree is known from sites in Shizhu in Sichuan, Lichuan in Hubei and Longshan and Sangzhi in Hunan. Dawn redwood is usually confined to slightly waterlogged areas of open forest, stream banks, and floodplains. However, fossil records indicate that this tree was widely distributed throughout Eastern Asia and abundant in the United States (Pacific Northwest) during Oligocene period (38 million years ago).

Threats

While this tree was once widely distributed, today, the wild populations of dawn redwood are confined to a few relatively small areas in China. The subpopulations appear to have been reduced to a few mature individuals, about 1000 trees all together. The areas surrounding the forests where this tree is found heavily cultivated and the forests where the tree is found are in imminent danger of being converted to farmland. Currently, the tree does not reproduce well, and is highly sensitive to disturbances such as those from agriculture, making prospects for natural regeneration poor. The impact of climate change on such limited habitat could

further disrupt the sensitive populations of this species.

Conservation Action

While the wild populations are limited, since its reintroduction, this tree has been grown extensively in cultivation. Grown both in botanical institutions and as a landscape tree, you can now see this tree in many parts of the world, and several cultivars are available. However, the specimens currently in botanical collections have relatively little genetic diversity, making the diversity available in the wild populations critical to the success of this species. Conservation priorities include protection of the existing natural populations, and restoration of the species through reintroduction of genetically diverse trees. Several collaborative efforts exist to promote the protection, education, and reintroduction of these trees.

Want to help? Contact your local U.S. Fish and Wildlife Service, the American Public Gardens Association or Botanic Gardens Conservation International to find out whether dawn redwoods grow in your community. Visit a tree near you, learn more about it, and share it with your friends. You can also plant your own dawn redwood tree in your yard or community, or support organizations such as the [Save the Redwoods League](#) that are dedicated to redwood conservation and education.

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