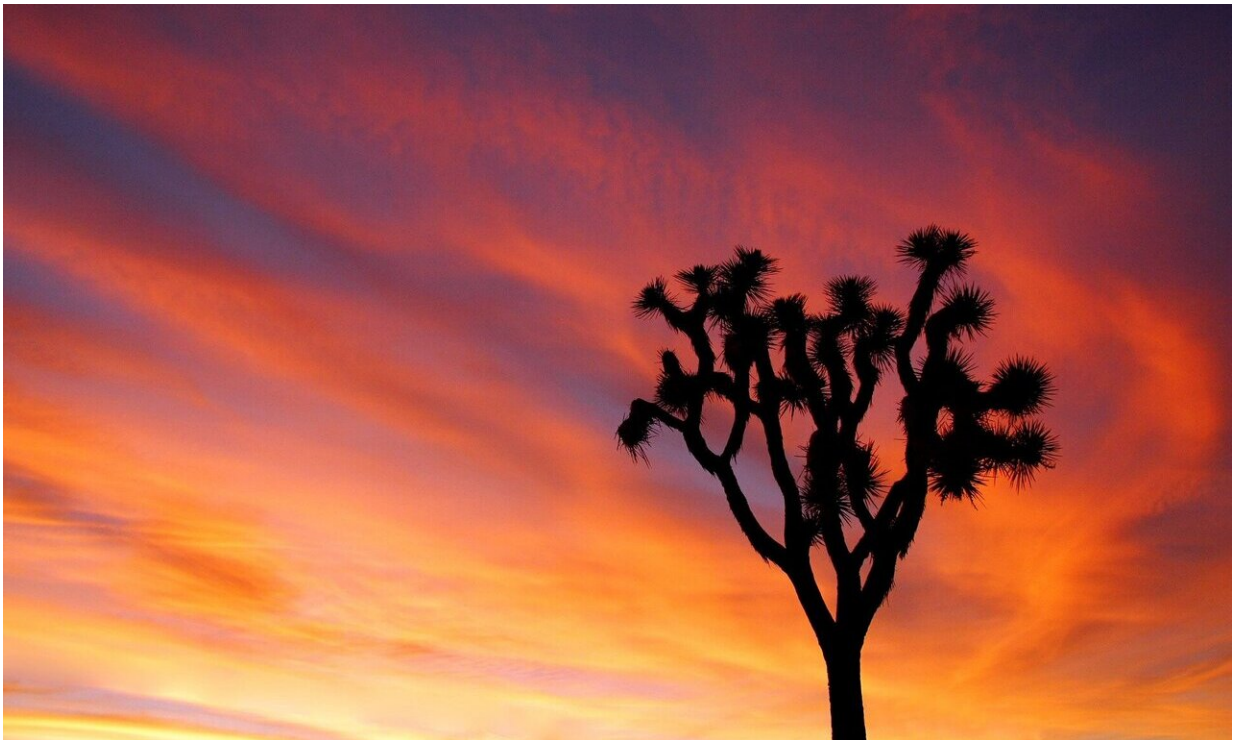


Scientists say Joshua trees may warrant listing as a threatened species

April 14 2020, by Louis Sahagun



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Joshua trees face the risk of extinction after decades of development, drought and more frequent wildfires due to climate change in their Mojave Desert stronghold, according to California wildlife authorities who are recommending that the trees be considered for listing as an endangered species.

The state Department of Fish and Wildlife on Monday said it based its recommendation on a review of a petition submitted by the Center for Biological Diversity, which argues that the western Joshua tree's spindly desert woodlands are "likely to become endangered in the foreseeable future" without protection under the California Endangered Species Act.

The fate of Joshua Tree National Park's namesake plant is now in the hands of the state Fish and Game commissioners. They are to decide in June whether to accept the department's recommendation and declare the tree a candidate for listing. If the [trees](#) are listed, the law requires state wildlife managers to devise a recovery plan for them, which could limit development on some of Southern California's sunniest real estate.

A final decision is expected sometime next year.

Public announcement of the department's recommendation was delayed several days due to a teleconference with the commissioners on Thursday that descended into chaos after they were overwhelmed by hundreds of angry anglers participating in the call. Many of the critics who labeled the commissioners "fascists" and shouted "make fishing great again!" mistakenly believed they aimed to cancel the entire fishing season statewide.

Conservationists see Monday's announcement as a triumph of state environmental law. Critics, however, describe it as misguided overreach because Joshua trees are already protected under many city and county ordinances, and within the 800,000-acre national park.

"We're elated that Joshua trees are a step closer to protection," said Brendan Cummings, the center's conservation director and a resident of the community of Joshua Tree. "We urge the state to finalize these protections quickly so Joshua trees can survive and thrive in California for generations to come."

But the prospect of offering more protection to Joshua trees concerns some residents in struggling high desert communities such as Yucca Valley, about 10 miles northwest of the main entrance to the national park.

The town of 21,000 residents, which sits along California 62 about 25 miles north of Palm Springs, has a median household income of about \$45,200, compared with about \$60,100 countywide, according to the U.S. Census Bureau.

"In my opinion, Joshua trees are as majestic as redwoods," said Bob Armstrong, a real estate broker and resident of Yucca Valley for 40 years. "But it would be ridiculous to make it tougher than it already is for citizens to move a Joshua tree in order to improve their property by, say, building a swimming pool."

Local jurisdictions in Joshua tree habitat that currently have plant protection ordinances include Hesperia, Palmdale, Victorville, Yucca Valley and Los Angeles and San Bernardino counties.

The petition argues, however, that existing state laws and ordinances that require permits to harvest or sell native desert plants may help protect individual trees but are largely inadequate at protecting the species from habitat loss.

In addition, since Joshua trees are not listed as threatened or endangered species, it is uncertain whether the potential environmental effects of a large-scale development or highway project would be adequately mitigated, the petition says.

Researchers for decades have warned that time is running out for the trees, which reach about 40 feet in height and live about 200 years. Many desert species rely on the trees' blossoms, roots, inner chambers

and decaying husks to complete their life cycles: yucca moths, bobcats, termites, skipper butterflies, desert night lizards, kangaroo rats and 20 species of birds, including Scott's orioles, ladder-backed woodpeckers and great horned owls.

Recent studies show the tree's range is contracting at lower elevations, and its reproduction has all but come to halt.

Joshua trees were once dispersed across landscapes with help from ancient pack rats and elephant-size [giant ground sloths](#), a finding based on the abundance of seeds found in fossilized dung. But these sloths went extinct about 10,000 years ago, taking away the tree's Johnny Appleseed. Today, rodents are its main agents of seed dispersal.

Beyond their ecological value, Joshua trees are cultural mainstays for movies, fashion shoots, advertising campaigns and wedding ceremonies.

The tree was named for the biblical figure Joshua by a band of Mormons traveling through the Cajon Pass back to Utah in 1857. They imagined the trees as prophets, their outstretched limbs pointing the way to their promised land.

During the 1980s, hundreds of thousands of Joshua trees were replaced by development in desert boom towns. Many more were removed later to make way for transmission lines and renewable energy facilities.

In the 1990s, heavy rains triggered explosive growth of exotic grasses throughout Southern California's desert regions. Feeding off nitrogen-laden smog wafting in from the Los Angeles area, the grasses left Joshua tree forests vulnerable to large-scale brush fires.

Now, the trees are failing to reproduce at hotter, drier lower elevations, and scientists project they could become functionally extinct in

California by the end of the century.

Prolonged droughts, which are expected to occur with greater frequency and intensity over the coming decades, will lead to higher death rates for mature Joshua trees, scientists say.

The western Joshua tree is one of two genetically distinct species that occur in California. It has a boomerang-shaped range that extends from the national park westward along the northern slopes of the San Bernardino and San Gabriel mountains, northward along the eastern flanks of the Sierra Nevada and eastward to the edges of Death Valley National Park.

About 40% of the western Joshua tree's range is on private land where state [endangered species](#) law would apply, according to the petition, and includes the cities of Palmdale, Lancaster, Hesperia, Victorville and Yucca Valley.

The eastern Joshua tree's range in California is centered in the Mojave National Preserve and eastward into Nevada.

"Unfortunately, federal wildlife and public land managers are doing little to address the realities of climate change," Cummings said. "If the Joshua tree is to survive in California, it is essential that the state step in and lead recovery efforts before it's too late."

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Citation: Scientists say Joshua trees may warrant listing as a threatened species (2020, April 14) retrieved 11 May 2024 from <https://phys.org/news/2020-04-scientists-joshua-trees-warrant-threatened.html>

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