

Chile's pine forests: a botanical dinosaur bound for extinction?

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The *araucaria araucana* Chilean pine tree is seen as sacred by several local tribes

In Quinquen, an indigenous community in southern Chile, Ricardo Melinir shows off a forest of Chilean pine trees—the *araucaria araucana*, a "living fossil" seen as sacred by several local tribes.

He managed to save the "Monkey Puzzle" [trees](#)—some of which are 1,000 years old or more—from logging companies, but they are still under threat from blight and climate change.

"It is difficult to say how old these pines are," says the 60-something Melinir, shivering in the cold.

He points to a giant tree felled in the winter months earlier this year, a victim of heavy snow and old age.

The forest is located in Araucaria province, in the Chilean Andes about 600 kilometers (375 miles) south of the capital Santiago.

The trees, declared a part of Chile's national heritage in 1976, can grow up to 60 meters (200 feet) in height and three meters in diameter.

In Quinquen, at least 40 percent of the [pine](#) tree forests are wild, says Melinir, who is the head of the Pehuenche community, which takes its name from the tree's fruit.

In 1991, the restoration of a democratic government in Chile following the Pinochet dictatorship that began in 1973 allowed the Pehuenche to recover their ancestral lands, which they had lost 50 years before.



The tree's pine nut can be used to make flour and drinks

Today, 50 or so families—a total of 200 people, all of them named Melinir—live throughout the area, which is the first indigenous conservation zone established in Chile.

But [climate change](#) has meant more wildfires, and many trees have been destroyed. Their pine nuts—prized by chefs the world over—have been stripped from what Neruda once called "Chile's towers."

All told, the trees are more vulnerable than ever.

Disease

Researchers are in a race against time to try to identify a new blight that has devastated the forests in recent years.

It could stem from a combination of environmental stress due to drought and the appearance of one or more types of mushrooms that dry out the tree's branches and kill it.

According to a study published in the Chilean daily El Mercurio, 90 percent of the trees are already affected, and two percent of those are dead.



Rene Melinir (R) prepares a traditional Mapuche dish made using the fruit of the "Monkey Puzzle" tree

The Chilean pine grows very slowly, and needs other male and female trees in order to ensure pollination and survival.

It has dark brown male "flowers" at the tips of its branches, and female yellow-green pine cones. The two "fall in love" in the boreal spring, Melinir says with a flourish.

Seeds appear in March and April, before the first snowfall.

Then, it's a long wait—20 to 25 years—before the tree sprouts.

Ruben Carrillo, a researcher at University of La Frontera, is putting pressure on Chile's environment ministry to put the tree on the list of endangered species, saying all of the procedures have been fulfilled.

"All we need now is for the decree to be published in the government gazette!" says the university scientist, who notes that the araucaria is the only species associated with an indigenous people.



The araucaria araucana trees are still under threat from blight and climate change

Ecotourism a possibility

In recent years, Carrillo says the [pine forests](#) have shrunk to some 260,000 hectares (640,000 acres) in Chile. They are also found in Argentina.

"The pine nut is our only way of surviving, the only crop we have," says Rene Melinir, Ricardo's chef son.

The nut can be used to make flour and drinks. It can be eaten raw or cooked. Some even use it to make jam, as well as savory or sweet pies.

"The pine nut contains lots of protein and calories. It has no salt or gluten, which makes it more healthy," says Rene.

In the shade of the araucaria trees, the community in Quinquen wants to get into the ecotourism business—a new way to boost its income, confined to farming and raising livestock.

About 200 tourists, most of them French, came in 2017, according to Alex Melinir, the president of a cooperative of about 15 members seeking to live in harmony with the environment, as their ancestors did.

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