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## Lebanon Cedar Podcast

*Cedrus libani*

Mentioned in the Bible and in the 8000-year-old epic Gilgamesh, Lebanon's iconic cedars have been reduced to a fraction of their former range by centuries of logging. Ari Daniel Shapiro walks the Shouf Cedar Reserve to learn how scientists are working to save the last remaining trees from a more insidious threat—climate change. The answer may surprise you.

### Transcript

**Ari:** I'm Ari Daniel Shapiro for the Encyclopedia of Life, and this is One Species at a Time.

*Cedrus libani*. The cedar of Lebanon. These trees have thick trunks and stout limbs that thrust outward. They've got broad and almost flat tops with giant fans of needles. For the Lebanese, however, it's not just a tree. It's a symbol. Of strength. Of longevity, since the tree lives for thousands of years. It's emblazoned on their flag. But Lebanon today is a land of traffic jams and apartment blocks climbing slopes once covered by cedar trees. Nizar Hani is the scientific coordinator, here at the Shouf Cedar Reserve. He says that for thousands of years, their fragrant wood has been highly prized.

**Hani:** Everywhere was cutting the cedar trees and transfer the wood through the Mediterranean Sea to Europe, to Egypt, to everywhere. It was a huge work. A long, long, long time ago, the area of the cedar forest was 500,000 hectares. Imagine.

**Ari:** That's about half the size of modern-day Lebanon. But all of that logging came at a great cost. Today, less than 1% of Lebanon's original cedar forest remains. Much of that forest is in this reserve. It's a quiet green oasis covering 5% of the country's area and containing a quarter of its remaining cedars.

Houssam Ghanem is a guide here.

**Ghanem:** <translated Arabic> The cedar is not just a slogan for the Lebanese people, Ghanem says. It's our father, our mother, our sister, our brother and our friend.

**Ari:** These ties run deep into the past. The cedars of Lebanon are described in the 8000 year-old Gilgamesh epic, and are often mentioned in the Bible. But preserving them isn't just about saving Lebanon's cultural heritage. Just below Nizar Hani's feet as he walks through the reserve is a massive watershed...which is protected in part by the forest.

**Hani:** This is the importance of this reserve. Not just to protect the cedar trees and to protect the birds and the butterflies and whatever. It is to protect our life, it is to protect our drinking water.

**Ari:** The Lebanese government officially recognizes the value of the cedars. Most of the remaining trees grow on public land, where cutting is prohibited. But Nizar Hani believes the government should do more to protect the country's cedars... especially with a new menace threatening them. Hani picks up a small brown cedar cone.

**Hani:** It's very, very dry cone. This cone, this will not continue. Now we are facing a new challenge, which is the climate change.

**Ari:** Climate change poses many problems. Dry cones... more attacks from insects... and a growing risk of forest fires. Then there's what Hani says may be the biggest problem:

**Hani:** The life cycle of the cedar seed: they need to be under snow for two months.

**Ari:** It's that winter weather that triggers germination. But warmer temperatures these days mean a shorter winter, and fewer saplings. So it's not enough to just protect the cedars in a reserve like this. Now new trees have to be cradled through the first years of their life.

**Ari:** This refrigerated warehouse in the town of Zgharta is run by a local NGO. Carlos Nakad is an agricultural engineer.

**Nakad:** We are going now to the cold storage room in order to show you where I put the container of seeds of cedars.

**Ari:** A heavy metal door locks out the summer heat. To produce saplings, Nakad first has to chill the cedar seeds here for 40 days. After the seeds germinate, the trees grow at a nearby nursery, where Nakad tends to rows of young cedars. He sells more than 5000 trees each year. But planting cedars is only the beginning for Nakad.

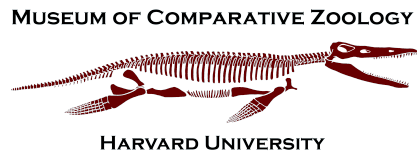
**Nakad:** I don't want a man to plant one tree and take off three others. Or plant them and not irrigate it. The big challenge – is to conserve your tree.

**Ari:** Nakad's trying to cultivate a broader culture of stewardship for trees and the land in general. It's tough work in a country without wide environmental consciousness. Houssam

Ghanem, the guide at the Shouf Cedar Reserve, faces a similar challenge. But he says their efforts to teach local residents about the value of the cedars are starting to take root .

**Ari:** We preserve what we love, Ghanem says. We love what we understand, we understand what we learn. And, Ghanem says, for the endangered cedars of Lebanon, that learning can't happen too quickly.

Our series One Species at a Time is produced by Atlantic Public Media, in Woods Hole, Massachusetts. For the Encyclopedia of Life, I'm Ari Daniel Shapiro.



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