In Cherokee Country, Reviving a Tree's Deep Roots

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Davy Arch can't remember a time when he didn't have a pocketknife for carving a bowl from butternut tree wood or for splitting river cane for baskets.

Nowadays, however, the 48-year-old Arch and other artists in the Eastern Band of Cherokee Indians are facing shortages of these native Appalachian trees and plants for their traditional crafts.

The fungus *Sirococcus clavigignenti-juglandacearum* has ravaged butternut, or white walnut, trees. The fungus causes canker sores and ultimately can kill the trees.

Probably borne by imported plants, *Sirococcus* is thought to have spread quickly once it entered the United States. Over 70 years ago, it is believed to have infiltrated the U.S. South.

Sunshine Brosi is a graduate research assistant in natural resources at the University of Tennessee's Tree Improvement Program. She said that about 80 percent of the butternut trees have been killed in North Carolina.

As for river cane, which looks like bamboo, it has been overused or pulled out by farmers or land developers who consider its growth too aggressive.

Arch, a master artist and member of the board of the North Carolina Arts Council, says 95 percent of the large butternut trees are dead near his home in Cherokee, in the Qualla Boundary area of western North Carolina, which is home to 13,000 Cherokee Indians. He adds that river cane occupies only about 2 percent of its original territory.

In addition to basketry, river cane is also used to make blowguns for some traditional hunters—who still use the weapons to kill small game, like squirrels—and for tourists, who buy them as souvenirs.

"High-quality material is getting harder and harder to come by," Arch said.

The demise of the butternut tree came to the public eye when Eastern Band Cherokee activists purchased about 300 acres (120 hectares) in North Carolina. The real estate included the sacred "mother town" of their tribe, Kituhwa (pronounced gah-DOO-ah), located about three miles (five kilometers) from the Qualla Boundary area.

Since the 1700s Kituhwa had been burned by British and U.S. soldiers many times and was eventually abandoned. When the Eastern Band purchased it in 1995, Kituhwa was known as Ferguson Fields and had served over the years as a dairy and an airstrip.

Today only three large butternut trees remain in Kituhwa.

Restoring Plants

Now the tribe, the University of Tennessee Tree Improvement Program in Knoxville, and other parties are trying to restore the butternut to Kituhwa.

Earlier this year about 500 seedlings were planted in the area, and they have grown quickly. Efforts are also underway to allow river cane to grow again in the area.

Sarah McClellan-Welch, an agriculture extension agent with the North Carolina State University Cooperative Extension program in Cherokee, sees the river cane and butternut as "sister" plants.

The butternut tree's roots contain juglone, a natural chemical that acts as a poison to keep many other plants from growing near it. River cane, however, grows quite well near butternuts—and is already growing with some of the butternut seedlings planted in Kituhwa as part of a collaboration with the University of Tennessee.

McClellan-Welch says she works with the tribe in the interest of growing traditional materials for the artisans and crafters. But she also sees a broader theme to the regrowth efforts.

"This also is in the interest of wildlife, soil conservation, and erosion control," she said.

Grafts From Resistant Trees

Brosi, the university of Tennessee research assistant, is studying the genetics of some butternut trees that appear to be resistant to the fungus cankers.

The goal at the university is to scan seedlings for resistance and develop breeding orchards to increase the natural resistance found in wild populations.

Some trees have fewer cankers than others, and some can heal over the cankers.

"We're planting butternut seedlings to look for genetic resistance and determine factors important in their establishment and growth," Brosi said.

So far, the butternut tree grafts are growing under controlled conditions in nurseries and at the university's experimental farm.

As for the seedlings, Brosi hopes another 300 will be planted next spring. She said the seedlings will develop the fungus, but it is not clear which will survive due to their natural resistance.

Cultural Roots

The effort to reestablish butternut trees and river cane is as much cultural as agricultural. Interest in the plants surged after local Cherokee began hearing stories of how the butternut was integral to their culture as a food and a medicine, and how river cane was used historically to build houses.

The Eastern Band Cherokee traditionally used the juglone in the tree roots to kill tooth pain, to rid humans and animals of tapeworms, and as an antibiotic tea.

The butternuts that give the tree its name are also good for cooking and eating, Arch, the Cherokee artist, says. The nut husks and tree bark are used to make a black dye for river cane baskets unique to the area.

The interest in the traditional plants represents "a renaissance in a lot of ways because, with modern conveniences and lifestyles, people had not been doing things the traditional way," Arch said.

Like many of his contemporaries, the artist learned native crafts growing up.

"Every family in our community had an artist, either a traditional beadworker or someone who did basketry or carving," he said.

But now, after the arrival of modern conveniences, such as television, and jobs in the tourism industry and casinos, only about 10 percent of young people are developing the skills for traditional arts and crafts.

It's a tide that many Cherokee hope can be stemmed, and the regrowth of the butternut and river cane may be one way to do it.