

# Plant restoration efforts are finding some success on Maui

August 29, 2016

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ULUPALAKUA - Maui has made great strides toward saving some of its most vulnerable native plants, but many local habitats are still facing "desperate situations," environmental experts said Sunday.

Surrounded by the lush greenery of the D.T. Fleming Arboretum, scientists and conservationists gave guests a glimpse of what's happening on the front lines of preservation in Maui Nui watersheds, forests and the ocean. It was part of Maui's first-ever Indigenous Crop Biodiversity Festival, a parallel event to the International Union for Conservation of Nature World Conservation Congress, which Hawaii will host for the first time from Thursday to Sept. 10 in Honolulu.

In Hawaii, there are many species found nowhere else in the world, making preservation efforts even more crucial.

**Article Photos**



Many plants that have failed to reproduce elsewhere have thrived in the arboretum, including this alani tree.

The Maui News / COLLEEN UECHI photo

"This is their only home," said Lissa Fox Strohecker, public relations and education specialist for the Maui Invasive Species Committee. "If they're gone, they're gone forever."

Conservation was important to the early Hawaiians, who monitored animal and plant populations closely, said Robert Hobdy, retired head of the state Department of Land and Natural Resources on Maui and an expert in Hawaiian botany and culture. When a species declined, the chief would prohibit the hunting or gathering of the species until it recovered.

But with the arrival of Western explorers, starting with Capt. James Cook in 1778, goats, cattle and sheep were brought to Hawaii. It was forbidden to hunt them, so the animals grew quickly in number, and it wasn't until the 1820s that Native Hawaiians began to notice the damage, Hobdy said. Forests were pushed back. Streams were depleted.

Interest in native Hawaiian plants and animals grew, but it wasn't until after the overthrow of the Hawaiian Kingdom that the Board of Agriculture and Forestry was formed. In 1904, the board hired its first forester, Ralph Hosmer, who created 44 forest

reserves within the next 10 years, taking up about a quarter of the land in Hawaii.

In 1916, the National Park Service, and Haleakala National Park, were established, and efforts to protect the environment have spread since then, from large-scale organizations like The Nature Conservancy to individuals like David Thomas Fleming, the arboretum's founder. Government agencies have worked with private landowners to preserve at-risk ecosystems, and are consulting more with Native Hawaiian cultural practitioners.

"What we've moved into today is, I think, a very promising way of approaching conservation, which is education, inclusion and collaboration," Hobdy said. "I think that's where we need to go."

Maui has been the site of many key efforts. The East Maui Watershed, created in 1991, was the first partnership of its kind in the state. Through the agreement, fences were built to keep out pigs, which dig up many plants in their search for food. Now, 15,000 acres are pig-free and visibly recovering, said Pat Bily, an invasive plant specialist with The Nature Conservancy. In West Maui, groups are working to improve Honokowai Valley, which once fed 6,000 people sustainably, said Duane Sparkman, a member of the Maui Cultural Lands Board of Directors. "They're trying to restore former lo'i in the area and get intake walls in the area lowered to allow more streamflow," Sparkman said.

One of Maui's most notable conservation success stories is the D.T. Fleming Arboretum. Plants that have failed to reproduce elsewhere have thrived in the arboretum, a haven for 150 species, 40 of which are rare and endangered, said Ginger Vockrodt-Gannon, a granddaughter of Fleming.

Fleming had seen many native species decline, and hoped to create an arboretum for endangered native plants. In 1950, Ed Baldwin of Ulupalakua Ranch gifted Fleming with the 17 acres for the arboretum, out of gratitude after Fleming introduced the gall fly to control a poisonous plant that was making the ranch's livestock sick. Nestled in Pu'u Mahoe, which means "twin craters," it's Hawaii's oldest and largest native arboretum, Vockrodt-Gannon said.

Many plants served the early Hawaiians in numerous ways. Martha Vockrodt-Moran, another Fleming granddaughter, said that some trees in the arboretum are the only seed-producing trees of their kind in existence. The arboretum sends plants out to places on Maui as well as other islands.

"Their preservation depends on our work," Vockrodt-Moran said.

Art Medeiros, founder and director of the Auwahi Forest Restoration, said that, while great things have happened, the situation for many forests is "desperate." On the leeward side of Maui, just under 3 percent of the original forest is left, he said. Forests in other parts of Maui are vulnerable because they rely heavily on one tree - the ohia, which is threatened by rapid ohia death.

"All of our forests are falling apart," he said.

Medeiros, however, sees hope where many never thought possible, in the Auwahi Forest. When Medeiros visited the forest in the mid-1980s, it was like a museum - nothing on display was alive. However, in 1996, the Fish and Wildlife Service had \$10,000 left in its budget, and offered to fund one of Medeiros' projects. Medeiros approached the Erdman family, which owned the ranch land where the forest was located. The Erdmans gave him 10 acres to work on. Now, the forest covers 181 acres, 56 of which are restored. After 20 years, two-thirds of the tree species reproduce naturally. Some of them haven't done so in over a century, Medeiros said.

"It's like seeing a dead person rise," he said.

When it comes to preservation, Hawaii can serve as a lesson in both its struggles and successes, experts explained. People once thought invasive species were only a problem in Hawaii, Medeiros said. Now, however, they recognize that invasive species plague all continents, including Antarctica. Catherine Davenport, a plant quarantine inspector for the state Department of Agriculture, said that seeing the successes of places like the Auwahi Forest can encourage others to do the same.

"People need inspiration that it can be done," Davenport said.

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Ernie Shields (from left), Kelly Jane Brisley, Laurie Carlson, and Jenifer Vockrodt-Sykes