



Teya Penniman has gained widespread recognition for her innovative work toward slowing the spread of prolific and damaging invasive alien species on Maui

Fighting Aliens

In April 2005, scientists on Oahu detected the presence of the erythrina gall wasp, an invasive insect that destroys the leaves of the endemic wiliwili trees in Hawai'i's native dryland forests. Four months later, the wasp had spread to Maui and the Maui Invasive Species Committee (MISC) swung into action. Field workers began hacking off affected branches at the first known sites. But MISC also took a step back and performed an island-wide survey for the wasp. They found it to be so pervasive that cutting campaigns would be too little too late. The focus would need to shift to other control methods. The revelation saved money, time, and resources that might otherwise have been wasted fighting a quixotic battle. Now those resources are being spent on the search for an effective biocontrol agent, ideally a parasite that harms the alien wasp but not native insects.

Behind that wise strategic decision was Teya Penniman, the manager of MISC, one of five such organizations in Hawai'i. These committees coordinate campaigns to control specific invasive species problems on an island-wide basis. Committee members include a variety of public and private entities ranging from Maui Land & Pineapple Company to county, state, and federal government agencies. MISC is a joint project of two University of Hawai'i entities, the Research

Corporation of the University of Hawai'i and the Pacific Cooperative Studies Unit (PCSU). Penniman and MISC operate with state funding as well as monies from Maui County, the U.S. National Park Service, and other federal agencies. "Since we are not a state agency, we don't have enforcement authority to address invasive species on private property. Instead, we rely on developing a positive image with the public through our work and our outreach and education programs," says Penniman. Under her stewardship MISC has become an international model for invasive species control efforts. "She's done amazing things over there and has really set the standard," says David Duffy, a professor of botany at UH and the unit leader of PCSU.

Penniman formerly worked as a research biologist, logging field hours studying birds, and as a public-policy lawyer, studying natural resource issues. In 2002, she assumed her post at MISC. Penniman has overseen productive efforts to halt pests from reaching the pristine areas of the Valley Isle, such as Haleakala Crater, Kipahulu, and Hana. These areas harbor habitats for scores of endangered endemic species of flora and fauna. The habitats span national parks, state parks, county parks, and private lands. At MISC Penniman manages the efforts of 28 employees and allocates an annual budget of approximately \$1.3 million.

It's a small sum considering the

implacable foes that MISC faces, such as the fast-spreading miconia tree and the aforementioned gall wasp. To maximize the organization's impact, Penniman has made MISC a flexible rapid-response team that combines high-tech smarts with on-the-ground muscle. A data hound from her biologist days, Penniman uses mapping software to trace likely dispersion routes of invasive species and uses this information to guide crews in the field. "We're making a difference by having a trained crew that is also flexible and by organizing efforts quickly. We can adapt pretty rapidly to changing situations," she says. For example, when the toxic rubber vine plant was discovered on Molokai, MISC helped evaluate the feasibility of control. This year, Penniman dispatched a crew of six from her office on Maui to work with Nature Conservancy personnel and two Molokai-based MISC staffers to suppress this invader.

Although it is a never-ending battle, Penniman points to a list of successes as evidence of the validity of this low-key, cooperative approach. MISC has helped bring about reductions in coqui frog populations, eliminate new infestations of highly flammable fountain grass, and clear miconia across thousands of acres of forests. Says Penniman, "Continued vigilance is critical, but we're very happy to be making an impact. Our partnerships and community support are the keys to our success." 🌟

PHOTOS: MAUI INVASIVE SPECIES COMMITTEE / TEYA PENNIMAN