

# Invasive species arrive in many ways; prevention tips offered

## Kia'i Moku

By Joylynn Paman



How did you get to Hawai'i? Our isolated island chain is located

2,500 miles from the nearest land mass and chances are you were either born here or flown here. When the first island settlers arrived, it took months of voyaging by canoe to reach Hawai'i. Hundreds of years later, when Westerners arrived, it still took a substantial amount of time but as new modes of transportation by boat and air evolved, so did the ease of reaching Hawai'i. The islands were no longer "isolated". Today, it can take less than six hours to travel between Hawai'i and the mainland - quite a difference from our original island settlers. But have you ever wondered how our native plants and animals reached Hawai'i?

Thousands of years ago, plants and animals made their way to these remote islands on their own, by wind, waves, or wings. As they adapted to the island environment, approximately 2,000 colonizing species evolved into nearly 10,000 new and unique plants and animals endemic to the islands. They evolved in isolation without the predators and competitors of their homelands.

The isolation which has made Hawaiian species so unique has also rendered them vulnerable to rapid changes made possible by mass travel. Today, dozens of alien species are introduced to the islands every year. The introduction of

alien species along with habitat loss has heavily impacted Hawai'i's unique species. Of all the species lost to extinction in the United States, nearly 75% were endemic to the Hawaiian Islands.

Unlike native and endemic species, invasive species do not enhance our environment, they often transform it. They out-compete native species, sometimes causing local extinctions, they cost thousands or millions of dollars to control, and some can transmit diseases to humans, plants and animals. Whether introduced intentionally or not, invasives cause great harm to our economy, environment, and quality of life. Preventing establishment of invasive species in new areas is easier and cheaper to manage than waiting until a species becomes an established pest.

Effective prevention includes knowing how invasives move through our islands and how to stop their spread. Modes of transportation for invasive species include:

- **Air:** Unfortunately, some travelers smuggle species such as exotic reptiles and plant seeds in from around the world, or species may hitch a ride in baggage or cargo. Always inspect your luggage for seeds and do a thorough cleaning before returning to Hawai'i or traveling between islands. Check with the Department of Agriculture for a list of approved plants and animals that can be brought safely into the state.
- **Boat:** Non-native bacteria, aquatic plants, and eggs of larger species may be introduced to new areas when ships discharge their ballast water, while other species can attach themselves to the

hulls of boats. Vessels should be kept clean of hitchhiking seaweeds or animals.

- **Vehicle:** Is your car or truck its own little ecosystem? Weed seeds and insect invaders hitchhike in the mud and dirt caked on your car and also inside your vehicle. To prevent sharing their "aloha" with the other islands, thoroughly wash your vehicle, including the undercarriage, and vacuum the inside.
- **Plant movement:** Plant transportation is an easy way for pests such as coqui frogs, little fire ants, stinging nettle caterpillars, miconia, and plant diseases to move between the islands. Carefully inspect plants and soil before traveling to be sure these pests aren't along for the ride. It's best to move plants with bare root stock.
- **Hiking or hunting gear:** Seeds and insects can also catch a ride in the dirt caked on hiking and hunting gear or even in the shoelaces of your boots. Clean and scrub your hiking and hunting gear before and after your activity, to avoid giving another island something else to hunt.
- **Snorkeling or diving gear:** It takes only a small piece of alien algae to start a new infestation. Remove any algae from your gear to prevent its spread.
- **Pets:** Many new species are introduced when people release exotic pets in the wild or dump aquarium plants and fish into local water bodies. If you have an unwanted pet, find a new home for it or take it to a pet shop.
- **Construction:** Soil brought to a construction site may contain invasive plant seeds or hard-to-detect little fire ants. Ask about your soil's source and be



**Lissa Fox**, a Maui Invasive Species Committee field worker, scrubs her boots to remove fountain grass seeds that may have gotten lodged in her shoes while doing fountain grass control.

sure it's not from an area of known infestations. Mail: Many plants and animals can be ordered through the internet or direct mail. Just because you can get it, doesn't make it legal. The Department of Agriculture should be consulted before you place your order to be sure you don't have an unwanted visitor at your doorstep!

We all have an interest in protecting Hawai'i's unique environment and maintaining a healthy economy. Residents and visitors alike can help prevent the spread of invasive species. The next time you travel between the islands or return from more distant locations, take a few extra minutes to be sure that you're the only one who's traveling and that harmful invasive plants and animals are not catching a free ride!

• "Kia'i Moku" (or "Guarding the Island") is prepared by the Maui Invasive Species Committee to provide information on protecting the island from invasive plants and animals that can threaten the island's environment, economy and quality of life. Joylynn Paman, is public relations and education specialist with the MISC.