

A PROBLEM with Overgrown Ornamentals

Australian tree fern's fast growth made it popular, makes it a pest

Kia'i Moku

By Joylynn Paman



If you're looking for instant gratification in creating a tropical look for your latest landscaping

project, then planting a fast-growing Australian tree fern might appear to be a good solution... but is it? Used by many plant enthusiasts, Australian tree ferns seem to be the answer, but it is the same tendency to grow quickly that also makes them a threat to our native forests and watersheds. Some botanists have even gone to the extreme of calling it one of the worst native forest invaders in Hawai'i – and for good reason.

Australian tree fern (*Cyathea cooperi*) was introduced to Hawai'i prior to the 1960s for its ornamental traits. Its rapid growth, forty foot tall trunk, and twenty foot long green fern fronds attracted many in the plant industry. But as time progressed, this fern from northeastern Australia began to spread. Producing millions of spores each year, Hawai'i's tradewinds and feral ungulates assisted in its dispersal. Like many other invasive plants, it began to attack Hawai'i's forests and watersheds. Native trees, shrubs, ferns, lichens, and mosses that are needed to capture rainfall, maintain stream flow, prevent soil erosion and sustain a healthy watershed were quickly choked out by this invader.



Forest & Kim Starr (USGS)

By the 1990s, it was evident that Australian tree fern posed a major threat to our islands and that the paradigm would shift from viewing the plant as a great landscaping contribution to a pest that needed to be controlled immediately. This was the case in 1987 when the fern was discovered in the rain forests of Haleakala National Park, within Kipahulu Valley in East Maui. By the beginning of the 1990s, thousands of Australian tree ferns blanketed low elevation areas and threatened the pristine native forests of Kipahulu. Today, the species has become naturalized across the East Maui Watershed and Haleakala National Park works to stop it from entering higher elevations and other management areas within the park.

But where the wind blows and where the plants go, so do the spores. Maui is not the only island that has felt the effects of this pest. Moloka'i's rainforests are in jeopardy of being overrun by this species and the Moloka'i/Maui Invasive Species Committee (MoMISC) is defending its turf. MoMISC succeeded in getting the one nursery on Moloka'i to stop selling this species and now is stalking the plant in the district of Kalae. Australian tree ferns have been transported throughout the state through the tradewinds and plant industry, allowing them to become naturalized on O'ahu and Kaua'i as well.

On the Garden Isle, residents and private organizations are battling the "superweed" head-on. In the early 2000s, surveys were conducted to determine the extent of the population. What they found was jaw-dropping. Australian tree fern was just about everywhere. It was in 2005 that they realized they needed to take action immediately to ensure the preservation of the remaining native forests. Today, the focus is on protecting 12,000 acres of native forests in the heart of Kaua'i, home to many endemic species found only on the Garden Isle and one of the last areas the fern has not heavily impacted. Luckily, Maui has not reached this extent yet.



The Nature Conservancy - Kaua'i



Forest & Kim Starr (USGS)

In an effort to head in a positive direction, some plant industry members on Maui, Kaua'i, and O'ahu are taking matters into their own hands and are adopting a voluntary code of conduct to stop the sale and use of Australian tree fern within the green industry through self-regulation. Some members of the Maui Association of Landscape Professionals recently adopted these codes and will slowly phase out the use of Australian tree fern and other invasive species over time. As an alternative, they will substitute these invasives with other species such as the native *hapu'u* tree fern.

Known to many as the "mother of the forest," *hapu'u* ferns live up to their nickname and foster a healthy nursery for young native seedlings such as 'ohi'a, 'olapa, and 'ie'ie. With its silky, red-brown, wool-like fiber, up to ten times as many native plants find their first refuge in the moist surroundings of the *hapu'u* trunk. In comparison, Australian tree fern has a harder scaled trunk which does not harbor seedlings as well. Instead, it grows quickly, reproduces at a fast rate, is easily dispersed by the wind and animals, and makes its way to yards throughout the state by uninformed plant enthusiasts.

You can help stop the spread of Australian tree fern by not purchasing and planting it in your yard. Some people might think they're doing the native Hawaiian forest a favor by purchasing a fern that hasn't been taken out

Australian tree fern was introduced to Hawai'i because of its ornamental traits. Its rapid growth, 40-foot-tall trunk and 20-foot-long green fern fronds (like those in the picture below) attracted many in the plant industry, but the plant produces millions of very mobile spores. The picture at the top was taken on Kaua'i, where residents and private organizations are taking on the "superweed" and trying to protect native forests.

of the forest, but it turns out that they are doing more harm than good in this instance. If you see it for sale, notify your plant provider that it is a pest. And you can protect the forest from your own backyard! If you have this pest in your yard, remove it and dispose of it properly, ensuring that spores are not being spread elsewhere. By doing these simple things, you can help keep Maui no ka 'oi. For more information about Australian tree fern, visit www.hear.org.

“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.