



STOP

THE SILENT INVASION

Five Things We Must
Do to Protect our
Economy, Health, and
Environment from
Unwanted Pests

The headlines have become all too familiar. An invasive weed called **Miconia** is spreading into our forests and watersheds.

Agricultural pests such as **papaya ringspot virus** and **banana bunchytop disease** are invading our farms. Screeching **tree frogs** are in our back yards. And now, bringing it all closer to home, a statewide outbreak of **dengue fever**.

While these events may seem unrelated, all are in fact symptoms of a larger problem—the uncontrolled silent invasion of Hawai'i by destructive alien pests and disease organisms.



In the aftermath of the September 11 terrorist attack, controlling alien pests may not seem to be an

urgent priority. But the outbreak of dengue fever that began in East Maui has underscored the seriousness of the threat. More than just being a health issue, dengue fever, if not contained, has the potential to cripple a visitor-dependent economy already reeling from fears



of terrorism. "It's a triple whammy," is how Harry Hasegawa, president of Hana's Hasegawa's General Store in East Maui, described the dengue outbreak to the *Honolulu Advertiser*. "September is a slow month, then we had the attack on New York. Now this. What's next?"

The reality is that the worst may be yet to come. State inspectors

now fear the arrival of the dreaded red-imported **fire ant**, which recently invaded California and has already been intercepted twice in Hawai'i. Experts also warn that Hawai'i could soon have established **snake** populations if several practical steps are not taken now. More than 200 credible snake sightings were reported in the islands during the last decade, and most of these snakes were free-roaming and not recovered.





Hawaii's invasive species problem is the most severe of any state, but the future will be much more dire if we do not act boldly and promptly. Although we have made slow, incremental progress in recent years, it is not nearly sufficient, largely, but not entirely, due to the State's chronic budget crisis. Dramatic improvements must be made now to close our leaky quarantine sieve. This point was driven home by recent blitz inspections by the State Department of Agriculture at Maui's Kahului airport, which uncovered more pests in 16 weeks of intense inspections than are found annually at all Hawai'i airports and harbors combined.

Alien pests already cost the State roughly \$500 million annually in lost agricultural revenue and property damage alone. Irreversible damage to native ecosystems and watersheds is less readily quantifiable in dollars, but is even more devastating. And imagine the impact on our \$19 billion dollar tourist industry with continuing outbreaks of dengue fever, or potentially malaria, or the stings of red-imported fire ants sending visitors to the hospital. Now more than ever we need to safeguard our tourism and agricultural industries, our environment, and our health. Our already weakened economy

cannot afford another crippling blow. Hawaii's people are keenly aware of the problem and want to see strong action. A 2001 Mālama Hawai'i study of public attitudes towards the environment found that more than 80% of residents favor "strict limits on importing harmful alien pests." In fact, support for this measure was greater than for any other environmental issue.

Solutions are within our reach. The events of September 11, while tragic beyond comprehension, are also a wake-up call. Enhanced security precautions are already underway at all our nation's airports and other ports of entry. The new federal regulations will require that

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all cargo and passengers be inspected for biological materials and weapons. As an island state with unique challenges, we need to make sure that the new regulations and the technology they require also protect Hawai'i from harmful, unwanted alien pests.

Below are five practical and affordable measures available to us now that will significantly improve existing programs before our economy, health, and environment are again seriously impacted.

- 1) **Shared Capacity Building:** Build shared capacity between the Hawai'i and U.S. Departments of Agriculture for protecting Hawai'i from the many new pests poised to enter our state.
- 2) **Fire Ant Prevention:** Implement a plan for preventing new ant species from entering the state, with special attention to the red imported fire ant,

and utilize this plan as a prototype for developing similar plans for other groups of pests such as mosquitoes.

- 3) **Miconia Eradication and Control:** Secure immediate and long-term funding to develop the capacity of Island Invasive Species teams to contain Miconia and to carry out early detection of other alien pests and ensure rapid response.
- 4) **Snake Prevention:** Implement a snake prevention plan to stop all snakes from entering Hawai'i.
- 5) **Risk Assessment:** Implement a risk assessment/screening process for the landscaping, nursery, and forestry industries to identify and prevent introductions of new plant pests and prevent the spread of existing plant pests.

One of Hawaii's great, unsung advantages as a visitor destination and a place to live is all the things we don't have—such as snakes, biting flies, and diseases like malaria. Most of us take this for granted. It is important to remember, however, that the same exceptional environment that makes these islands so inviting for people also makes it inviting for pests. If we fail to halt their accelerating spread, we court almost certain disaster. If we allow Hawai'i to become a paradise for pests, it will no longer be a paradise for our children.



PREVENTION: AN ECONOMIC IMPERATIVE

Few problems are more costly or far reaching in their consequences than the silent invasion of harmful alien pests. Here in Hawai'i, just two pests—the Mediterranean fruit fly and the Formosan ground termite—cost the State \$450 million annually. Should a third major pest like the red-imported fire ant slip through our borders and become established, those costs could escalate dramatically.

The best and most cost-effective solution for controlling harmful alien pests is enhanced prevention – stopping them before they enter. In the long run, any modest costs we might incur now to strengthen our prevention systems will more than pay for themselves in the damage they prevent. Consider these examples:

 **Brown Tree Snake.** On the Pacific Island of Guam, the introduced brown tree snake crawls along electrical lines and causes, on average, one power outage every four days – a huge economic burden to the island's citizens. The U.S. government now spends \$3.6 million annually to ensure that cargo coming to Hawai'i from Guam is snake free. However, when you consider that a single power outage on Oahu in 1991, caused by a falling tree branch, cost an estimated \$13 million, the money is well spent.

 **Papaya Ringspot Virus.** In 1996 when papaya ringspot virus invaded

the islands, the first infestations were caught early on Kauai and the virus was eradicated for under \$25,000. In direct contrast on the Big Island, where early eradication efforts failed, costs in crops losses and control programs exceeded \$10 million.



 **Miconia.** Uncontrolled, this invasive weed has taken over 70% of the native forests in Tahiti. On Kauai and Oahu, where Miconia infestations were detected before they became widespread, we are spending less than \$50,000 a year in our eradication efforts. In contrast, on Maui and the Big Island, where we were late in addressing the threat, we have already spent \$4 million and will



likely spend millions more to get the problem under control.

 **Red Fire Ant.** The need to enhance prevention becomes even more urgent when you consider the potential costs of a pest like the red-imported fire ant. In Texas, damage and control costs for this pest already total more than \$691 million a year. In California, where the red-imported fire ant was just discovered, the legislature has allocated \$40 million over a five-year period for eradication, and scientists conservatively estimate it will cost homeowners \$250 million annually if the ant becomes established in the state. And in Australia, where the red-imported fire ant has also recently made inroads, the government has announced it will spend \$123 million on an eradication campaign.

On average, 100 new plants, 20 species of insects, plus the occasional disease are introduced to Hawai'i each year. Free of the competitors and predators that kept them in check in their native environments, these introduced plants and animals sometimes explode in Hawai'i, wreaking havoc on the economy and our delicate island ecology. Once it gains a foothold, an invasive pest often spreads with breathtaking speed, making eradication and control efforts difficult or

impossible—and almost always costly. With each new pest that becomes established, control costs spiral upwards—a trend that has become all too familiar in Hawai'i.

Despite having one of the world's longest-standing quarantine systems, Hawai'i's ability to keep unwanted pests out of our islands is not keeping up with the enormous increase in national and international air and sea cargo now coming into the state. Between 1971 and 1989, cargo increased by more than 120% while the number of State inspectors rose by only 15%. This discrepancy has only increased during the last decade. Equally telling, recent blitz inspections by the State Department of Agriculture at Maui's Kahului airport found as many pests in 16 weeks of intense inspection sampling as are annually found in all inspections at Hawai'i's airports and harbors combined. With



more than 30 million pounds of cargo to inspect every day for pests, HDOA is severely underfunded to carry out adequate inspection of cargo.

Recognizing that Hawai'i faces daunting economic challenges in the aftermath of September 11, The Nature Conservancy and member agencies of the Coordinating Group on Alien Pest Species (CGAPS) propose five simple low-cost strategies that can have enormous payoffs in reducing the future costs of pest control in Hawai'i and in safeguarding our tourism and agricultural industries, our health and our environment. These are the highest leverage strategies available to us now for the lowest possible cost.

The increased annual cost to the state that we propose is \$1 million dollars.

Specifically, we are asking the state for \$500,000 to build the capacity of the Hawaii Department of Agriculture to ensure more strategic inspections, and \$500,000 for Island Invasive Species teams to combat Miconia, tree frogs and other pests. Other organizations, state and federal agencies are also stepping up to the plate and will contribute more than \$3 million dollars over the next several years. Together, we can start to make needed investments in our pest prevention systems that will save us billions in potential future costs and reinforce our reputation as the world's safest and most desirable vacation destination. The alternative is to engage knowingly in a game of biological roulette—and deal with the almost certain severe consequences.

