

**LINDA LINGLE**  
Governor



**SANDRA LEE KUNIMOTO**  
Chairperson, Board of Agriculture

**DUANE K. OKAMOTO**  
Deputy to the Chairperson

State of Hawaii  
**DEPARTMENT OF AGRICULTURE**  
1428 South King Street  
Honolulu, Hawaii 96814-2512

**TESTIMONY OF SANDRA LEE KUNIMOTO  
CHAIRPERSON, BOARD OF AGRICULTURE**

**BEFORE THE HOUSE COMMITTEES ON AGRICULTURE  
AND  
ENERGY AND ENVIRONMENTAL PROTECTION  
FEBRUARY 6, 2008  
8:30 A.M.**

**HOUSE BILL NO. 2516  
RELATING TO BIOSECURITY**

Chairpersons Tsuji and Morita and Members of the Committees:

Thank you for the opportunity to provide testimony on House Bill No. 2516. The purpose of this bill is to authorize the issue of general obligation bonds and appropriate funds for the joint biosecurity inspection facilities at Honolulu International Airport and Honolulu Harbor. The department supports the intent of this bill, but is concerned about how this will impact priorities as indicated in our Executive Biennium budget.

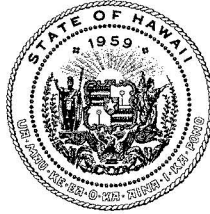
Invasive species is threatening our economy, agriculture industry and environment. Preventing entry of invasive species is a primary mission of the Hawaii Department of Agriculture. The department is filling in the gaps in invasive species prevention systems by implementing our Biosecurity Program.

The department has already initiated the planning and installation of joint-use inspection facilities at the airports and harbors to mitigate environmental concerns for the improvements to the transportation infrastructure at ports statewide and is currently developing coordinated federal-state programs targeting risk assessments, diagnostics, detection, control and suppression, and emergency management programs designed to further increase the effectiveness of our invasive species programs.

A separate but related initiative is under way to identify the inspection infrastructure needed at Honolulu Harbor of the inspection of sea containers arriving in Hawaii containing high pest risk cargo.

Transportation infrastructure is critical to an island state but there must be provisions for safeguards to prevent the introduction of invasive species into the state or between islands.

LINDA LINGLE  
GOVERNOR OF HAWAII



**STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES**

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

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CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

**RUSSELL Y. TSUJI**  
FIRST DEPUTY

**KEN C. KAWAHARA**  
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AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
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ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

**TESTIMONY OF THE CHAIRPERSON  
OF THE BOARD OF LAND AND NATURAL RESOURCES**

**on House Bill 2516 – RELATING TO BIOSECURITY**

**BEFORE THE HOUSE COMMITTEES ON AGRICULTURE  
and  
ENERGY & ENVIRONMENTAL PROTECTION**

**February 6, 2008**

House Bill 2516 authorizes the issue of general obligation bonds and appropriates \$5,000,000 for the joint biosecurity inspection facilities at Honolulu international airport and \$1,500,000 for Honolulu harbor. The Department of Land and Natural Resources (Department) supports the intent of this measure, however has concerns with the budgetary implications this bill will have on the Executive Supplemental Budget request. In addition, the Department notes that the general obligation bonds authorized by this bill are not considered in the State's bond issuance plan.

Preventing new invasive species from establishing in Hawaii provides the greatest long term protection for Hawaii and the Department supports strong import quarantine measures. The lack of including invasive species quarantine in all airport and harbor facilities planning both hampers inspection efforts by the Department of Agriculture but increases the cost and time that shippers and businesses must expend to take their agricultural cargo to remote locations. Central, well planned facilities allow for efficient cargo movement and better quarantine inspections that protect Hawaii's economy and environment from invasive species.

LINDA LINGLE  
GOVERNOR



**STATE OF HAWAII**  
**DEPARTMENT OF TRANSPORTATION**  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

BRENNON T. MORIOKA  
INTERIM DIRECTOR

Deputy Directors  
MICHAEL D. FORMBY  
FRANCIS PAUL KEENO  
BRIAN H. SEKIGUCHI

IN REPLY REFER TO:

February 6, 2008

TESTIMONY OF THE DEPARTMENT OF TRANSPORTATION

HOUSE BILL NO. 2516

COMMITTEE ON AGRICULTURE  
COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

The Department of Transportation appreciates the intent of this bill, which is to appropriate funds for the design and construction of joint federal-state biosecurity inspection facilities. However, we have concerns about the adverse budgetary impact that this bill will have on the Executive Supplemental Budget request.

This bill will appropriate \$5,000,000 for the design and construction of the facility at the Honolulu International Airport and \$1,500,000 for the design and construction of the facility at the Honolulu Harbor. The general obligation bonds authorized by this bill are not considered in the State's bond issuance plan.



Legislative Testimony  
**HB 2516, RELATING TO BIOSECURITY**  
House Committees on Agriculture  
and Energy & Environmental Protection

February 6, 2008  
Room: 325

8:30 a.m.

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The Office of Hawaiian Affairs SUPPORTS HB 2516, which appropriates funds for the establishment of joint biosecurity inspection facilities at Honolulu International Airport and Honolulu Harbor.

The legislature found in 2003 that the silent invasion of Hawai'i by insects, disease-bearing organisms, snakes, weeds, and other pests is the single greatest threat to Hawai'i's economy and natural environment and to the health and lifestyle of Hawai'i's people. Invasive species already cause millions of dollars in crop losses, the extinction of native species, the destruction of native forests, and the spread of disease.

This bill would elaborate upon these findings by providing for joint federal and state inspection facilities, which would increase the efficiency and efficacy of these inspections. This is a natural step towards the furtherance of protecting our valuable natural resources from the silent invasion.

Therefore, OHA urges the Committees to PASS HB 2516. Thank you for the opportunity to testify.

**HAWAII FARM BUREAU FEDERATION  
2343 ROSE STREET  
HONOLULU, HI 96819**

FEBRUARY 6, 2008

HEARING BEFORE THE  
HOUSE COMMITTEE ON AGRICULTURE  
&  
HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

TESTIMONY ON HB 2516  
RELATING TO BIOSECURITY

Chair Tsuji and Morita and Members of the Committee:

My name is Alan Takemoto, Executive Director, of the Hawaii Farm Bureau Federation, which is the largest non-profit general agriculture organization representing approximately 1,600 farm and ranch family members statewide.

The Hawaii Farm Bureau Federation supports HB 2516, which authorizes the issuance of general obligation bonds and appropriates funds for the joint biosecurity inspection facilities at Honolulu International Airport and Honolulu Harbor.

Invasive species have become one of the most devastating problems impacting Hawaii's agricultural industry. Invasive species and the havoc to Hawaii's environment and economy are well noted in the demise of the native wili wili tress, the recent infestation of imported Christmas trees, coqui frog, and others pests and diseases that chronically devastates our agricultural crops.

Appropriations to fund the DOA's planning and designing of a joint federal and state biosecurity inspection facilities is a big step towards curtailing invasive species that enter the state through imported cargo.

Thank you for allowing us to testify on this measure.



## **Maui County Farm Bureau**

*An Affiliate of the American Farm Bureau Federation and Hawaii Farm Bureau Federation  
Serving Maui's Farmers and Ranchers*

### **TESTIMONY**

#### **HB 2516 RELATING TO BIOSECURITY**

#### **HEARING BEFORE THE HOUSE COMMITTEE ON AGRICULTURE and HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION**

Chair Tsuji, Chair Morita and Committee Members:

My name is Warren Watanabe, Executive Director of the Maui County Farm Bureau, a non-profit general agriculture organization and an affiliate of the Hawaii Farm Bureau Federation.

**MCFB strongly requests your SUPPORT** of HB 2516 providing funding for the Hawaii Biosecurity Plan.

The viability of our farmers and ranchers is at stake. Invasive species control is of great concern to our farmers and ranchers. Crops have been lost, control costs increased and health of our livestock industry threatened by various invasive species. Therefore, this subject matter is one of our primary concerns. We are therefore in agreement that Invasive Species Control is important.

As we look to address invasive species, our farmers and ranchers are facing a near crisis situation in the area of transportation. Improvements in Harbor infrastructure will be critical for expansion of Hawaii's agriculture. Recent experiences with the Hawaii Superferry and now the Kahului Harbor 2030 Draft EIS gives strong testament to the delay tactics that will be used by some to slow down the improvement process. This measure is needed to ensure that concern of invasive species does not lead to slow down the much needed harbor improvement plans.

MCFB respectfully requests passage of this measure. The viability of our farmers and ranchers is at stake.

P.O. Box 148  
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## **Hawaii Agriculture Research Center**

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Aiea, Hawaii 96701

Ph: 808-487-5561/Fax: 808-486-5020

### **TESTIMONY BEFORE THE HOUSE COMMITTEES ON AGRICULTURE AND ENERGY AND ENVIRONMENTAL PROTECTION**

#### **HOUSE BILL 2516**

#### **RELATING TO BIOSECURITY**

**February 6, 2008**

Chairs Tsuji and Morita and Members of your Committees:

My name is Stephanie Whalen. I am President and Research Director of the Hawaii Agriculture Research Center (HARC). I am testifying today on behalf of the center, our research and support staff, and our members and clients.

**HARC supports House Bill 2516, Relating to Biosecurity** which provides for funding for a joint biosecurity inspection facility with the federal inspectors.

Forming a partnership with the federal inspection services is an efficient and effective method to make the best use of limited resources: money and space. With the increasing number of invasive species slipping into the state unnoticed, legislation that helps to improve effectiveness of cargo inspections must be a high priority for the sustenance of not only agriculture but our environment.

Thank you for this opportunity to testify in support of this important measure.



Hawaii  
Crop  
Improvement  
Association

Sarah Styan, President  
P.O. Box 609  
Waimea, Hawaii 96796  
Phone: 808- 338-8300 ext 113

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Testimony by: Sarah Styan  
HB 2516, Biosecurity  
House AGR/EEP Committees  
Wednesday, Feb. 6, 2007  
Room 325: 8:30 am

Position: Support

Chairs Tsuji and Morita, and Members of the House AGR/EEP Committees:

My name is Sarah Styan. I am a Kauai resident, President of HCIA and research scientist of Pioneer Hi-Bred International, Waimea Research Station. The HCIA represents seed production and research facilities operating in Hawaii for nearly 40 years. The HCIA is comprised of five member companies that farm an estimated 8,000 acres on four islands, valued at \$97.6 million in operating budget (2006/2007 HASS). We are proud members of Hawaii's diversified agriculture and life sciences industries.

As testified in previous years, HCIA believes that financing the prevention of importation of invasive species is more prudent than later financing of eradication or containment programs. Examples of such latter efforts include the battle against the coqui frogs, miconia, gorse weed, fireweed and others.

This measure provides funding for the planning of interim and permanent federal/state inspection facilities for imported cargo. This is an important step towards stopping the flow of invasive species at the port of entry.

Thank you for the opportunity to present testimony.

Testimony of The Nature Conservancy of Hawai'i  
Supporting H.B. 2516 Relating to Biosecurity  
House Committee on Agriculture  
House Committee on Energy & Environmental Protection  
Wednesday, February 6, 2008, 8:30AM, Room 325

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*The Nature Conservancy of Hawai'i is a private non-profit conservation organization dedicated to the preservation of Hawai'i's native plants, animals, and ecosystems. The Conservancy has helped to protect nearly 200,000 acres of natural lands for rare and endangered native species in Hawai'i. Today, we actively manage more than 32,000 acres in 11 nature preserves on O'ahu, Maui, Hawai'i, Moloka'i, Lāna'i, and Kaua'i and also work closely with government agencies and private landowners on cooperative land management projects.*

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The Nature Conservancy of Hawai'i strongly supports H.B. 2516 Relating to Biosecurity.

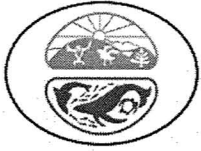
The Hawai'i Department of Agriculture is doing an admirable job to protect the State from new pest species. With additional financial and personnel support from the Legislature, the Department's implementation of a multi-faceted Biosecurity Plan will enhance this effort with more inspectors, more efficient and effective inspection services, joint state-federal inspection facilities, and agreements with importers for improved sanitary protocols before items are shipped to Hawai'i.

While the Commerce Clause of the U.S. Constitution and the preemption provisions of the U.S. Plant Protection Act, limit states' ability to regulate items in trade, there are opportunities for our State agricultural inspectors to collaborate with their federal counterparts to help stem the tide of invasive species. The funding proposed in this legislation will support the next logical step in the Department of Agriculture's biosecurity plan by facilitating the co-location of State and federal agricultural inspection and treatment capacity in joint facilities at our main ports of entry.

Not only will such facilities serve to protect against new pest introductions, they will also facilitate the inspection and certification of locally produced agricultural products for export to the mainland U.S. and foreign countries. So, this funding will both protect Hawaii and its economy from the threat of invasive species, as well as promote Hawaii's diversified agricultural economy and market opportunities.

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# Conservation Council for Hawai'i

Testimony Submitted to the House Committee on Agriculture  
and House Committee on Energy & Environmental Protection

Hearing: Wednesday, February 6, 2008  
8:30 am  
Room 325

Support for HB 2516 Relating to Biosecurity

Aloha. The Conservation Council for Hawai'i supports HB 2516, which authorizes issue of general obligation bonds and appropriates funds for the joint federal-state inspection facilities at the Honolulu International Airport and Honolulu Harbor.

We also recommend that, as part of the Hawai'i Department of Agriculture's post-entry measures within the Biosecurity Program, permanent adequate funding be established for the Invasive Species Committee's for Kaua'i, O'ahu, Moloka'i, Maui, and Hawai'i. The Invasive Species Committees are doing a good job with limited resources. They are working with private landowners in a cooperative manner to control invasive species that are already here. Please identify the appropriate vehicle to establish permanent adequate funding for the Invasive Species Committees.

Mahalo nui loa for the opportunity to testify.

Sincerely,

Marjorie Ziegler



***Working Today for the Nature of Tomorrow!***

Telephone/Fax 808.593.0255 • email: [info@conservehi.org](mailto:info@conservehi.org) • web: [www.conservehi.org](http://www.conservehi.org)

P.O. Box 2923 • Honolulu, HI 96802 • Office: 250 Ward Ave., Suite 212 • Honolulu, HI 96814

***Hawai'i Affiliate of the National Wildlife Federation***

President: *Julie Leialoha* \* Vice-President: *Nelson Ho* \* Secretary/Treasurer: *Kim Ramos* \* Directors: *Fred Kraus, Ph.D.* \* *Douglas Lamerson,*  
*George Robertson* \* *Claire Shimabukuro* \* *Helene Takemoto* \* *Mashuri Waite* \* Executive Director: *Marjorie Ziegler*



The House of Representatives  
Committee on Agriculture  
Committee on Energy & Environmental Protection  
8:30 a.m., Conference Room 325  
State Capitol

### **Testimony in Support of HB 2516**

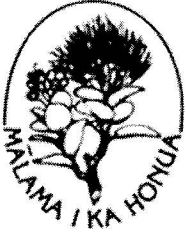
Aloha Chairs Tsuji and Morita, Vice Chairs Brower and Carroll, and Members of the Committees,  
The Coordinating Group on Alien Pest Species (CGAPS) **supports HB 2516, *Relating to Biosecurity.***

HB 2516 would help the Hawai'i Department of Agriculture (HDOA) to implement an effective biosecurity program by providing funds for the planning and building of a new joint Federal-State inspection and quarantine facility at the Honolulu International Airport.

As we know, inspection of incoming cargo from outside the U.S. is inspected primarily by the federal Homeland Security-Customs and Border Protection, while cargo coming from U.S. ports is inspected by HDOA. These agencies are mandated to look for invasive pest species on their respective lists, and these lists are quite different, which becomes problematic when one agency finds a pest that is of concern to the other, yet isn't on their own list. CGAPS believes that interagency communication and cooperation should be a top priority in the battle against invasive species, and a joint inspection facility would allow for better coordination and potential cost-savings with regards to infrastructure needs.

CGAPS asks for your support of HB 2516. Mahalo.

CGAPS--Coordinating Group on Alien Pest Species  
Ph: (808) 722-0995



# Sierra Club Hawai'i Chapter

PO Box 2577, Honolulu, HI 96803

808.537.9019 hawaii.chapter@sierraclub.org

## HOUSE COMMITTEE ON AGRICULTURE HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

February 6<sup>th</sup>, 2008, 8:30 A.M.

(Testimony is 4 pages long)

### TESTIMONY IN SUPPORT OF HB 2516 AND HB 2501

Chairs Tsuji and Morita and members of the committees:

The Sierra Club, Hawai'i Chapter, with 5500 dues paying members statewide, supports both HB 2516 and HB 2501, providing funding for invasives inspection facilities and for the Department of Agriculture's biosecurity program.

We believe that the adequate funding for the control and prevention of invasive species has been lacking for too long. As a result, Hawaii's residents, businesses, and agricultural operations are footing the bill. Estimates by one state biologist show that alien pests cost residents and the agriculture industry upwards of \$400 million annually.

Hawai'i is losing the war on alien species. Some alien species, such as miconia, threaten to destroy watersheds and native ecosystems, jeopardizing freshwater supplies and pushing species to extinction. Other alien species, such as the coqui frog and dengue and its carriers, threaten our health, tourist industry, and our quality of life. Of particular concern is the introduction of the brown tree snake—a snake that nearly wiped out the native bird population on Guam.

Invasive pests from the Asia and the US mainland wreck havoc on native ecosystems. The cost—both economic and environmental—of introduced species in Hawai'i is astronomical. Tourism, agriculture, native species, and citizens' way of life are threatened with each new introduction. Sufficient funding to reduce introductions is clearly warranted; this is one area where an ounce of prevention is worth many pounds of cure.

The following pages contain articles highlighting the magnitude of Hawaii's invasive species problem. The first, from the February 7<sup>th</sup>, 2001 *Honolulu Advertiser*, describes the failure of the current mitigation methods efforts at the Kahului airport. The second, from the December 15<sup>th</sup>, 2005 *Honolulu Advertiser*, explains the dire situation with a recently introduced pest, the erythrina gall wasp, and the native wiliwili tree. Both make the case for expanded invasive species funding.

Thank you for the opportunity to testify.

## Airport inspectors find plenty of trouble

By Timothy Hurley

Advertiser Maui Bureau

February 7, 2001

KAHULUI, Maui — A trial period of beefed-up agricultural inspections under way at Kahului Airport has turned up hundreds of insects and diseases, many not known to occur in Hawai'i.

State agriculture officials said yesterday that inspectors have returned contaminated shipments to the Mainland and have destroyed others as part of an effort to see exactly what's needed to intercept alien species at an airport that is soon expected to be accepting international flights.

At the same time, they said, the project may shed some light on weaknesses that may exist at inspection points at other ports of entry across the state.

Agriculture officials described their pest risk assessment study last night at a meeting sponsored by the Maui Invasive Species Committee and the Maui Farm Bureau.

The effort, they said, is being financed by \$300,000 in Federal Aviation Administration money and features more inspectors and dog teams, a doubling of the staff at Kahului Airport. The project was launched in late September and will continue during intermittent three- and four-week periods for a year.

Lyle Wong, Plant Industry Division administrator, said workers are conducting a 100 percent inspection of all incoming domestic flights and air cargo containers of agricultural products such as fresh fruits and vegetables and also are looking at aircraft cabin cargo and wheel wells.

Specifically, inspectors are looking for plant materials, insects, animals and other organisms that could wreak havoc on Maui's environment and crops.

Entomologist Neil Reimer said that Kahului Airport inspectors intercepted 90 plant diseases and 844 insects, mites, snails and other pests from Sept. 25 to Dec. 15. That compares to typical results of 1,200 interceptions a year islandwide.

Of the 844 pests, nearly 200 of them are not known to occur in Hawai'i, Reimer said, and about 200 more were too immature to be identified. The rest already are established in the Islands.

Lloyd Loope, U.S. Geological Survey scientist stationed at Haleakala National Park, said the numbers indicate the inspection system is "a leaky sieve."

"We're finding out just how leaky it is," Loope said.

The best solution for Hawai'i seems to be to push for pre-inspections before goods leave the Mainland, he said.

"Otherwise, Hawai'i will continue to accumulate a host of pests that impact all aspects of life and business in Hawai'i," Loope said.

When state officials announced plans to expand Kahului Airport 10 years ago, some critics questioned the wisdom of accommodating international flights and even more Mainland flights without a more serious quarantine effort to prevent invasive alien pests.

The critics complained that the existing inspection system was inadequate and getting less effective over time because of budget cuts.

More than two years ago, state and federal authorities signed an agreement on preventing introduction of alien species at Kahului Airport. A team of representatives from state and federal agencies, the airline industry and the Maui tourism industry was formed to look at the issue, and an Alien Species Action Plan was formulated.

Reimer said preliminary data show plants present a higher risk of bringing in pests, while passengers and baggage are a lower risk.

Fred Kraus, the state's alien species coordinator, said increased port-of-entry inspections statewide would help filter out many pests, including an increasing number of snakes.

Scientists have said more than 15 new pest species become established in Hawai'i each year.

*Honolulu Advertiser*

Thursday, December 15, 2005

**Scientists step up battle to save wiliwili**

By Jan TenBruggencate

Hawai'i researchers and plant experts are working in laboratories, gardens, native forests and soon even in Africa toward a common goal of saving the embattled Hawaiian wiliwili tree, which is being threatened across the state by a mysterious bug called the erythrina gall wasp.

The almost microscopic wasps appeared in Hawai'i only this year and have invaded all the main islands. They are soon expected to be everywhere wiliwili is found in the wild landscape.

"They're so tiny and they're spread on winds, so it just seems they're going to reach every population," said Honolulu botanist Maya LeGrande, who specializes in wiliwili. She said wiliwili is the only native dryland tree species that is still widespread.

The urban landscape is suffering, too. Native wiliwili and its relatives, sometimes known as coral trees, are popular landscaping plants that belong to the genus *erythrina*. Many of trees in parks and along streets in Honolulu and across the state are now bare, their branch tips overtaken by misshapen lumps, or galls, that are unformed leaves, swollen in reaction to eggs injected by the female wasps.

Scientists, foresters, landscapers and natural-resources managers launched a statewide multi-agency response soon after the bug was first noticed on O'ahu in April. But the wasp has spread so rapidly and its impacts are so severe that saving the wiliwili in the Hawaiian dry forest is in doubt.

Some botanists say a biological control — a disease or another insect that attacks the wasp — is the wiliwili's best hope, but state entomologists say it could be years before such a remedy could be approved for release, even if one is found soon.

The next best hope is that something already in the Hawaiian environment will identify the wasp as prey and begin attacking it.

But scientists wonder if there's time, and they are leading a complex series of efforts to bring living plant material into storage, to protect plants still in the wild and to find the magic biological bullet as soon as possible.

Alvin Yoshinaga, who runs the Center for Conservation Research and Training at the University of Hawai'i's Lyon Arboretum, is taking delivery of tens of thousands of seeds from hundreds of populations of wiliwili around the state as part of an effort to preserve the genetic diversity of the wild plants.

"We're refrigerating or freezing them. We're splitting the collections into three different locations," said Lauren Weisenberger, who oversees the arboretum's seed conservation lab. Wiliwili seeds germinate at a high rate and should survive for several years in cold storage, she said.

Scientists at the National Tropical Botanical Garden's new tissue culture laboratory in Lawa'i Valley on Kaua'i are trying a different tack. They are growing rare relatives of wiliwili in a sterile lab, then clipping off bits of leaf and placing them on agar in test tubes and petri dishes. If they can develop

techniques to grow erythrina from sterile plant tissue in the lab, they can keep species alive indefinitely in bug-proof rooms.

"If we can do this, we can keep it safe until the gall wasp is controlled in the wild," said Ellen Coulombe, administrative assistant in the garden's conservation department.

The National Tropical Botanical Garden and the Waimea Valley Audubon Center on O'ahu together have the world's largest collection of wiliwili and other erythrina. Each garden has more than 80 species, and both are working hard to protect their collections.

Waimea botanist David Orr said his gardeners drenched their plants with an insecticide called imidacloprid, which enters the plant's tissues and may protect it against the wasps.

"I'm really amazed at our results. Our plants are doing pretty well," he said.

State foresters with the Department of Land and Natural Resources are experimentally treating wild trees at Kekaha, Kaua'i, and Wai'anae, O'ahu, with applications of imidacloprid. Similar treatments at the National Tropical Botanical Garden, however, have not been that successful.

It is clear that some wiliwili cousins, notably some thick-leaved species from Africa, appear to be naturally resistant.

On Dec. 24, state Department of Agriculture entomologist Mohsen Ramadan will fly to Tanzania in Africa, where there are known to be relatives of the erythrina gall wasp. His goal is to find other insects that naturally attack the gall wasp and might be effective in controlling the pest in Hawai'i. Other insect experts are looking in Kenya and elsewhere in Africa.

"The rainy season will be starting there and plants will be beginning to flush. That will be a good time to be looking for the wasps," said Neil Reimer, plant pest control branch manager at the Department of Agriculture.

"I am confident that there are parasites in Africa and that we can get them."

But that's just the first step. Reimer said it could take several years to completely test any parasites to be sure they don't threaten native Hawaiian insects.

University of Hawai'i entomologist Russell Messing said scientists still don't clearly understand the interaction between the gall wasp and the wiliwili plant.

"The thing that's tricky about the project is you can have entire communities of things living within a gall. There's a lot of biology that needs to be done," Messing said.