



Division of Forestry and Wildlife
Department of Land and Natural Resources
State of Hawai'i

THE HAWAI'I INVASIVE SPECIES COUNCIL

Summary of the Report to the 26th Legislature

2010 Regular Session

The Hawai'i Invasive Species Council provides the institutional framework for leadership and coordination for a statewide invasive species prevention and control program. HISC is administered by DLNR, and chaired by HDOA and DLNR.

HISC members include:

Department of Land and Natural Resources (DLNR)
Hawai'i Department of Agriculture (HDOA)
Department Business, Economic Development, and Tourism (DBEDT)
Department of Health (DOH)
Department of Transportation (DOT)
University of Hawai'i (UH)

HISC Program Areas:

Prevention (Chair: HDOA)
Response & Control (Chair: DLNR)
Research & Technology (Chair: UH)
Public Outreach (Chair: DOT)
Resources (Chair: DBEDT)

HISC Strategy 2008-2013 online:

<http://www.hawaiiinvasivespecies.org/hisc/strategicplan.html>

HISC Accomplishments

Prevention

The lead agency and chair is HDOA. Goals include:

1) Review risks of pest/invasive species entry into the State and 2) Implement measures and improve Hawai'i's capacity to prevent the entry of new pests/invasive species with shared resources and shared responsibilities of all agencies.

Prevention Highlights

- Implementation of a Weed Risk Assessment system screening for plants led to the adoption of voluntary Codes of Conduct by the Landscape Industry Council of Hawai'i. This \$97,700 project was managed through DLNR in cooperation with UH, Maui Invasive Species Committee and the Bishop Museum. O'ahu Invasive Species Committee's early detection program with Bishop Museum discovered 131 previously undocumented plant species for evaluation and prioritization, and worked with HDOT to use the WRA in the Honolulu Rail Transit project.

- DLNR's Division of Aquatic Resources (DAR) implemented a hull fouling and ballast water prevention and early detection program in conjunction with the Aquatic Invasive Species Team.

- DOH implemented a \$307,300 project to undertake West Nile Virus (WNV) surveillance, analysis and improve response capabilities through the purchase of traps, test kits, insecticide sprayers, insecticides, staff training, and computer hardware and software.

- HDOA hired an Invasive Ant Coordinator to improve response plans and technologies to address invasive ants. A new apiarist will address the varroa mite infestation.

Response & Control (Established Pests)

The lead agency and chair is DLNR. Goals include: 1) Review priorities for the control of pests already present or recently arrived in the State and 2) Implement cost-effective eradication and control programs against incipient and established pests with shared resources and shared responsibilities of all agencies.

The Invasive Species Committees of Hawai'i (ISCs) are island-based partnerships of government agencies, non-government organizations, and private businesses working to protect each island from the most threatening invasive pests early in the invasion process.

Each island-based ISC maintains an early detection program to help keep invasive plant species out of nurseries, botanical gardens, agricultural experiment areas, and other sites of potential introduction. Each ISC has a professional staff that implements rapid response, eradication and containment plans, working on invasive pests that have the potential to severely impact our economy, ecosystem, watersheds, human health and quality of life.

Trained field staff work to control target species that pose a high risk while populations are still relatively small and it is economically feasible to eradicate or contain them.

Response and Control Highlights

- Aquatic Invasive Species Response Team used sea urchin biocontrol in conjunction with mechanical removal suction devices ("Supersuckers") in Kāne'ohe Bay and partnered with UH researchers, The Nature Conservancy and Mālama Maunaloa to remove invasive mud weed (*Avrainvillea amadelpha*) and restore seagrass habitat in Maunaloa Bay.

- Statewide, the ISCs surveyed and controlled various invasive plants and animals on approximately 78,443 acres. For example, Miconia surveys alone covered 36,075 acres where 120,236 plants were removed.

- OISC worked with HDOA to keep public lands and residential areas free of coqui frogs.

- MISC's control and eradication efforts focused on 23 plant species, coqui frog, veiled chameleon, and banana bunchy top virus; its "Coqui-Free Maui" certification program involves 28 nurseries.

MoMISC is controlling seven of its eight priority target species; added albizia to list and surveyed over 330 acres, treating 1,885 trees.

- KISC partnered with Marriot Kaua'i Lagoons to remove pampas grass as golf course ornamentals on 206 acres with donations of natives from NTBG and is working with taro growers to treat over 256 acres of cattails, removing 4,213 plants.

- BIISC early detection crews surveyed 291 miles of road, mapping 198 potentially invasive species, targeting pampas grass and wax myrtle for full island-wide eradication.



HISC's Weed Risk Assessment provides a publicly accessible tool for early detection and prioritization for control of potentially invasive plants, such as milk thistle, that can negatively impact our environment and economy. —photo by Forest and Kim Starr

Report on Coqui Frogs

• The Big Island has the worst coqui frog infestation problem. With so much land on the Big Island infested, efforts to control frogs are only practical in a limited number of sites. On other islands, most frogs arrive in shipments of nursery plants that come via the Big Island. A total of 93,373 acres were surveyed and it was estimated that 65.5% (or 60,880 acres) was infested with coqui frogs. The Big Island's goal is to keep pristine natural areas free of the frogs, and to help the community control frogs around residential areas.

• Maui has a long-established population in a limited area; work on O'ahu and Kaua'i has so far kept populations from establishing. On the other islands, the aim is to prevent the establishment and to eradicate all known populations of frogs.

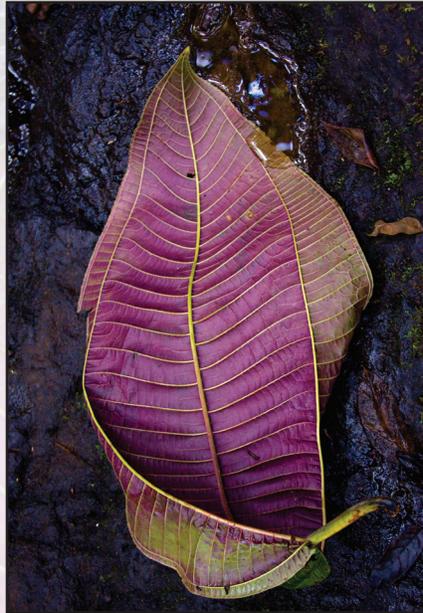
• Typically, HDOA and ISCs maintain close contact with nurseries to prevent establishment or export of frogs. HDOA, counties and the ISCs work together to control populations on all islands and prevent interisland movement of frogs by treating goods that originate from the Big Island. A hot water treatment method, developed by a nurseryman on Oahu using HISC research and technology funds, is in use to eradicate transported frogs.

• The Hawai'i Coqui Frog Management, Research and Education Plan:

<http://www.hawaiiinvasivespecies.org/hisc/pdfs/20071217coquiplandraft.pdf>



The coqui frog competes with birds and other fauna that rely on insects for food. —photo by CTAHR



HISC supports research projects that include investigations into promising biocontrol measures for major forest weeds, such as Miconia. —photo by Ryan Smith

Research & Technology

The lead agency and chair is UH. Goals include: 1) Encourage researchers to address the problems created by invasive species, 2) Encourage the development and implementation of new technology to prevent or control the establishment of invasive species, 3) Develop effective, science-based management approaches to control invasive species, 4) Effectively communicate and apply the results of research to the field, and 5) Promote interagency collaboration and stimulate new partnerships.

Research and Technology Highlights

2008-2009: In FY09 the Research and Technology Working Group was allocated \$500,000 to fund new research and technology projects in three areas:

- An international biocontrol workshop with South Pacific islands.
- Bishop Museum's Hawaiian Biological Survey project for the HISC Alien Species Database Project.
- Research and Technology Grants: (\$330,000 for 10 projects).

2009-2010: The funding for Research & Technology was reduced by the HISC to \$0 in FY10. This was done to maintain existing staff and capacity in the other components of the HISC. Future restoration of Research & Technology funding was recommended even under continuing budget restrictions.

In May 2009 MISC hosted the International Miconia Conference in Keanae, Maui. More than 110 individuals from eight countries attended presentations and workshops that focused on research needs, biocontrol agents, modeling, control techniques and outreach.

Public Outreach

The lead agency and chair is HDOT. Goals include promotion of the following messages/concepts using print, broadcast and electronic delivery systems, as well as public engagement:

- Protect Hawai‘i.
- Report a Pest to 643-PEST (7378).
- Don’t Dump Aquarium Pets or Plants.
- Don’t Plant a Pest.
- Don’t Pack a Pest.
- Don’t Sell or Buy a Pest.
- Keep Pets Contained.
- Buy Local.
- Plant Native Species.

Public Outreach Highlights

Outreach builds public reporting networks:

- Statewide public reporting network for snake sightings and other invasive species.
- The HISC Public Outreach Working Group strived to inform the public and engage them in the early detection and reporting by asking them to report alien pests to the State Pest Hotline.

Resources

The lead agency and chair is DBEDT.

Goals include:

- 1) Determine levels of resources spent on invasive species.
- 2) Determine resource needs statewide.
- 3) Seek public and private sector funding for invasive species management and control programs to support priority programs.
- 4) Share knowledge and expertise.

- Outreach at community events reached over 50,000.
- Electronic media supports HISC messages via Web site www.hawaiiinvasivespecies.org which received more than 63,300 visits. Outreach funds also provided partial support for posting materials to the Web site and list serves, and for implementing other electronic media methods.
- Education materials produced range from refrigerator magnets, key rings, and pens to posters, brochures, displays and printed and portable document format (PDF) newsletters, as well as a statewide electronic newsletter.
- Invasive species educational programs and community events implemented by staff total 58.
- Number of volunteers recruited and/or referred to invasive species projects resulted in more than 2,572 volunteer hours logged.
- With more than 50 mentions of the HISC or HISC projects in the media and given the combined estimated audiences of broadcast, print and electronic media coverage, it is estimated that over 250,000 people were reached.

Resources Highlights

- A budget recommendation was made by the Resources Working Group chair to the HISC following an interagency meeting on September 17, 2009 to consider budgets recommended by all of the working group chairs.
- Demands on the budget were higher than available funds and agreeing on a balanced budget required a collaborative approach. The final budget recommendation was approved by the Council on September 18, 2009.

Resource Shortfalls for Invasive Species Management in Hawai‘i	Millions of dollars	
	Annual	Set up costs
Modern Biosecurity System	\$4.0	\$54.0
Biocontrol	\$3.1	\$10.0
Restoration and Site Management to Protect Watersheds and Biodiversity	\$10.5	\$10.4
Rodent and Predator Control to Protect Native Biodiversity	\$4.0	\$20.5
Brown Treesnake	\$10.0	
Invasive Species Committees	\$3.2	
WNV	\$0.4	\$3.0
Agricultural Pest Control Needs	\$3.2	
State of Hawaii DOT S.N.I.P.P. Statewide Noxious/Invasive Plant Program	\$6.0	
Emergency Response Fund		\$3.0
	\$44.4	\$100.9

Review of Legislation in 2009

The 2009 legislative session yielded several bills and resolutions that were directly or indirectly related to invasive species in the State.

Bills and Resolutions that passed

HB 1741 (Act 59, SLH 2009) temporarily reduced the rate of the conveyance tax being distributed to the Natural Area Reserve Fund (NARF) and the Rental Housing Trust Fund. It also increased the rate of the conveyance tax on properties valued at \$2 million or more and second house purchases. HB 1741 reduced the NARF portion of funding to HISC to 20%.

SR 43 and SCR 72 both requested the U.S. Department of Agriculture and the Department of Homeland Security to cooperate with the HDOA to collaborate and share information to prevent invasive species from entering Hawai‘i, strengthening collaborative efforts.

Bills of note that did not pass

HB 1433, carried over to the 2010 session, clarifies and enhances the effectiveness of the Pest Inspection, Quarantine and Eradication (PIQE) Fee which had, in the 2008 session, been amended to apply to both air and marine cargo at a rate of 50¢ per 1,000 pounds (Act 3, SLH 2008). Some cargo carriers (notably air carriers) have thus far refused to collect or remit the PIQE fees despite the law going into effect August 1, 2008.

If HB 1433 were to pass in the 2010 session, it would help raise fee collection rates by establishing penalties, currently non-existent. Fees raised currently fund HDOA inspectors and invasive species rapid response actions. An enforceable PIQE fund is an important part of the state’s overall biosecurity plan and prevention efforts.

Part of HB 1433 would add exceptions from the fee for “liquid bulk freight” and “cement freight.” However, it is not just the freight itself that could have a risk of carrying invasive species, but the containers and the vessels themselves could be vectors for invasive species. A refinement in the definitions is needed.

HB 1684, carried over to the 2010 session, aims to establish and revise penalties appropriate to the harm caused by the intentional introduction and spread of invasive species. The HISC supports penalties for those who intentionally violate such permitting and prohibition rules.

Approved Budget FY10

The Hawai‘i Invasive Species Council approved the expenditure of \$2 million in State special funds for State FY10 to support cooperative efforts to develop and implement a statewide program to prevent, detect and control invasive species.

HISC’s \$2 million budget is a 50% reduction from FY09 which had been funded at \$3 million in State special funds and \$1 million in general funds. The largest project supported was a \$600,000 transfer to the Hawai‘i Department of Agriculture to maintain quarantine inspectors at risk of state layoffs.

Organizational and Resource Needs

- **Better laws and rules to support effective enforcement action to prevent the arrival, establishment and spread of invasive species.**
- **Comprehensive prevention and detection measures for both terrestrial and marine invaders not yet present in Hawai‘i.**
- **Better small mammal control to protect native birds.**
- **Better pig and ungulate control in high value native forest areas.**
- **Biocontrol for widespread pests.**
- **More control methods to address newly naturalizing pests already present in Hawai‘i.**



The 2003 State Legislature authorized the creation of the Hawai'i Invasive Species Council under Act 85, SLH 2003, and stated:
“ ... the silent invasion of Hawai'i by alien invasive species is the single greatest threat to Hawai'i's economy, natural environment, and the health and lifestyle of Hawai'i's people and visitors.”
In 2006, Act 85, amended by Act 109, SLH 2006, became permanent law in Chapter 194, HRS.

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