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TO: House Resources Subcommittee on Fisheries Conservation, Wildlife and Oceans

FROM: Keren Gundersen, Project Coordinator, Kauai Invasive Species Committee

RE: Oversight hearing on the serious growing problem of invasive species in the Hawaiian Archipelago.

Aloha and welcome to Hawaii. Thank you for the opportunity to discuss the growing problem of invasive species in Hawaii and in particular, Kauai. As project coordinator of the Kauai Invasive Species Committee and as a concerned resident of Kauai, my commitment to preserving Kauai's biodiversity is paramount.

IMPACT: To look at the impact that non-native invasive species has on Hawaii, one must look at what is threatened. Hawaii has one-third of the endangered species in the United States. More native species have been eliminated in Hawaii than anywhere else in the United States and invasive alien species pose the greatest threat driving these and other native species toward extinction. Kauai alone has over 95 threatened and endangered species federally listed by the US Fish and Wildlife Service. In Hawaii, Kauai has 47% of the endemic (found only in Hawaii) plants, 55% of the endemic birds, and 42% of the native natural communities. It also has the highest number of species of native plants in the state. Invasive species pose huge threats to not only the unique biodiversity found only in Hawaii but also to Hawaii's watersheds and water resources, tourism-based economy, agriculture, health, and general quality of life.

It is estimated that a new species now arrives in Hawaii every 18 days. Not all of these species are invasive threats, but their continued and varied arrival alone indicates that diligence be taken in prevention and detection of harmful invaders.

A sample of invasive threats on Kauai:

Miconia (*Miconia calvescens*) now infests 2700 acres in the Wailua area. *Miconia* is the greatest concern because of its persistent ability to act as an umbrella shading out plants underneath it. Without this under-story, the watershed will no longer function as a water-collection resource and our island's drinking water is threatened. Because of its shallow roots, *Miconia* can cause severe amounts of flood damage, washing out entire hillsides, creating silted runoff and eventually threatening our precious reefs. If *Miconia* escapes the Wailua area and becomes established in the rugged terrain of the Lihue-Koloa Forest Reserve, it will challenge all of Kauai's resources to control it. Approximately 100,000 acres of native wet forest, prime habitat for *Miconia*, are at risk.

Golden Apple Snail (*Pomacea canaliculata*) infestations in Hanalei have impacted the taro industry resulting in a 20% crop loss. Originally intended as an exotic escargot for the restaurant trade, this pest is causing serious harm to one of Kauai's prime agricultural industries. Apple snail eats stem, corms, and other plant parts of taro.

Fireweed (*Senecio madagascarensis*) is a yellow flowering weed currently listed on Hawaii's Noxious Weed list by the Department of Agriculture. This plant is poisonous to horses, cattle, and other livestock posing a serious threat to pasturelands. In Australia, yearly losses of \$2,000,000 are attributed to fireweed. An area of fifteen acres located near Halfway Bridge on the southeastern part of the island is currently being worked in hopes of not only containing this pest but eradicating it.

Ivy Gourd (*Coccinea grandis*) is another pest on the Hawaii Noxious Weed List. It exploded in the 1980s on Oahu and in the Kona area of the Big Island, creating huge problems for agriculture and conservation of lowland sites. There are only a few known populations of Ivy Gourd on Kauai covering an estimated 20+ acres.

Mongoose (*Herpestes auropunctatus*) invasion on Kauai poses a huge threat. Currently, mongooses have not been a confirmed presence on Kauai, although many alleged sightings have occurred since the early 1960s. Mongoose do not only predate on insects and lizards, but also on the eggs of groundnesting birds and sea turtles. Kauai boasts the only growing population of Nene in Hawaii, believed, in part, to be because mongooses have not yet become established.

Coqui Frogs (*Eleutherodactylus coqui*) are not only a threat to endemic invertebrates, but also to the tourist industry, private property values, and increased rodent populations due to predation. Kauai has one known population of this pest which is currently being controlled in hopes of eradication.

Many more harmful pests threaten to invade Hawaii, causing further damage. Even one new pest - like the Brown Tree Snake - could change the character of our islands. The Brown Tree Snake poses a threat to several sectors of the economy.

In addition to the potentially devastating impact it could have on native animal populations, the snake; 1) poses a public health risk because it bites people and pets, 2) threatens poultry farms because it feeds on chickens and eggs, and 3) presents the risk of costly power outages because it climbs electrical power lines causing short circuits in the power supply. Together, these impacts could add up to between \$29 million and \$405 million in annual costs to Hawaii according to a University of Hawaii economic impact study.

APPROACH: While a single-species eradication approach to invasive threats is an effective method for targeting incipient alien invasive species, a comprehensive approach is effective in eradication and restoration of management areas than can be geographically or artificially defined with tangible boundaries.

All of Kauai Invasive Species Committee's (KISC's) target species are incipient in nature, meaning that they are relatively new to the island. While they remain incipient, it

is imperative to survey the extent of infestation, treat the known populations, and then monitor the sites for further evidence of recurrence. As KISC's staff size increases it will be possible to target species that are beyond incipient status and focus on defining and protecting management areas.

Many of KISC's partners utilize a more comprehensive approach to eradication. Kokee Resource Conservation Program works in the defined area of Kokee State Park working to remove various species from pristine native areas. They are effectively surveying, treating and monitoring sites in a generalized area to protect the island's crown jewel, the Alakai Wilderness Preserve. Likewise, The Nature Conservancy is joining in partnerships with other working groups to restore a portion of Lumahai Valley. This valley is one of only two remaining lowland native wet forests and is defined naturally by the valley's surrounding ridges. These natural boundaries allow for a more comprehensive approach to alien species removal and also enable them to set parameters of measurable success.

FUNDING and POLICY: KISC is not only funded by Federal dollars through the US Forest Service and US Fish and Wildlife, but also receives funding through State, County and Private sources. Total annual budget averages \$200,000 for KISC with a staff of three. KISC also receives tremendous support through its members, in the form of equipment loans, base-yard and office space, and other in-kind services.

Long-term funding is essential for this long-term and serious problem of invasive species. A cooperative funding partnership is needed to address all aspects of invasive species impacts. Prevention, response & control, research and outreach are all areas needing focused funding.

The benefits of coordinated and inclusive invasive species policy planning can not be over stated. We strongly support efforts to legislatively authorize the National Invasive Species Committee and believe that the provisions for public assistance and rapid response capabilities in H. R. 2310 would greatly benefit Hawaii.

Other legislation that is important to Hawaii are H.R. 3479 Brown Tree Snake Control and Eradication Act of 2003, and HR 1080 National Aquatic Invasive Species Act of 2003.

Thank you for your continued support and interest in protecting the unique biodiversity and limited resources of Hawaii.