Coqui News

Online at www.hear.org/kisc/coqui_news

Kauai Invasive Species Committee

Success Notification

June 2012

Lāwa'i infestation site officially Coqui-Free!

Captured Male Coqui

Many residents of Kaua‘i have not been aware that a population of the invasive coqui frog had become established in a wild-land area of Lāwa‘i. Accidentally imported in 1999 in nursery stock, the coqui frogs quickly multiplied into an infestation before the state or federal authorities could respond. But today, after 12 months of not hearing coqui frogs at the infestation site, the population has been deemed eradicated. This success has been the result of efforts by the Kaua‘i Invasive Species Committee (KISC), the Hawai‘i Department of Agriculture (HDOA), DLNR's Division of Forestry and Wildlife (DOFAW), US Department of Agriculture Wildlife Service (USDA-WS), Kukui‘ula Development, and the Koke‘e Resource Conservation Program.

Hawai'i's lush vegetation, warm temperatures and high humidity not only welcome human visitors but indiscriminately provide a tropical paradise for the more than 1,000 alien plants, vertebrates, and invertebrates that have been accidentally introduced from all corners of the world over the past 65 years. Some have become established at the expense of native species, competing for habitat and nutrient sources.

One species that has garnered much attention in recent years is the coqui frog, *Eleutherodactylus coqui*. Its ability to quickly adapt to Hawai'i from its native Puerto Rico and reach unprecedented numbers, the absence of predators, and its noisy mating behavior have made the coqui frog the target of government and community eradication and control efforts.

The coqui frog, *Eleutherodactylus coqui* was accidentally introduced into Hawai'i from Puerto Rico in about 1988. Aside from being a major noise nuisance, the frogs pose a threat to Hawai'i's island ecosystem. Coqui frogs have a voracious appetite that puts Hawai'i's unique insects and spiders at risk. They can also compete with endemic birds and other native fauna that rely on insects for food. The frogs are quite adaptable to the different ecological zones and elevations in the state and have been found from sea level to 4,000 feet elevation (at sites in Volcano on Hawai'i). Scientists are also concerned that an established coqui frog population may serve as a readily available food source if (or when) brown tree snakes are accidentally introduced in Hawai'i.

Coqui crewmember spraying citric acid

On the Big Island, *E. coqui* has also been shown to have economical and health impacts as well. Affecting property values, disrupting the quiet evenings around tourist destinations, and driving many to a sleepless night in paradise are all the result of an ever-increasing population of coqui frogs.

On Kaua‘i, only one wild-land population has been known to exist. After being introduced in 1999, the frogs went

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Want more info?

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Contact Phone Numbers:

- **KISC**: 821-1490 (from 7:00 am to 4:00 pm)
- **Crew Supervisor**: 651-8781
- **Hawaii Department of Agriculture**: 274-3069
- **Pest Hotline**: 643-PEST

Tidbits

15,114 person-hours expended

9,988 acres surveyed

14,214 gallons of citric acid solution used

Help keep Kaua`i Coqui-Free!

Report coqui frogs!

643-PEST

Mugs Kaneholani hauling spray hose

undetected for two years giving them a chance to establish a breeding population. In 2001, Coqui frogs were discovered in a valley in Lāwa'i. At this time it was estimated that the population infested approximately 10 acres and was thought to be less than 100 calling males (only the males make a bird-like "ko-kee" sound).

From 2002 to 2003 US Department of Agriculture Wildlife Services Research Center (USDA-APHIS-WSRC) conducted field tests using Citric Acid as a control for coqui. Both HDOA and DLNR-DOFAW assisted with the field tests conducted at the coqui infestation site in Lāwa'i.

Environmental Protection Agency (EPA) approval for this method of control was eventually achieved, although the frog population was not eradicated.

From the fall of 2003 to 2005 sporadic control efforts continued to take place due to the lack of available manpower and funding. These efforts utilized partnerships with HDOA, KISC, DOFAW, Koke'e Resource Conservation Program, and private volunteers. Dense foliage hampered spray efforts as it provided refuge for the frogs as well as prevented citric acid penetration and distribution throughout the site. Despite these efforts, by 2005 the population density had been estimated as upwards of 300 calling males.

During mid-2005, a strategy meeting was held involving County, State, Federal and private representatives to devise a work-plan to more effectively eliminate this infestation. A work plan with a budget was outlined, as well as funding secured from the State Legislature, the County of Kaua`i, and Kukui'ula Development. Efforts utilizing this work-plan commenced early in November 2005.

Habitat modification to battle the dense foliage was the top priority of this new work-plan. Heavy machinery was brought in to clear all vegetation 14"d. and under to make the area less hospitable to coqui and put stress on their reproductive cycle.

With the additional funding provided by the County of Kaua'i during FY07, additional temporary staff was hired, supplies of citric acid were received, and work continued at the Lāwa'i infestation site. Although the temporary coqui crew ended their term at the beginning of November 2007, work at the site has continued by the KISC crew. Priority has been given to this eradication project with at least two days/week dedicated to control work at the infestation site in Lāwa'i.

With state and county funding, a collaborative approach with interested partners and neighbors, and a clear agreement as to the goal, this project has achieved success. With continued awareness and support from the public it will be possible to prevent future infestations of coqui on Kaua'i.

Duane Patricio, Joseph Aguon-Kona (supervisor), Cheryl Lemalu, Kevin Sasaki, and Robert Diaz. 2007 temporary coqui field crew hired with county funding.

Continued thanks go out to the Kauai Coqui Frog Working Group members who collaborated and assisted with this project: Hawaii Department of Agriculture, College of Tropical Agriculture and Human Resources, DLNR-Division of Forestry and Wildlife, County of Kauai, Garden Island RC&D, Kukui'ula Development, A&B Properties, and Lāwa'i Highland neighbors.

Congratulations to everyone!

Joe Kona, Joseph Aguon-Kona, and Jeff Schlueter filling spray tank with citric acid.