



Coqui News

Kauai Invasive Species Committee

Work Notification
June 25 - 29

Work update at Lawai infestation site

Upcoming control work is scheduled to continue the week of June 25, 2007. Crews will be arriving in the early morning and working until 9:30 pm., at the latest.

This week, field-work is scheduled to take place on June 25, 26, 27 and possibly the 28th. We are hoping to start our new "Frog Force" at the work site. This new crew of six members are scheduled to work 4 ten-hour days (Monday through Thursdays).

This past week the crew applied lime in section 10 and citric acid in sections 3, 6, 7 and 8. They also monitored for reports of frogs in Kalaheo and confirmed one greenhouse frog. They will return to another site as no frog was calling when they

were monitoring.

For the week of the 25th, the crew will work on applying herbicide in sections 3, 5, 6, 8, and 12-17. Most of the strawberry guava that was cut by the machinery is re-sprouting and needs to be addressed before they turn back into trees.

Application of hydrated lime is slated for sections 12, 14, 15, and 16. Frogs are being heard in sections 5, and 16-21 so citric acid will be sprayed in these areas taking into consideration any prevailing winds.

The contractor has begun work on clearing foliage on the intake side of the reservoir below Lawailoa Lane. This will, hopefully, dry out this area and make it less hospitable as coqui habitat. Rocks were also laid on a steep access road at the south end of section



Hydro-axe starting to clear hau on intake side of the reservoir below Lawailoa Lane

11 which will make this area more maneuverable.

Ongoing monitoring with the recorders is continuing to take place at the infestation site. To capture frogs calling on these recorders, they need to be re-set daily. This task is either carried out by the crew or KISC's Data Technician, Jeff Schlueter.

POSTED:

Friday, June 22, 2007

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Contact Phone Numbers:

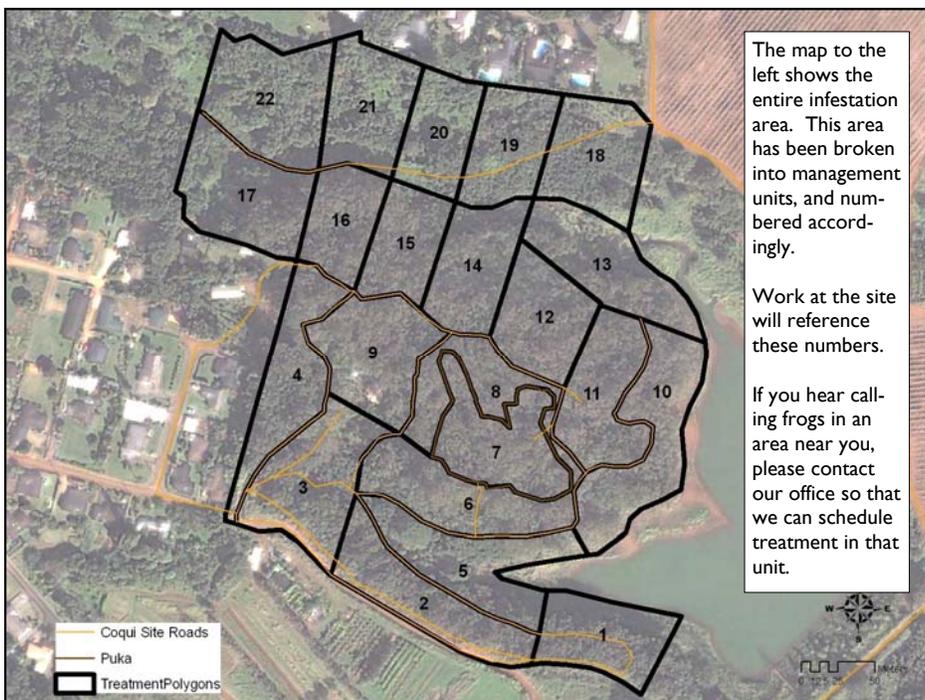
- **KISC:** 246-0684
(from 7:00 am to 4:00 pm)
- **Crew Supervisor:** 651-8781
- **Hawaii Department of Agriculture:** 274-3069
- **Pest Hotline:** 643-PEST

Tidbit

Frogs absorb water through their skin so they don't need to drink.

Correction to last week's newsletter: **Kauai Commercial**, not Kauai Freight, delivered and stacked the 40 tons of citric acid in the KISC base yard. Great job!

Management Area Map





Sky-diving frogs rain down

Puerto Rican coqui frogs freefall from trees

PUERTO RICO - For five years, Margaret Stewart had studied coqui (ko-KEE) frogs in Puerto Rico. She thought she knew almost everything a scientist could learn about them.

"Imagine my surprise when another scientist said that the frogs could glide down

through the air. I was amazed," says Stewart. "I knew they didn't have webbed feet or flaps of skin that would help them glide."

So how do they do it? Stewart wanted to see for herself, so she went deep into the Puerto Rican rainforest where she studied the frogs. But this time she did something she hadn't ever done. She got up

before dawn and was sitting in the forest at 4:00 a.m. Suddenly, frogs started raining down around her - plop, plip, plop. They were jumping from high in the branches above her. And they landed lightly in the leaves on the forest floor. Some even glided down onto her head!

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Perched coqui frog

How do tree frogs cling?

The pads of tree frogs are round, but they are not, as many people believe, suction disks. They are far more complex than that.

The undersurface of a toe pad is made up of many wedge-shaped cells, each separate from the others. These cells penetrate the cracks and irregularities of the surface to be climbed.

In addition, glands in the toe pad excrete a sticky substance that increases their efficiency. It would seem as if some frogs have stickier toes than others.

For instance, when one holds a peeper one is not

aware of any stickiness on the toe pads at all. How different are the toes of the Eastern Grey Tree frog! If this amphibian wishes to cling to your finger, it is quite difficult to disengage his toes. Incidentally, it should be mentioned that after the animal is removed one's fingers do not feel sticky.

Perhaps even more important are the mucous pores in the toe pads. Muscles control the mucous pores, and I would guess these muscles control the secretion of 'sticky goo' so it's only released when tree

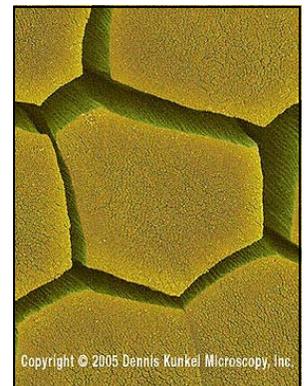
frogs are climbing or 'hanging out' on slippery or vertical substrates.

Adhesion by toe pads is supplemented by adhesion of the skin of the belly, also by surface tension. On rough surfaces, the structure of the epidermis allows interlocking of the toe pad with the surface.

The 4th link below will take you to this full article.

Ruth Allard, Conservation Biologist,
American Zoo and Aquarium Association

"When the frogs fell in front of me, I could see that they were spreading their arms and legs as they fell," says Margaret Stewart. "They slowed their fall by being so spread out, and they never got hurt. I was just thrilled to see for myself the secret that those little frogs had kept from me all those years!"



Microscopic photo of
coqui toe pad

Informational Links

Please visit the following sites for more info:

- Work Notification Policy:
<http://www.hear.org/kisc/pdfs/200704coquiworknotificationpolicy.pdf>
- <http://www.hear.org/AlienSpeciesInHawaii/species/frogs/>
- http://findarticles.com/p/articles/mi_m0EPG/is_n3_v28/ai_16817840
- <http://www.madsci.org/posts/archives/nov99/943170754.Zo.r.html>