

2006 Coqui Control, Monitoring and Outreach Program
Hawaii Volcanoes National Park



Kim Tavares, HAVO Coqui activities coordinator
2006 December | v.20070101

Project Objectives

Prevent Coqui populations from establishing at HAVO

Support neighborhood volunteer force around HAVO

Promote Coqui awareness & prevention, recruit volunteers

Map Coqui distribution throughout project area

Collaborate with other federal, state and county Coqui control efforts

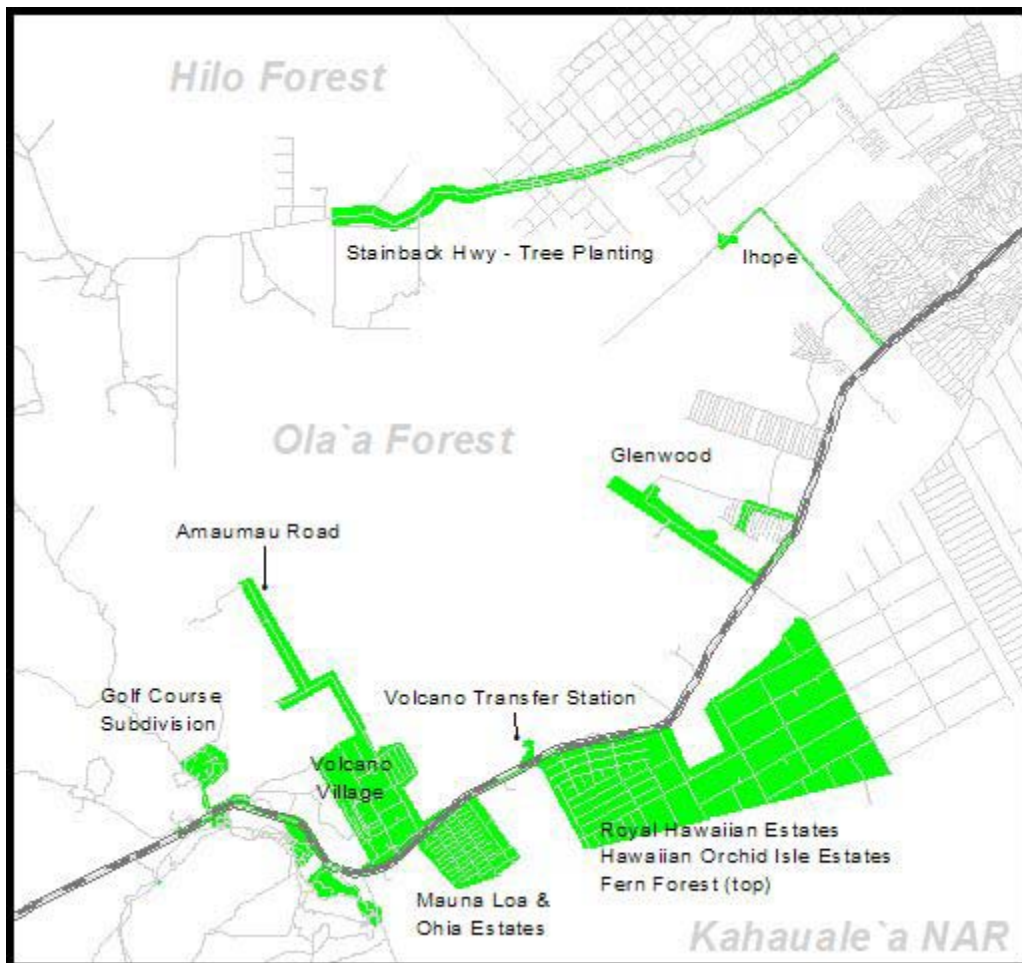
Facilitate resources to control new, small infestations around the Park

Project Area

Hawaii Volcanoes National Park

Puna neighborhoods around the Park Entrance

Undeveloped lands near Park and Forest Reserves



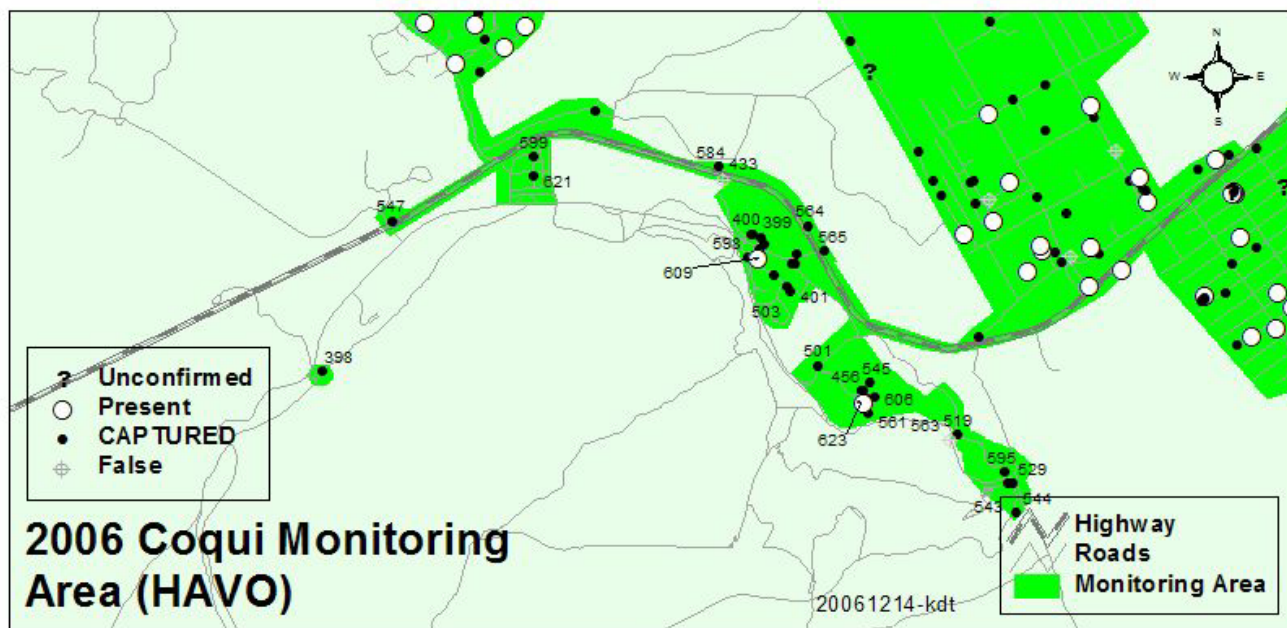
2006 HAVO Coqui Season Summary

The beginning of the 2006 Coqui season switched on when male frogs became audibly active in March after a 3-month quiet period over winter. It lasted about two weeks. Those early reports came from places where frogs were personally known or were on record as “not captured” by the end of last season. It turned cold, rainy and windy again after that, so the frogs quieted down again, for a few more weeks. The season finally peaked in June-August, and many frogs continued to call through September. During peak, several new reports per day were coming in, for all areas covered in this report. It became obvious by proximity to roads and parking lots that frogs are primarily moving on motorized vehicles that park overnight in, or drive through infested areas. It also became clear very early on, that building materials and delivery vehicles are frequent transport vectors. It was less evident but still prevalent, that frogs are still also coming up with plants and plant materials, including ti leaves for imu cooking and cattle feed. Calling activity dropped noticeably in October, and it nearly stopped by the end of November.

Sites & Data **(#) established breeding population(s) – over 1 year or eggs found*

Hawaii Volcanoes National Park

Hawaiian Volcano Observatory
Kilauea Military Camp
Visitors Center, Volcano House, Volcano Art Center
Park Entrance
Maintenance, Fire, Protection
Park Housing
Research Center, RM, BRD
Kilauea Iki Overlook
Thurston Lava Tube



Hawaii Volcanoes National Park

Reports: 36
Captures: 36
Spot Drench: 0
At Large: 2
Established Sites: 0

Status:

Coqui are coming from vehicle traffic. This includes visitors, park employees and delivery vehicles. They were repeatedly found at areas from Volcano Highway (H-11) at the Park entrance to the Visitors Center, high vehicle traffic areas along Crater Rim such as parking lots and pull offs, visitor attractions and service areas. Although there were no eggs found at any Park sites to date, at least one female frog was found and removed this season. It is reasonable to assume that female frogs are coming to the Park as frequently as males. Since several dozen males were removed this year and only one or two females were found, the Park should expect Coqui breeding to begin at all hotspots by spring of 2007.

Greenways & Forest Reserves

- Highway 11 – National Park
- Highway 11 – Volcano to Nahelenani
- Highway 11 – Alii Anela to Kahauale`a
- Old Volcano Road (betw Ohia & Royal Hawaiian)
- * (1) Volcano Transfer Station
- Hunting unit back of Volcano Transfer Station
- * (2) Ihope-Ola`a
- * (1) Stainback-Ola`a

Highway-11, Puna side of Hawaii Volcanoes NP

Reports: 13
Captures: 3
Spot Drench: 5 – Volcano transfer station & old Volcano quarry
At Large: 2 – H-11 makai, betw Wright & Haunani, old Volcano quarry
Established Sites: 2

- Volcano transfer station (10 acres/3 dozen calling end of 2006)
- Old Volcano Quarry (0.1 acres/1 calling end of 2006)

Status:

Coqui are frequently found in random roadside locations along Highway-11.

Volcano Transfer Station: The area between the highway and the Volcano transfer station is currently the largest and nearest Coqui population to Hawaii Volcanoes National Park. Discussions with State Highways truck drivers and equipment operators led to the discovery that these vehicles are the likely source of this large and spreading Coqui population. The trucks & equipment are based out of the Kurtistown baseyard, a heavily infested Coqui breeding area. They use the back side of the Volcano transfer station to load and unload gravel for road work. The infestation core is at the vegetated edges of the clearing (tibouchina) beyond the gravel piles, and extends into the forest in all directions, but generally seems to be where there are eucalyptus trees.

USDA crews drenched the perimeter vegetation several times, but more frogs continued to call outside of the area that was drenched. BIISC crews also drenched an isolated frog in back of the gravel piles behind the container dumpster area. BIISC and HAVO crews installed a trail (roughly 150 meters) from the highway to the highway edge of the infestation. A trail around the perimeter of the infestation is needed to calculate actual acreage affected, and to begin planning an eradication strategy. One or more trails from the gravel piles, through the tibouchina and out to the eucalyptus trees & frogs will be need to. Although the distance may be longer, it is safer to avoid working from the highway whenever possible. An informal suggestion has been circulating that suggests the County Coqui crews could help by treating the Kurtistown baseyard, decontaminating all vehicles & equipment, and keeping the baseyard Coqui-free. If the problem can be stopped at the source, it would be worthwhile to eradicate the transfer station population early next spring, before it spreads farther in all directions.

The second of three problems at the transfer station is the container dumping area. It was drenched three or more times in 2006 by USDA crews, but is frequently re-infested. There are only one or two potential sources from private persons bringing frogs with trash to the dump. It is more likely this station is being infested by County vehicles and/or the dumpster/recycle containers, and will require continued mop-up work until such time the containers & trucks that deliver them are decontaminated and remain Coqui-free. The third area of the Volcano transfer station where Coqui were heard was the back side, towards and into the hunting unit. A single frog was plucked from the forest by a large group of volunteers, from a dead Koa tree stump, 150 meters away from the nearest jeep trail or road. USDA reportedly captured another one within 50 or 100 meters of this frog. More are likely to arrive by way of hunters vehicles.

Old Volcano Quarry: In addition to the Volcano transfer station, another established Coqui site is the old Volcano quarry. This population is slowly being reduced in size by continued drenching. It is difficult to completely soak a four-foot high brush pile of dead strawberry guava that's grown over with grasses, ginger and rubus ellipticus, but several attempts were made again this year. Hopefully it will be quiet next spring, and finally extinguished. USDA crews drenched the pile once or twice, and BIISC crews drenched it once this season.

Ola'a Forest Reserve Buffer: Glenwood to Mountain View (mauka)

Reports: 1006

Captures: 11

Spot Drench: 8

At Large: 3524

Established Sites: 7

- Stainback at Flume Road / ATV Park
- Ihope Road, near top end – two separate sites, one small the other larger
- Glenwood: Glenwood Gardens, North & South Glenwood Road, Highway-11 Glenwood, North Oshiro subdivision.

Hot Spots: Many

- In subdivisions with small lots, many new homes and people who work or travel to and from infested areas
- Hirano's Store, lots of traffic and tour buses
- ATV Park off Stainback Highway

Status:

Stainback Highway: One evening survey from Kulani Road to Army Road, was conducted early in the summer by HAVO crews and USDA (Roberta Swift). The survey began at the top, by the Army Road gate that prevents traffic from reaching the prison facility. Surveyors queried Kulani prison staff leaving the facility about the unconfirmed reports of Coqui at the prison. They acknowledged matter of factly "oh yes, they are there too", and drove off whistling, imitating Coqui calls. After dark set in, the survey began. The first call was very close to the top. It was far from the road, beyond the abrupt end of a jeep trail headed mauka towards the powerline. The frog was found and retrieved from uluhe underneath the powerline. Only a few more were found on the way downhill, isolated and usually out of reach, in tall hapuu. USDA crews went back after the survey, and drenched those spots. At about the Flume Road and/or the ATV Park road, it was obvious there was a large infestation nearby. The survey did not continue below Kulani Road.

Ihope Road: There are two problem areas at opposite corners of the same intersection, near the mauka end of Ihope Road. The smaller is towards the highway, but the larger is growing outward, toward Ola'a & Hilo forests (and in all directions). A survey and training hunt was conducted at the end of Ihope Road at the request of Julie Williams (Keakealani Outdoor Education Center, Volcano). She had a frog on her property and tried many times with no success to find it. Once she learned how and actually caught it, she was hooked. This was the beginning of many more summer frog hunt adventures for Julie, in Volcano. She went on to train many more Coqui hunters in her neighborhood.

Glenwood: Glenwood has many breeding populations of Coqui. At least three or four of them are more than two years old. People don't notice when there are only a few infrequent callers, but are alarmed now by those relentless calls and growing numbers. A few sites had special attention. An action group was formed in Glenwood Gardens (Rita Pregana & neighbors). They applied for a grant from the County, and signed up for a loaner sprayer for a week. Isolated frogs at high elevations were captured where ever access was granted, and where ever it was possible to squelch the problem with one tank full or less, of citric acid. People want to know how they got the frog, where it/they came

from and especially what they can do to prevent it from happening again. Most of the known high density frog populations in Glenwood are within a mile of the highway at Glenwood Road intersection, but there are many unreported sites within that range and up to three miles below (towards Hilo).

Neighboring Communities

- Volcano Golf Course Subdivision
- Volcano Village
- Cymbidium Acres
- * (2) Mauna Loa Estates
- * (1) Ohia Estates
- * (3) Royal Hawaiian Estates
- Hawaiian Orchid Isle Estates
- * (5) Fern Forest
- * (6+) Glenwood

Neighboring Communities: Volcano Golf Course to Ohia Estates

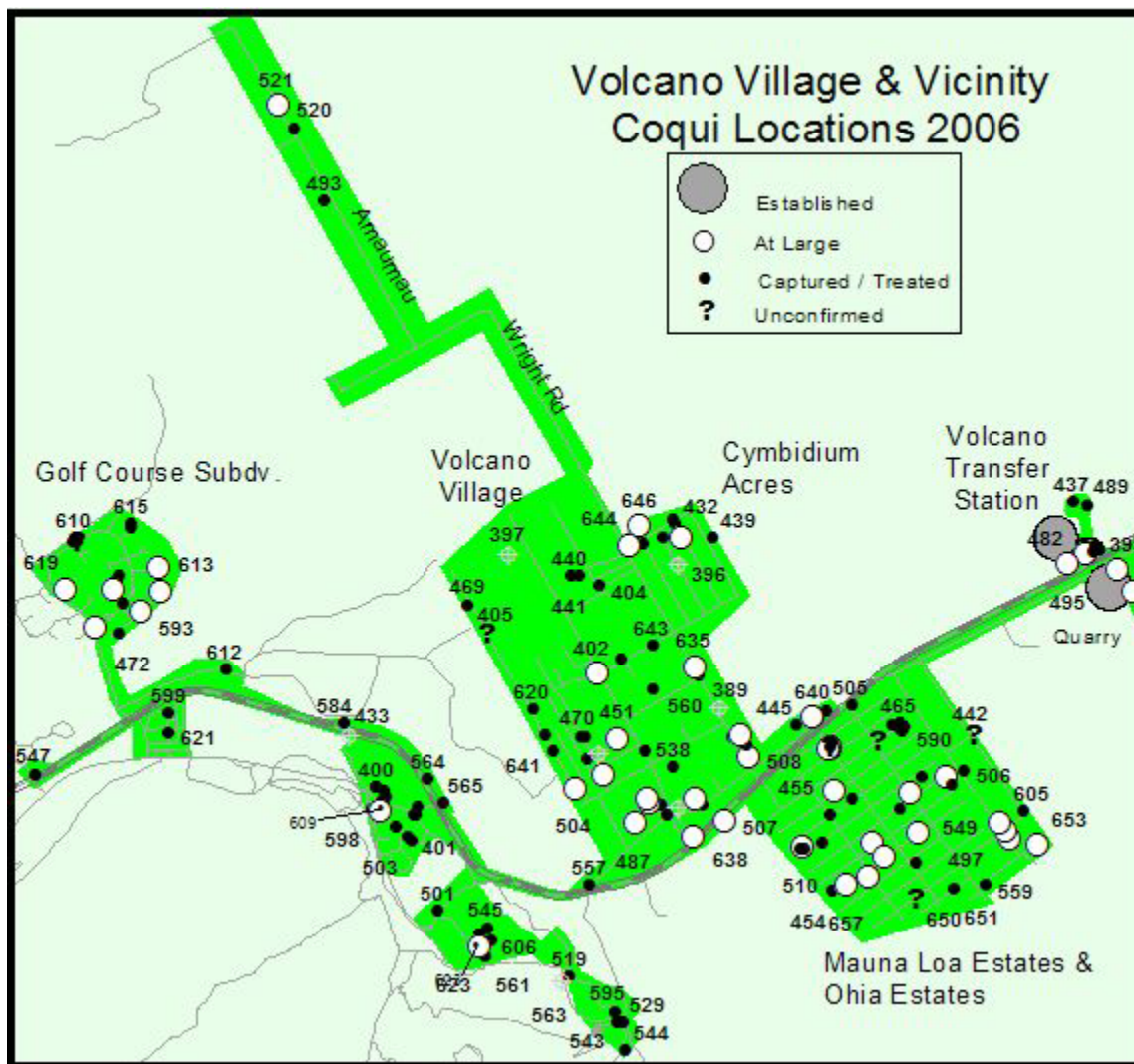
Reports:	115
Captures:	82
Spot Drench:	1 – Between Ira Ono & Father George De Costa
Other Treatment:	1 – Hank’s tent fumigation
At Large:	44
Established Sites:	3 <ul style="list-style-type: none">- Mauna Loa Estates - 2/Ruby (0.1 acres/4 calling end of 2006)- Mauna Loa Estates - 6/above Pearl (0.1 acres/4 calling end of 2006)- Ohia Estates - Nahelenani at Liona (unknown acres/none calling end of 2006 – eggs reportedly found, location unclear)
Hot Spots:	Several <ul style="list-style-type: none">- Kalanihonua Road & Loop- Old Volcano Road (Commercial Strip)- Cooper Center- Wright Road at Keonelehua- Iiwi Road

Status:

Volcano Golf Course: Volunteer team mobilized just in time. Prior years only produced one or two frogs each, compared with 16 reports and 9 captures this season alone. New homes & construction sites contributed considerably to the sharp increase in activity. Still several frogs at large expected to return to calling in the spring.

Volcano Village: A Coqui awareness booth was set up by Volcano Coqui group members every Sunday at the Cooper Center farmers market. Tim Tunison and others collected reports, recruited trainees and volunteers, and generally kept people involved with listening for, reporting and capturing Coqui frogs throughout the season. Of 44 Coqui reports, 38 were captured, one was drenched (by BIISC & HAVO Coqui crews) and 14 are reportedly still at large. One site with a particularly difficult situation was treated by tent fumigation. Hank Banquer didn't know that when he bought some used farm equipment it would come with frogs living inside. Several volunteer outings produced only a few frogs bagged, and more equipment came up that was infested. He hired a fumigation company to "smoke em out", and reports that it worked, but was expensive. No eggs, no females reported in the Village.

Cymbidium Acres: Road A is looking like a new "hot spot". Eight frogs reported this year and five caught, most of them on or near Road A. There are a few at large, farther away from roads, and volunteers are in pursuit of access permission, to be ready to go in to get them when the weather warms up. No established populations here yet.



Mauna Loa Estates: Two established sites, 39 reports, 27 captures and 17 still at large. Mauna Loa Estates activity increase was due to increased vehicular traffic, primarily construction work & workers, materials packaging, utility and delivery vehicles. Both established sites (2nd & Ruby, and the top of 6th) were not reported or did not exist last year, but this year erupted with a dozen or so calling males each. This could have been caused by one undetected batch of eggs at each site, a new introduction with plants/vehicles/etc. over winter, or new traffic patterns from residents. Both have been surveyed and trees flagged & ready for citric acid treatments. Many frogs have been removed from both sites. Eggs were found at 2/Ruby. USDA drench crews have these sites on their to-do list, but scheduling a date has not yet occurred. There are lots of ears out in MLE and folks eager to learn how to find frogs.

Ohia Estates: Several reports came in for a limited number of sites. The most problematic site seems to be Nahelenani at Liona. Frogs are infrequent callers, and quiet during monitoring visits. An anonymous report came in that said eggs were found and smashed by stomping w/ foot into the forest floor. If this is an accurate report, there should be no problem finding the site by next spring as the eggs may not have been destroyed, or others were likely around, undetected. Others reported catching frogs in the area, so the problem might also have been resolved this year. It probably could use drenching, once the locations are brought to light. Individual frogs were detected & captured in two other locations in Ohia Estates by HAVO Coqui crew, with one volunteer assisting.

Communities From Transfer Station to Hirano's: RHE, HOIE & FF (top & mid)

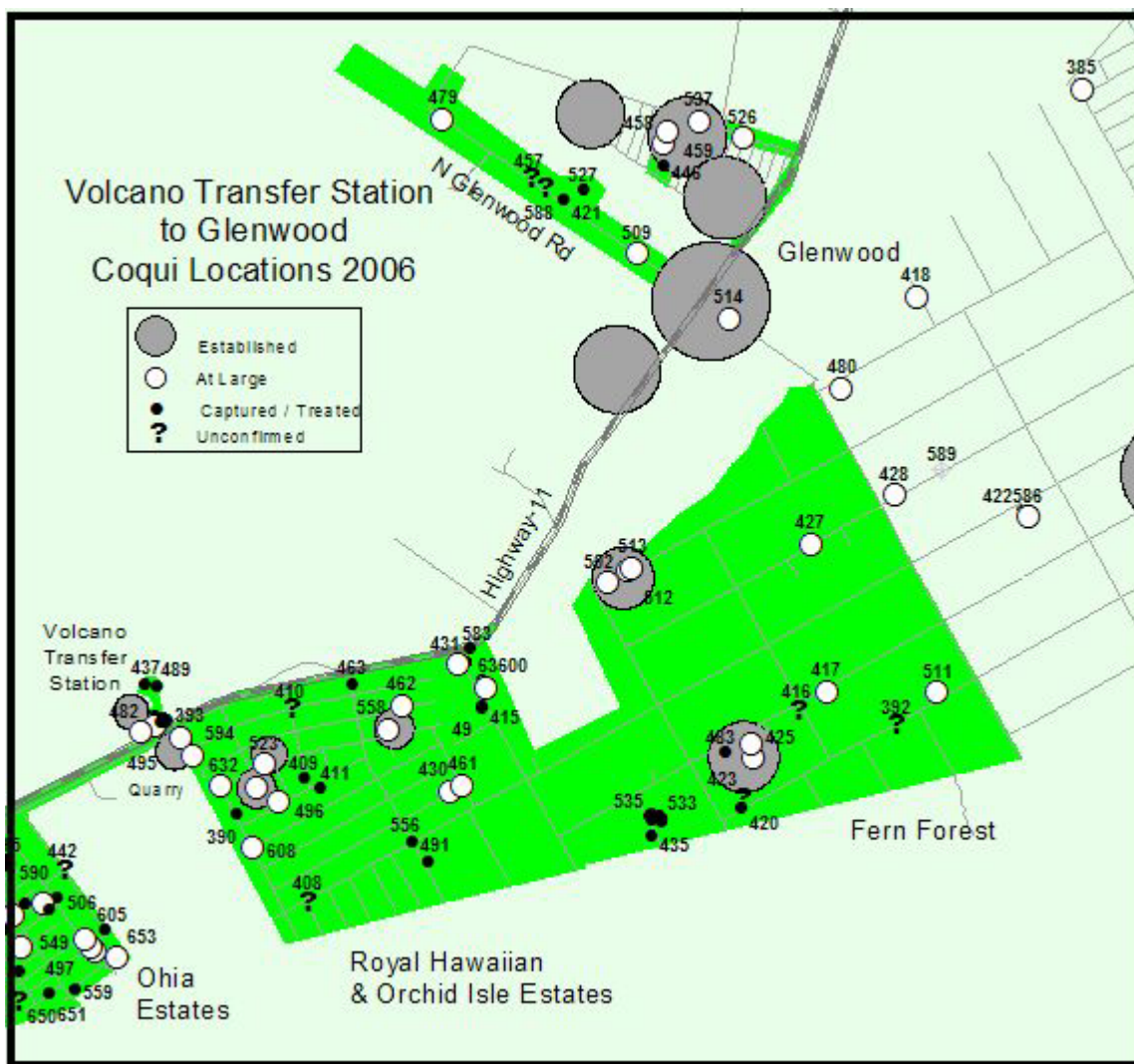
A number of reports have not yet been entered to the database. The data will be updated at a later date. Summary of details provided are based on GIS data and a preliminary review of hard copy notes & email.

Reports:	48
Captures:	77
Spot Drench:	20
At Large:	2020
Established Sites:	5
	- RHE - Anuheia at Kanilehua / "Bowden's"
	- RHE - Ala Oki at Ali'i Anela
	- RHE - Anuheia / "Candice & Richard's"
	- FF - Makoa below Uluhemalu
	- FF- Omeke, Pole 5
Hot Spots:	New Home Sites, Construction Sites
Status:	

Royal Hawaiian Estates (RHE): There are three established sites in this block at various ages & stages of control. Anuheia at Kanilehua, aka "Bowden's" is the oldest site, and has been diligently worked

over by volunteers in the past. Some treatments by USDA happened here, but more are still needed. There always seems to be “one more frog” to catch here. In 2006 two new sites emerged. Ala Oki, just in from Ali'i Anela had a few frogs in a very small space until a frog catching party of three scooped them up, with USDA drench crews following up with citric acid, just in case females, froglets or eggs were left behind. The last site is also on Anuheia, but just down the hill from Ali'i Anela at Candice & Richard's residence. Richard found eggs in his hapuu, and captured a few calling males. HAVO crews also caught a few, and USDA crews are planning to drench the site soon. Scattered individuals are showing up in expected locations along roadsides.

Hawaiian Orchid Isle Estates (HOIE): Little activity in this neighborhood looks good but may be deceiving, as surveys were not complete or regular here, this season. Six frogs were reported, four were caught/reported caught by volunteers.



Fern Forest (above Kahauale'a Road): Most of the activity in this block occurred near the highway, at residences across from Akatsuka's. This year Akatsuka's had their first Coqui arrive to the greenhouses. We learned that it is difficult to locate frogs by hearing them inside the confines of a plastic dome. The sounds are hard to pinpoint. Mori Akatsuka treated the tables that we determined

frogs were calling from, and reports that all has gone quiet since then. He as also agreed to allow a Coqui alert sign to be mounted to a post outside an access driveway on his property. Other problems not related to the orchid farm were simultaneously happening at multiple residences across the street. Frogs are arriving on vehicles and hauled goods from infested areas, and this site is hot and will re-infest. At one site the male frog was found protecting eggs in the trunk of a treefern. The tree was later drenched by USDA crews, for the female.

Fern Forest (Kahauale`a to Captain`s): This block is home to two large, established infestations of roughly 10 acres / 1000 audible male frogs in each. One of these infested sites is likely to be a source for some Park frogs. The other is growing towards Park employees, less than a half mile away from Kahauale`a NAR. Both of them are at about 2600 feet elevation. On the brighter side, another small infestation erupted this season at another site about a mile closer to the Park than either of these. Efforts to eradicate this brand new threat may have succeeded, but it will have to be monitored through the 2007 season to be sure. HAVO and BIISC crews, along with the residents, hand captured and treated the sites with 800 gallons of citric acid, where fifteen or more frogs were caught around the house. A few isolated individual frogs were left at large or unconfirmed by the end of the season in other areas of this block.

Participants

It would have been impossible to accomplish so much this season without the help of many dedicated people, volunteers and paid personnel. Volunteers in the Park were mostly Park or Observatory employees. Most active volunteer Park Coqui hunter is Wolfie Thomas. Outside the park, Volcano area residents banded together to form, plan and implement a strategy. Thanks to energetic Volcano Village volunteers Julie Williams and Tim Tunison, the Coqui hunting group grew from five individuals to nearly twenty, this summer. They went after frogs in all neighborhoods from Volcano Golf Course to upper Fern Forest. USDA-NWRC researchers also surveyed & tagged trees with frogs in upper Puna, and followed up by drenching, squelching, several potential new infestations. The Big Island Invasive Species Committee provided support in a variety of ways, including crews & citric acid to eradicate a new, small Coqui infestation at 2700 feet elevation, in Fern Forest. The Volcano community Coqui group had weather-tolerant Coqui awareness signs made to help keep people alert over winter. They will be posted in places visible by persons entering any of the Volcano area communities off Highway 11, to remind us to consider whether or not we might be transporting Coqui from somewhere we`ve been, or on something we`re carrying home, on any given day. Local vendors Volcano Store and Akatsuka Orchid Gardens, along with some residents have agreed to allow the group to post signs on their strategically located properties.

HAVO Coqui volunteers

Wolfie Thomas | Visitors Center-Headquarters-Art Center-Volcano House
Office located near headquarters, works nights, hears/catches/reports frogs

Bobby Mattos | Resources Management
Cut trails, provided vehicle & equipment logistics

Rhonda Loh | Resources Management

Participated in Coqui monitoring and hand capture activities

Norrie Judd | Interpretation

Participated in Coqui monitoring & hunts

Jay Robinson | Interpretation/HNHA

Spotted a frog hopping around in the day at HVO and captured it

Primo Mateo | Fee Collection

Spotted and squashed a frog that jumped off a car at the entrance station.

Stacy Okimoto | Resources Management

Early detection, frequently heard frogs at Research, RM and BRD

Anonymous Helpers | Dead frogs found & reported

At least one dead frog was found squashed with nobody around to claim the victory.
(KMC Post Office)

It's likely many more male frogs were seen, heard, captured and/or not reported.

Neighborhoods with Volunteers / Block Coordinators

Volcano Golf Course Subdivision – Organized “Catchers” Group

Jim Gale

Dennis La Pointe

Volcano Village – Organized “Catchers” Group

Tim Tunison

Steve Hess

Cymbidium Acres – Few Dedicated Individuals (part of Volcano Village Group)

Julie Williams

Mauna Loa Estates – Dedicated frog “reporters”, need more catchers, drench crews

Tamar Elias

Jeff Sutton

Dan Gates

Ohia Estates – Interest in helping expressed by a handful of residents

Al Santos

Frederick Manke

Royal Hawaiian Estates – No organized group, individuals monitoring near their homes

Hawaiian Orchid Isle Estates – No organized group, individuals monitoring near their homes

Fern Forest – Not enough “catchers”, lots of “reporters”, commercial sprayers developing

Glenwood – One neighborhood group attempts to contain infestation on their street

Big Island Invasive Species Committee (BIISC)

Field crew, 1 worker-week:

Spot treated:

Village - Old Volcano Road (Ira Ono)
Volcano transfer station isolated frog
Old quarry dead tree pile

Site treated: Fern Forest-Noeula Road, 2700 feet elevation

This site had up 15-20 calling male frogs, and residents caught most before drench crews came. The remaining frog trees were tagged, frogs were bagged, and citric drenched. A few frogs were out of the 200 ft range of the hoses, so a third length was borrowed from DLNR-NARS that just made it to the farthest frog. Next summer will reveal whether this effort was a successful eradication, or if breeding already occurred outside the drenched range.

Hauled, mixed & used citric to eradicate a small infestation and to suppress others

Citric Acid chemicals (contributed 2,000 lbs)

Cell phone communications (contributed 2 phones)

Outreach materials & literature

USDA-NWRC

Roberta Swift & Michelle Higashi:

Surveyed incipient populations, nominate for treatment or potential drench-test sites
Suggested sites for USDA drench crew work

Tom or Tyler, drench crew supervisors, work schedule authority

Drenched many sites from Volcano to Mountain View:

Village - Amaumau Road (Lance Yamashiro)
RHE – Ala Oki (renters)
RHE – Anuheia at Kanilehua (Bowden's)
Old Volcano quarry (Oliver English/Rick Rego)
Volcano transfer station (County & State)
Fern Forest – Kahauale`a near H-11 (Charlotte, mac nut)
Fern Forest – Below Captain's (1 or 2 sites)
Glenwood - Hirano's Store
Glenwood – North Glenwood Road
Stainback Highway – all sites Flume Road to Army Road

Surveyed sites, tagged trees, scheduled to drench:
MLE 6th, above Pearl (Glenda Kealoha)
RHE Anuhea (Candice & Richard)

USDA Sprayer Loan

HAVO-BIISC, 1 week in August
Glenwood Gardens, 1 week in August

Recommendations

Immediate needs:

1. Gear-up for treatment needs in 2007 (equipment & citric acid)
2. Follow-up on transfer station site (trail cutting, mapping, drench work)
3. Mop-up existing known isolated frogs (suggest drenching all tagged trees)
4. Continue listening, capturing new hearings
5. Monitor/control hotspots

Long-term:

1. Establish frog transport prevention protocols (& database, what worked, what didn't)
2. Expand awareness program, increase activities
3. Increase volunteer recruitment

Data Block Names

- by proximity to Park Headquarters -

	Block Acres	Block Miles	# Volunteers	#Reporting Persons	#Reported	#Captured	#Spot Treat	# At Large	#Established Sites	Acres Established	Year Established	Drenched (acres)
Hawaii Volcanoes National Park												
Hawaiian Volcano Observatory	6	0	2	2	1	1	0	0	0	0	0	0
Kilauea Military Camp	45	1	3	4	3	3	0	0	0	0	0	0
Visitors Center, V-House, Volcano Art Center	32	0.5	2	3	7	7	0	0	0	0	0	0
Park Entrance	10	0.25	1	2	3	3	0	0	0	0	0	0
Maintenance, Fire, Protection	20	0.5	2	4	4	3	0	1	0	0	0	0
Park Housing	24	0.5	1	1	0	0	0	0	0	0	0	0
Research Center, RM, BRD	107	1	1	6	9	10	0	1	0	0	0	0
Kilauea Iki Overlook	29	0.35	0	1	1	1	0	0	0	0	0	0
Thurston Lava Tube	49	0.45	3	1	4	4	0	0	0	0	0	0
H-11 National Park	114	2.3	2	2	4	4	0	0	0	0	0	0
TOTALS for Hawaii Volcanoes NP	436	6.85		26	36	36	0	2	0	0		0
Highway-11 (Outside Park Bounds)												
H-11 Volcano to Nahelenani	92	3	0	1	1	0	0	1	0	0	0	0
H-11 Ali'i Anela to Kahauale`a	64	3.1	0	1	1	1	0	0	0	0	0	0
Old V-Road (btw Ohia & Royal Haw'n)	56	1.5	3	2	4	0	3	1	1	0.1	2003	0.1
Volcano Transfer Station	18	0.1	3	6	6	1	2	0	1	10	2006	1
Hunting Unit back of Volcano Tx Stn	12.5	0	8	1	1	1	0	0	0	0	0	0
TOTALS for H-11 (outside Park bounds)	242.5	7.7		11	13	3	5	2	2	10.1		1.1

Data Block Names

- by proximity to Park Headquarters -

	Block Acres	Block Miles	# Volunteers	# Reporting Persons	# Reported	# Captured	# Spot Treat	# At Large	# Established Sites	Acres Established	Year Established	Drenched (acres)
Neighborhoods: Golf Course to Ohia Estates												
Volcano Golf Course Subdivision	246	2.8	4	8	16	9	0	7	0	0	0	0
Volcano Village	1530	14.5	16	15	44	38	1	14	0	0	0	0.1
Cymbidium Acres	156	2.3	4	6	8	5	0	3	0	0	0	0
Mauna Loa Estates	577	13	16	25	39	27	0	17	2	0.2	2006	0
Ohia Estates	199	3.1	6	7	8	3	0	5	1	0.1	2006	0
TOTALS for VGCS to OHIA	2708	35.7		61	115	82	1	46	3	0.3		0.1
Neighborhoods: Royal Hawaiian Estates to Fern Forest (mauka)												
Royal Hawaiian Estates	660	8	8	6	12	14	2	16	3	0.5	2003	0.2
Hawaiian Orchid Isle Estates	689	8	2	6	6	4	0	2	0	0	0	0
Fern Forest (Alii Kane-Kahauale`a)	546	2.75	2	4	4	1	2	1	1	0.1	2006	0.2
Fern Forest (Kahauale`a - Captain's Dr)	3070	15	2	17	26	59	16	2000	2	30	2003	0.5
TOTALS for RHE to FF-Captain's	4965	33.75		33	48	78	20	2019	6	30.6		0.9
Mauka Roads: Ola`a to Glenwood												
Glenwood	577	3.6	4	14	1000	9	3	1524	4	4	2002	0
Ihope-Ola`a	159	3.6	3	1	1	1	0	1000	2	3	pre-2005	0
Stainback-Ola`a	890	8	2	2	5	1	5	1000	1	10	0	0
TOTALS for OLAA-Glenwood	1626	15.2		17	1006	11	8	3524	7	17		0