

MAUI INVASIVE SPECIES COMMITTEE
MEETING MINUTES
June 8, 2007

ATTENDANCE: Fern Duvall, Pat Bily, Steve Anderson, Kuhea Paracuelles, Lloyd Loope, Philip Thomas, Mindy Wilkinson, Nathan Varns, Abe Vandenberg, Brooke Mahnken, Teya Penniman, Chris Radford, Joy Paman, Adam Radford, Darrell Aquino, Elizabeth Anderson

- Fern Duvall II (DLNR/DOFAW) called the meeting to order at 10:15am. Introductions were made around the room.
- Minutes from the April 27, 2007 meeting were approved. They will be posted on the website.

ANNOUNCEMENTS

- Betsy Gagne is giving a talk at 7pm tonight at the Native Hawaiian Plant Society meeting. She will be talking about Kanaio and Natural Area Reserves in general. Re-designation of some Forest Reserve areas to NARS is under discussion.
- "Message in the Waves" will be playing at the Maui Film Festival three times. The film was shot in Hawai'i and is about plastic in the ocean. Music by two MISC crewmembers, Chris Candito and Abe Vandenberg, is featured.

BRIEF UPDATES

Staffing

- Teya: we are in the process of hiring three temporary workers for the coqui crew for the summer. Chris Candito recently transferred from the vertebrate crew to the plant crew. One of Mike's crew members, Elisse Deleissegues, has been promoted to a new position – "Miconia Logistics and Data Technician." She will be taking a more active role in facilitating the Hana miconia operation.

Public Relations

- Joy: we have some new PR giveaway items - pens, magnets with specific species highlighted, and rulers. The rulers will accompany our early detection field guide, which is in the final revision stage. We hope to print the guide and start offering workshops soon. Mahalo to everyone who provided review comments. At the end of May, MISC put up a display at the airport in the Hawaiian Airlines departure area. The display will be up for six months and features early detection species.
- We had a booth at the Maui County Farm Bureau Agriculture Festival. The booth featured banana bunchy top virus – 300 people stopped by. On June 9th, we will have a display featuring invasive algae at the Maui Ocean Center World Ocean Day event. The second edition of our newsletter will be arriving in your mailbox shortly. Coqui frogs are the highlight of this issue. We recently had BBTV road signs created. We are trying to figure out how to post them temporarily at various intersections. Fern: until you figure out the official details, you could rotate them through staff/committee member's yards. Joy: we will be in the 4th of July Parade again this year. Last year we won the most unusual float award. On November 3, 2007, the MALP Maui Lawn and Garden Fair will be combined with the Maui Nui Botanical Garden's Arbor Day celebration. Pat: every year I take people from MALP up into Waikamoi so they can get a feel for what is native.
- Joy: the Superferry has been working with the HISC Public Outreach group to develop positive messages regarding what people can do to minimize the risk of invasive species transport. They will provide video information onboard during the ferry ride. Invasive species will be covered during 2-3 minutes of the video. Kuhea: when service starts, I will be going aboard to see their inspection systems. I would like someone from MISC to join me. I will also be going on several cruise ships to inspect their environmental programs and would like you to join me for those inspections. Fern: there have been negative seabird interactions with the Electric Company on Kaua'i over the last 10 years. The Department of Justice just sued HI Electric and the cruise lines. The birds are attracted to the bright lights.

Funding

- Teya: the official word via Tri-Isle is that the County budget does include the additional \$500,000 for MISC (\$200K for coqui and \$300K for miconia). A huge thank-you to the County of Maui!

VERTEBRATES: GOALS, STATUS, & PLANS

Mitred Conures

- Adam: the mitred conure program began ramping up in 2005. There have been at least 774 MISC hours put in on the project. Much of this time has gone to observation. There have been a lot of creative ideas put forth regarding control. Currently DOFAW has been conducting control operations. To date five control operations have been conducted and 56 birds controlled at one location. The original flock at this location was estimated to be 80-90 birds. We plan to continue control operations and adapt as we go.
- Fern: Mike opened up five stomachs and Jay planted the material from the crop, stomach, and intestines. There are a number of things growing. Most of the plants are not big enough to identify yet, but there is a Melastome (it may be *Clidemia*). Hopefully we will be able recognize the plants as they grow up a bit. There is no human provided food for these birds – they are foraging on wild things. We should look for miconia in wet cracks on the cliffs where the birds are. It is clear that there are viable seeds that are making it all the way through their digestive tracks. It would be worth getting additional stomachs in the future to repeat the exercise. Mindy: it would be wonderful if you could publish your results in a Bishop Museum paper. People are arguing that parrots are not seed dispersers. That has been one of our hurdles for funding - what we are doing is seen as not having an impact. Lloyd: it is important to get the results published even if it is a small sample. We need to get that information out there. The journal 'Elepaio might be a good place. Abe: what if you had a captive bird and you fed it to see what grows? Fern: wild caught birds are better because they show what the birds are actually eating. Miconia was fed to captive birds and it did germinate.
- Adam: we finally received landowner permission to access the edge of the cliff where the birds are nesting. This has been a stumbling block for a long time. Thanks to Joy we now have open permission that gives much more flexibility and will help us tailor our operations to the activity of the birds. There are about 30 birds left at the original site. We may need to move the control site up into the trees as they become wise to our activities near the cliffs. We have seen them as high as 2000 feet during heliops. We have been doing miconia peripheral sweeps in the area and we have been finding mature trees.
- We do have a confirmed second separate population. We are quite confident that it is a distinct, separate population of ~25 birds. We will do a site visit in this area for our next operation. We have open access for this one too. Mindy: have you seen any short-term change in their activity since control operations began? Abe: they do not seem to abandon the area, but they definitely know we are there. Teya: we postponed control work until breeding season when they are most tied to the site. Adam: they are not abandoning the area, but they do probe the area. Abe: they send in probes to check it out. Fern: it is critical that they have a nest. Adam: we realize that when we get down in numbers, we will have to change the approach and sniping may be needed. Fern: we did get permission to use silencers for alien species control. Kuhea: can you bait them? Adam: Doug Runde tried baiting and trapping, but didn't see any evidence of them coming in to feed. There are people that believe baiting would work if we had a two-compartment trap with a tame bird inside. As we get down in numbers, we may need to try something else. Pat: adaptive strategies are important as you get lower and lower in numbers.
- PCSU position descriptions can include guns. We should look at modifying Adam's position description. This could be important for snake control too. Mindy: is it really a good idea to duplicate these functions? DOFAW has the capacity and the equipment.

Other Bird Species

- Adam: we are improving our protocol for new vertebrate reports so we have a more systematic response. We will have a draft together soon. We receive a lot of miscellaneous reports. I would like to get our program to a point where we track everything in the database. Follow-up on these reports is very time consuming. We are striving to become more systematic and consistent.
- Adam: we have had two substantial lovebird reports in Kihei. Both groups of animals appear to have been recovered. We don't know for sure, but the animals haven't been seen recently. Kuhea: have you done any outreach with the pet stores? Joy: no. Fern: there was a flock of lovebirds in Lower Nahiku for a period of years. I don't know if they are still there. They were all the way down by the lookout.
- Adam: there were another couple of parrots in Waikapu. They were pets and have been recovered. There is also a macaw at Mama's Fish House. It also is a released pet. We worked things out – it can be outside as long as the wings are clipped. There may be one or more cockatoos loose in Hana. We will follow up. We did follow up on upcountry parrot reports and didn't find anything.
- Fern: what about the saffron finches at Kula Elementary School? Adam: we need to follow-up on that. Pat: what about the cockatoos from Waikapu. Fern: there may be one left. Three were controlled and there are still a few reports now and then.

ACTION ITEMS:

- *Outreach to pet stores re: not releasing pets.*
- *Follow-up on lovebird report in Lower Nahiku.*
- *Follow-up on cockatoo report from Hana.*
- *Follow-up on saffron finches at Kula Elementary School.*

Coqui Frog

- Adam: we are ramping up our efforts for the summer with three temporary hires coming onboard. We plan to focus our efforts on Maliko Gulch over the summer. We have been working on coqui consistently for two years now. We revisit sites every four weeks. As the existing 12 populations continue to decline, our time is freed up to work in Maliko Gulch.
- We offer both advice and rapid response for Maui, Moloka'i, and Lana'i. We define a population as five or more vocalizing males or covering multiple properties. We delimit a population perimeter based on a report. We draw a circle and buffer the circle by 50 or more yards. This guides all of our efforts. The approach has been successful to date. We follow-up at a site three times after capture/control. We do some hand capturing, but we are also doing more of a spot spray approach. Darrell: if we hand capture, we spray too just to be sure we get the females or eggs. Adam: We do not control greenhouse frogs. They are too well established.
- Darrell: I just returned from following up on a report on Moloka'i. MoMISC sprayed the suspect property, but still heard a frog the next day. Last night we did not hear it and we sprayed very thoroughly again. It may have just been an ironwood creaking. The owner had recently purchased roofing at Home Depot on O'ahu.
- Fern: as you are successful, re-infestation will be more important. Are you regularly going to Home Depot, Lowe's, etc.? I am very worried about the Superferry. Adam: we do our best with the box stores and nurseries that are revolving door sites. They will never be off our radar. Containers are a real issue - especially from the Big Island. Mindy: the protocol for treating infested material leaving the Big Island is still in process. It has not been made public yet. HDOAs focus is on developing a protocol for treating stuff leaving the Big Island. This is not a substitute for inspection. The protocol would be applied to all nurseries. Darrell: will HDOA be dealing with all nurseries or just certified nurseries? Mindy: I don't know yet. Darrell: whose responsibility is it to check on plants from the Big Island? This is a big problem for us. Mindy: everything shipped interisland should be checked by HDOA. Darrell: what should we do if we find a container with frogs? Mindy: if you can, send it back. Darrell: by the time we know there are frogs, they are out of the container. Fern: always find out if the person has made a recent purchase. Adam: that only tells us the local source. Fern: it would be good to pin this down. The more clear we can be regarding what is coming in the better. Lloyd: the concept that we don't want to implicate a

nursery is a part of the problem. Mindy: there is a concern about libel. If things are not working, ask that the protocol be revised. Maui will pay the cost of the Big Island not dealing.

- Adam: we may make small kits for homeowners with pre-mixed bottles of citric acid. This would work for the small sites and those that are close to pau. When we began ramping up in 2005, most of the populations were dense. With the exception of Maliko, the sites are eight acres or less. In 2006 the populations and size of infestation shrunk. We had one victory – a site that moved into the monitor stage. We monitor every 4-6 weeks for a year after last frog is heard. We have reliable reporters in most communities. In 2007, we saw all sites, except Maliko, drop to low density. Honopou is still large acreage, but low density. We did a huge amount of habitat work and we burned at this site. Originally, the site was 13 acres. The time spent on habitat work is well worth it. In 2007, we added two sites to the pau list and we added a new nursery infestation in Kihei. We found the new site via information from the Maui Prince – they purchased plants from the nursery in question. We did a big suppression at the new site and haven't heard anything since. Two more sites will achieve "done" status in June/July. We have three revolving sites that continue to get re-infested. To summarize – in 2005, we started with 161 infested acres. At the end of 2006, there were 138 acres (127 of these acres are in Maliko).
- We have had reports from Hana. We have gone out and the Hana crew has followed up. Pat: do you have eyes and ears in 'Ulupalakua? Adam: not really. We are around Maui and Maui County a lot and we are always listening and following up. At this point on Maui the prime distribution vector is people – making infestation of natural areas less likely. Fern: on the Big Island it is different – they are past that threshold.
- Adam: the Kihei nursery has no frogs. We are in a monitor phase. Teya: we were asked to testify at a land use planning hearing for that site. The landowner was to take care of controlling coqui to the satisfaction of MISC in order to get his special use permit approved.
- Last summer we began work on the rim of Maliko Gulch and in the residential center - we basically worked anywhere there are homes. We have made progress. There is a notable improvement in density although acreage may not have gone down. We have worked systematically in the area using our traditional efforts. This summer we will be ramping up more in the inaccessible wildland areas. The area is steep with heavy vegetation. Mindy: aerial operations at Manuka on the Big Island will be discontinued. There doesn't appear to have been any improvement after our last round of aerial operations. They are continuing to spread and the operation is very costly.
- Adam: we have developed a plan for the entire area by breaking it into zones based on density, terrain, and the presence/absence of homes. Zone 1 is low density and difficult terrain. We originally were considering use of a helicopter. For Zone 2, we are looking at an irrigation system that could be very systematic. We can install it during daylight hours and then run it at night. Zone 3 has some homes. We are looking at an irrigation system using fire hose. We are trying to think of creative solutions. We are making trails in the steep area and dividing it up into parcels. We are also making access trails along the cliffs. We want to defend the borders. We are continuing to follow-up in the residential area. There is only one recalcitrant landowner in the area. This is the only coqui recalcitrant on Maui. We are also interested in playing around with the physical barrier idea.
- Adam: there is a property owner that may be willing to allow us to use his property as a remote baseyard for our operation. We may be able to use his facility and water and we would have a place to store pumps, etc. It is an ideal location - right on the edge of the gulch. It will cut our transport time down. We may put in a semi-permanent, stationary sprayer and tank.

Veiled Chameleon

- Adam: we have recently developed a more strategic plan for the chameleon project. Our efforts have been efficient and effective. It is hard for the crew to remain motivated when we aren't finding any animals. We wanted a clearer strategy for the crew and the committee and to have measurable results. There are basically three stages in a project like this:
 - 1) Initial suppression – reduce known infestation and control as many as possible. This stage is pau.
 - 2) Active control - comprehensive surveys of likely areas and public relations.
 - 3) Monitor - continue to monitor the core and monitor hotspots.
- Analysis of historical data shows that our methods are reducing the population. The fact that we saw little movement during research observations and have had minimal finds during outlier surveys indicates that we are not simply displacing animals. Fern: the fact that they don't move very far implies also that it is easy to miss them. A good analysis to look at would be the number of people searching relative to the number of finds. During the early searches a lot of people helped. Do you have enough manpower?
- Adam: using a 200 yard buffer, we can encompass almost all of our finds. A 400 yard buffer covers almost all of our recoveries (with the 'Apana and Ka'anapali exceptions). Within the 200 yards, we identified units by looking at vegetation corridors, proximity, separation from the core, etc. We will systematically go through everything in the 200 yard buffer. For every search week we will spend two nights in a new unit and one night in the core. For the 400 yard zone, we want to do a PR blitz. We hope to make it through all in the units in a year and a half and then reassess. At the end of the cycle we will try to pick-up the "not at home" properties and recalcitrants. After we changed our strategy and started looking further out, we started finding more animals. Brooke: we are also continuing to test traps and we are making a lifelike replica.
- Fern: you need to do radio spot and a newspaper article. We usually get good response. Joy: we just did a column in the Maui News on chameleons. Elizabeth: instead of good reports this time we got a lot of wacky calls (potential collectors, etc). Fern: I am worried about Ka'anapali. We should search the coffee plantation again. Pat: it is good that the coffee plantation is in active production. They are weeding, etc.

Snakes

- Adam: there was one snake report from Kanaha Pond. The snake turned out to be a full grown red-eared slider. Fern: I met the guy that reported it. There were a lot of mullet in the area doing their courtship routine as well as the turtle. They saw two things at the same time. Kuhea: we really need to emphasize to people to call in right away. In this instance the report was several days old. Fern: for a typical snake here there is so much food that the snake is going to eat something and then likely not move for two weeks. Adam: we have snake and general vertebrate training scheduled in August. We will do one day of snake training with a night search and then one day of general vertebrate training. Kuhea: I am interested in attending and then I can share the information with others.

Other Vertebrates

- There was one dead rabbit recovered and two turtles recovered. We also followed up a flying lizard report from Kihei, but no animal was ever spotted.

NEXT MEETING: August 10th, 9am-3pm, Priority-Setting