

MEETING MINUTES PRIORITIZATION WORKSHOP

October 3, 2008

ATTENDANCE: Forest Starr, Kim Starr, Randy Bartlett, Patrick Chee, Fern Duvall, Pat Bily, Bob Hobdy, Dan Clark, Karl Buermeyer, Glenn Shishido, Lloyd Loope, Jeremy Gooding, Tricia Rodriguez, Bard Ogle, Adam Radford, Mike Ade, Brooke Mahnken, Teya Penniman, Elizabeth Anderson

- The meeting was called to order by Randy Bartlett (MPC/Chair) at 9:10am. Introductions were made around the table.
- Minutes from the August 8, 2008 meeting were approved. They will be posted on the website.

ANNOUNCEMENTS

- Karl: Dan Clark is new with the Fish and Wildlife Service out of Honolulu. He will be supervising the invasive species program in Hawaii. He was with the NPS Exotic Plant Management Team in the Caribbean before coming here.

BACKGROUND INFORMATION / PERSPECTIVES

Funding

- Patrick: the Legislature has appropriated the HISC funding for FY09 and the HISC has completed budgets. Any PO over \$10,000 must be approved by the Governor this year. She plans to review everything. We don't know how long the process will take. There are a number of projects that will need to be shut down if the process is not complete by December. Special and Federal funds may go through more quickly than general funds. Lloyd: does the \$10,000 apply to FY08 funds? Patrick: no, only FY09. FY08 funds are already approved and should not be an issue. FY09 funds will be scrutinized.

Staffing

- Elizabeth: Russell Suzuki retired from MISC at the end of August. He is the first PCSU employee to officially retire. Russ has been with MISC since close to the beginning and his knowledge (and laugh) will be missed. He will be staying on intermittent status to help us out now and then. Tricia Rodriguez and Brad Ogle both joined the Piiholo crew in late September. They were hired with the NPS Centennial Challenge funds. They both worked on the Maui Forest Bird Project last year and bring excellent skills to MISC. The MISC Executive Committee met recently to review budget shortfalls and discuss the impact on staffing. It was decided that we not fill any field worker vacancies that come open in the near future. It was also decided that MISC will not fill any additional field positions with the NPS funds, but rather stretch the funds to maintain current staff as long as possible. We will be filling the vacant Hoike position in the near future to meet our NPS contractual obligations.
- Adam: we had a management staff retreat last Sunday at Holua Cabin in the Crater. We addressed staffing issues, adapting to changing situations, efficiency, data management, doing the same or more with fewer resources, etc. It was a good opportunity for us to assess the program and tighten things up.

VERTEBRATES

Coqui Frog

- Adam: there are three primary areas that we spend time on in dealing with coqui 1) big sites, 2) rapid response and one-hit follow-ups, and 3) the coqui-free certification program. These three components make up the coqui program. Most calls and reports come directly to MISC. We receive between 2 - 40 reports per month. Some are at known sites and some turn out not to be coqui. Of the of 14 known population centers on Maui, seven are considered eradicated (it has been more than a year since any coqui have been heard). Six of the seven remaining active sites are low in numbers with fewer than 4 coqui vocalizing and several are revolving-door nurseries. Maliko Gulch is the only remaining large, uncontrolled site. With the exception of Maliko, we have had a clear reduction in infested acreage. The more we work in the Maliko area, the more we understand the problems there. The site covers 217 acres.

- Fern: how many nurseries have coqui currently? Adam: there is only one nursery that has frogs and they would like to be included in the coqui-free program. Castleton and the old Pua Nani o Kula nurseries are both coqui-free and included in the program. Fern: we really need to discuss the idea of Maui being more proactive regarding what comes in from the Big Island to address reinfestation. We need Maui-based controls. What ways could that be done? Adam: pretreatment with a hot water shower on the Big Island could work. Screening is really difficult. Pretreatment or certification would be the best way to go. We asked the participants in our program to try to buy from coqui-free providers.
- Adam: after the high water last winter the frogs have spread down Maliko gulch. The acreage increased because of that and because we know where they are now. Bob: I am a Maliko area resident and I have been hearing them again. Adam: we are treating them. We do have some recalcitrants in the Maliko area and we don't have a legal approach in place. In general, we have been very successful in the residential area of Maliko, but we have some pockets. Daytime spraying is not as effective as night spraying. We have one owner that will only allow us to spray in the daytime. Pat B.: is there a perception issue with the folks that don't want you to spray? Adam: there is a phytotoxicity issue. Some plants are more delicate. We can rinse the plants a half-hour after spraying – that is effective.
- Adam: in looking at our effort per site you can see that a lot of the sites required a ramp-up in effort and then showed a steady decline. This is what we want to see. Vegetation type, density and weather are big factors. Honopou is now coqui-free. It is a site where we initially wondered if eradication would be possible. The original acreage was 12-14 acres. We got a burn permit and cut and burned the understory in Honopou. That was the tipping point for that population. Fern: there are some sites where you can't do that sort of thing. Adam: habitat modification is the best bang for the buck before spraying
- Adam: the infestation in the gulch at Maliko is in pockets. It is not a continuous population. We are using the original Howard's site as our storage area and we have access to a County standpipe for water. Our goal is to get frogs off the roadways. We have not begun control in the high density areas yet. It is hard to get into – the area is long and spread out. We will begin work in there on foot starting next week. There is one area that is totally inaccessible with no way to get in on the ground. Our recent focus has been development of infrastructure and access roads. One of the landowners re-graded for us to allow access to a water source. We have put in three catchments and a network of trails. There are pockets of vegetation with water in the gulch - that is where the frogs are. The walls are dry and they don't seem to go up the walls. We work cooperatively with the area residents. We have put in gates per one owner's request after he opened up the property. We installed a ladder down into "Camp Maliko." We are still waiting on funds for some of the equipment we need. We will wrap up the smaller sites first and then shift our resources. For the lower portion of the gulch we are looking at having a helicopter drop in tanks and sprayers and leave them for a week. For the inaccessible area, we are looking at a large volume pump with a sprinkler. We can shoot citric acid 200 plus feet with the equipment we have now and the new equipment will cover even further. The pump is the biggest cost.
- Adam: we are aiming for brand recognition with our coqui-free program. We are basically providing an endorsement for businesses that are taking positive steps. The program is all based on positives - only coqui-free, not "has coqui." We contacted 114 related businesses. Of these, 70 proved to be relevant and 18 were not interested. To date we have 29 participants with 26 of these certified as coqui-free. The certified businesses get stickers, protocols, certificates, banners, letter of acceptance, etc. We have a PSA recorded and we will do a newspaper article. We will have a website launched soon. Dan: does the Big Island have a similar program? Adam: no. It would be great to have a statewide program and a network. Fern: a program like this would be very difficult on the Big Island. Adam: there is a research component to the program. We are doing pre- and post-consumer and business surveys. We stationed ourselves outside of walk-in businesses. We will do the same thing post-implementation and see what the impact will be.

Mitred Conures

- Adam: the project is on hold at the moment due to funding issues. We need to explore options for moving forward. We have recent reports of 11-12 birds at the Huelo Point location and an estimated 25 conures at a separate location to the west. We have tried playbacks, bait stations, rappelling for nests and eggs, and using blinds. There have been attempts to use bait birds, but the conures showed no indication of interest or response. The playbacks agitated them rather than bringing them in. Surveillance cameras resulted in a lot of pictures of pigeons and cats. Area residents do tell us what is going on. Miconia dispersal continues to be a big argument for control.

Veiled Chameleon

- Adam: I would like the Committee's input on how often we should search for chameleons and for how long we should continue when we aren't finding anything. This is a cryptic animal. We went through a re-evaluation period and went back to all the sites plus a buffer from all known locations. We didn't find much outside of where we were already looking. We expanded the extent of our search area to cover most of our outliers and we did find some animals. They seem to follow natural corridors and gulches and we have prioritized based on this fact. Veiled chameleons are not found anywhere except Makawao. Jeremy: you have a high level of confidence that you have defined your core. Adam: we have gone back to the original West Maui carcass site and found nothing. Most of the outlier individuals were turned in by the public rather than found by MISC. Most were large males. Within the 200-yard buffer area we did expanded searches and within 400 yards we did a PR blitz. After we completed that exercise, we decided we did have an expanded core. We do have some recalcitrant landowners within that core. A total of 206 animals have been recovered to date - 175 during searches and 31 (18%) turned in.
- Adam: we need to adapt our approach to maximize efficiency. We define how long to spend on a property based on the vegetation, etc. Most of our current searchers have never seen a veiled chameleon. Fern: you should prioritize properties based on people who have a good search image. You should differentiate high density with high canopy vs. low canopy. Adam: currently we are searching every six weeks. Brooke: the last chameleon found was on March 19, 2008 and prior to that there was a long lull. Fern: you would expect this time of year to be better than summer. Adam: what do you think of our schedule? We didn't get any response from the PR blitz. Residents want to know how long we are going to keep coming back if we are not finding anything. Fern: maybe we should do a flood search and then cut back. Get the experts (Domingo, Fred, Earl, etc.) to come back for a big push. Brooke: we are finding Jackson's chameleons so people are seeing lizards in trees. Fern: I think Jackson's are easier to see. They tend to be further out on branches and they have the white lateral stripe. Adam: I would propose a big push and then a slowed-down presence in the area. We can ramp back up later if needed. Fern: do the big push and then come back in six months. Maybe one search soon and then one in May. Randy: if we get a sighting or an animal turned in, then we ramp back up.

Other Vertebrates

- Adam: we make an effort to follow up on other vertebrate reports. Obviously lizards, rabbits, and snakes are appropriate. We would like input on other things like turtles and specific birds. Glenn: was the big cat a one time issue? Fern: no, it continues with the Bengal cat issue. Hybrid cats are illegal. Bengals are F1 crosses between a house cat and jungle cat. They are fertile. In one back-breeding you could have an almost pure jungle cat. There have been reports in Makena, on Waipoli Road, and on Haleakala Ranch. Jeremy: what is the probability of Bengals becoming naturalized? Fern: it is high. They swim and could get to offshore islets. There is a lady in Kihei breeding them. It is illegal, but it is not an HDOA priority to follow up. We shouldn't have MISC dealing with cats. It is a regulation problem. It would be really bad if they became established. This needs to go to CGAPS as an issue. Adam: what about turtles? Fern: red-eared sliders are established. Don't bother to pick them up. They are breeding and laying eggs. Tortoise reports are different. Adam: we will continue to follow up on uncommon turtles.

- Fern: as far as birds go, Thane Pratt wrote a paper on which birds would likely cause a problem. Cockatiels and parakeets have not been known to establish. MISC should follow-up on Cockatoo reports though. The macaws that are being allowed to fly free are an HDOA issue. Owned birds are an HDOA issue. Adam: what about lovebirds? Fern: that really goes back to MISC's "no new vertebrates" policy. If we can eliminate them, we should. As far as the saffron finches go, we probably get re-invaded from the Big Island all the time. You can buy them in pet stores. I believe they are still at the Kula fire station. I wouldn't bother to respond to saffron finch reports, but you should respond to any parrot-like bird. Lovebirds most likely wouldn't be ecologically damaging as they are dry seed eaters. Bulbuls and shamas are a high priority. We should be recording any unusual lizards. Adam: we don't respond to gold-dust day geckos.

TARGET PLANT SPECIES EVALUATION

- Teya: last year for our evaluation and review process we went through the New Zealand structure. The results didn't completely match our own internal MISC criteria. We went through a ranking process last year and we ended up keeping the same species. I don't think anything has changed. Pat B.: we wanted to validate our reasoning for certain species priorities. If there haven't been any challenges for the basis of our decisions, then why do we need a scoring process. Lloyd: there is a modern school of thought that you have to have a formal decision-making process. In December 1997 we made those hard decisions. We aren't necessarily working on all the worst weeds on Maui. The idea of coming up with a formal system to explain what we do is not really possible. We do need to be able to justify what we do. Teya: to refresh your memories, the criteria we looked at included significance of threat, effectiveness of control available, distribution, proximity to conservation land, etc. All of our targets came out to be quite weedy. Lloyd: we need to assess if there are other species we could be working on where we could do more good. Teya: we should use the same rigor for adding and for dropping species. Fern: are there species you think are being missed? I think MISC would be bad off if we are missing a future miconia just because that species doesn't have a champion. Lloyd: Forest, Kim, and I are the designated screamers. Teya: we will go through the current species and not make decisions as we go through them. We can look at the suite and at the end discuss if there are things we should delete or add. Randy: I think we will have an opportunity at the end to bring other candidates to the table.

Arundo

- Teya: we are not working on all areas now. Mike: we dropped the upcountry sites. Arundo is very hard to remove. The plants layer on top of each other and you end up with layers of dormant rhizomes. The Sprecklesville site has been moved around and at Hookipa it is growing on a rock. It is hard to get at it. We work on it when we are working on other species. Teya: we focus on high-value wetland areas only. Lloyd: it has been discussed as a bio-fuel species. Teya: we cut back our effort on arundo. We have more visits with less time this year. Lloyd: once you have arundo, it is very hard to get rid of. Surveillance seems reasonable. Forest: do we have a list of species that MISC suggests not growing? Teya: we haven't developed that. Lloyd: if it is a target, it is assumed. Pat C.: that would be something for outreach. There has been a "plant/don't plant" list discussion in the past, but it is difficult.

Ivy Gourd

- Teya: roughly 7% of our total plant time is spent on ivy gourd. It is taking less time than it used to. Mike: the number of fruiting plants on Maui is reduced and the seed bank is declining. It should go away eventually. Teya: ivy gourd is hard to count. We count plants as nodes. It is hard to get measures to show progress on ivy gourd. We often end up with an figure for area treated rather than number of plants. Forest: are you finding more locations? Mike: once in awhile. They are usually close to existing sites. We still need to do survey and monitoring. Teya: this is a species where we have spent considerable time on improving the efficiency of our treatment. We are much more efficient in terms of using our punch list. Most of our ivy gourd sites are residential. Brooke: we will be improving our field operations by going paperless for residential projects like ivy gourd and BBTV. It takes time to process, record and input data. The paperless system that we are heading for will cut out a lot of that time.

- Pat B.: what is the bottom-line? Are you keeping it contained? That would be a measure of success to me - you have surveyed a radius and it hasn't spread. Even if you are at it forever in the urban areas as long as it isn't spreading into the wildland, you are successful. Teya: to do a buffer would result in a huge amount of acreage to cover. Pat B.: you could cover a sample area. Forest: Art's crew should be trained on this one. Fern: is it found in conservation areas on Maui? Lloyd: no that is a reason we are doing it. Mike: surveys in other areas are ongoing. We only have one recalcitrant right now. He is in Kihei and uses it in his restaurant. Brooke: what about ivy gourd on the wet side? Should that be high priority? Kim: yes. Karl: does it have an elevational limit? Teya: it has a pretty broad range. Pat B.: we need to watch the urban wildland interface. Mike: the only site mauka of the highway in Kihei is at Maui Meadows. Lloyd: it is probably worth it to keep it out of natural areas. Teya: if we were to try to establish areas to do expanded survey, what would be a reasonable buffer? Fern: focus on proximity to conservation areas. Kim: don't let it get up above the highway in Kihei. Brooke: bird movement should determine the buffer. Teya: on Oahu they use an 800 meter buffer because they have bulbul. For white-eye it would probably be less than that. Maybe we should try 100-200 meters and then further if we find anything. Randy: make it a progressive thing.
- Mike: we are still spending time at the golf course. Fruiting has been limited. When it fruits under other plants it is very difficult. Randy: I think cattle egrets are spreading it. Mike: we cover Kapalua every 5-6 weeks. Randy: you should train my crew and let them do it in the future so you don't have to drive to Kapalua.

Pampas Grass

- Jeremy: we always look for pampas during our miconia flights. Teya: we are finding more and more pampas. Brooke: we have been focusing in Honomanu and we have ramped up our wildland ground efforts significantly. We are not yet seeing a decrease. We still have a number of recalcitrants in Kula. Mike: we open up new areas and we just keep finding more. We have had a few residential eradications. Lloyd: how much do we spend? Teya: calculating that is more complex than for other species. I need to work on that number. Lloyd: I think we are well justified in what we are spending on it. Randy: we should focus on the wildland areas that have a chance to bleed-out. Pat B.: do you think some of the increase is due to more intense surveys? Teya: yes, and we are getting on the ground in remote areas and seeing plants we wouldn't see from the air. Mike: there is definitely more there than we are seeing. Jeremy: the kill numbers are going up now that we are in on the ground. The aerial work is very weather dependent. There are only one or two plants known east of Koolau Gap. Pat B.: that is a measure of success to me. You are succeeding in containing the Honomanu population. Bob: the Honomanu area is inaccessible to pig hunters and as a result pigs have devastated the understory. East of the gap is not as devastated. Pigs opened up the Honomanu area. Teya: we are very appreciative of the NPS funding for heli support this year. Since they are paying for heliops, Jeremy and Steve had to spend a lot of time at MISC running our aerial operation. Mike: only two plants were found this year during the frontcountry sweeps on Haleakala.

Fountain Grass

- Teya: there are very few sites. Mike: the potential for fountain grass to come in as a contaminant in the hydro-mulch on the new Haleakala Highway is scary. Brooke: we have new populations at Makena and on Mokulele Highway. Plants from the Big Island were planted in Kihei. The people thought it was native. Lloyd: it would be nice to know how much we are spending on fountain grass. Fern: I think we can agree that it is really important to keep this one out even if we have to double our effort. Jeremy: what are the reentry intervals on sites we know have a seed bank? We know from the Big Island that it can be controlled if you re-enter every three months. Mike: we just miss them here. There is often a grass growing in a grass. If it is in flower, it is easy to see, but it is hard to see otherwise. Jeremy: we should mirror the Big Island re-entry schedule. They have been very successful. Brooke: on Lanai we go quarterly and we have always found mature plants on revisit. Jeremy: you will exhaust it eventually. Mike: we try to hit it once a month on Maui.

Other Species

- Teya: we need to do more in terms of training new staff on these species. We don't spend much time on these other targets - a couple of person weeks total each year. If Mike is in an area, he looks for them, but that is not really a clear approach. We could make a concerted effort to survey around known areas. I would like to be able to take some of these species off the list. Lloyd: maybe we should keep them on as a "keep your eyes peeled" list. Teya: Dave Duffy and Fred Kraus want to put out a paper on the success of the ISCs and some of these species would be prime things to mention. All except *Cryptostegia grandiflora* could be considered eradicated. Forest: we will get more of the *Melastoma* from the Big Island. Kim: As well as several of the others. *Rubus ellipticus* is not eradicated. Randy: you can eradicate things for the time being, but they will come back. Lloyd: *Cryptostegia grandiflora* was an original MISC target. There were 15 populations. We have controlled 12 and the other three are recalcitrants.
- Teya: *Pittosporum undulatum* is now a target. Mike: with both *Pittosporums* we have found more plants than originally known. It is a different job now. We just found more *Pittosporum viridiflorum* yesterday. Lloyd: they are noxious weeds and they invade rainforests. Both species play a really bad role in native ecosystems. Teya: if we follow our original decision making matrix, we need to know the extent of a population before we can make a firm decision. Chris Candito did quite a lot of survey work on *Pittosporum* so we are well on our way to knowing the extent. Mike: if we have a known population we can control it, but we might find more. Pat B.: we should revisit former control sites to see efficacy of control. Jeremy: I have an operational recommendation. We should pick one or two big gulches, get all the permissions needed, and then do a major deployment to control it. Go in with one big push and hit it. Treat it like a special project and then in the long-term you keep looking. Lloyd: we really need to get a write up on the eradicables. *P. Undulatum* is defensible. There are several people who feel really strongly about dealing with it. We need to protect watersheds. Mike: *Macaranga mappia* has been eradicated several times. *Maclura pomifera* is suckering. There is a seed bank for *Verbascum thapsus* and there is a new plant in Ulupalakua. Cat's claw is gone, but it comes back.

OVERALL PRIORITIES:

- Teya: we will cover miconia at our December meeting. Do we add or drop species? Forest: we should consider *Erica lusitanica*. Teya: it was mentioned last year as something to be on the lookout for. Forest: it is one of the worst invaders in Australia. It looks like pukiauwe. There is only one location on Maui that we know of. Pat B. I have seen it in bouquets. Someone may be cultivating it in Kula somewhere. Forest: Mike can just go get it now that we know where it is. **Decision** = Erica will be added as a target.
- Lloyd: what about *Arctotheca calendula*? Kim: I would want to map it first. Lloyd: it is in a botanical garden (~10 acres). It is a new state record. Forest: we need to map it further. If we start looking, we may find more. Lloyd: it has been a while since we have had a road-side survey. Fern: *Bassia hyssopifolia* could be a potential problem in wetland/saline environments. It is found in Kihei and Kanaha Lloyd: there is one *Adenantha pavonina* at the National Tropical Botanical Garden in Hana. The species is one of the top concerns in Samoa. Bob: there are old trees with regeneration in Lower Nahiku. You may want to get more information. Lloyd: stopping the next miconia has always been our goal. Fern: I really think we should take out the one bully tree to protect Auwahi. It is bird dispersed. Randy: check with the landowner and see if he is willing. Lloyd: it is a large tree and may be costly to have taken out. Pat B.: we need to make sure we do thorough research before we decide to take things on. Kim: we should consider *Leucaena diversifolia*. It is an upland species and was planted at the strawberry farm. It is already producing seeds and it will invade the cloud forest. Teya: do some more survey work and map around the area. Teya: is there anything we should drop?
- Brooke: our crew often gets asked why we don't control African tulip tree. Can the Committee offer some sound bytes we can use with the public? It is too widespread. We don't think it invades high elevation rain forests. Control is very difficult – it doesn't respond well to chemical control. It is cost prohibitive until there are better control methods. It is a potential biocontrol target for the future.

NEXT MEETING: Friday, December 5, 2008 from 9am to noon, Miconia