O‘AHU INVASIVE SPECIES COMMITTEE

General Meeting

Wednesday, February 1, 2006
9:00 AM - 12:00 PM

Lyon Arboretum
3860 Manoa Road
Honolulu HI 96822

MEETING AGENDA

I. Welcome and sign in

II. Announcements

III. Partner agency updates

IV. OISC summary: accomplishments/roadblocks

V. Addressing Invasive Species Statewide

VI. Invasive species project presentation
Kimberly Burnett, UH Economics: Economics of Invasive Species

VIII. Final comments, wrap-up

MINUTES

I. Call to order, welcome, and introductions

Ryan Smith, OISC Coordinator, called the meeting to order and went briefly over the agenda. Attendees gave their names and affiliations.

II. Announcements

A. New OISC staff , Ryan Smith

Brian Caleda is on full-time as Vertebrate Supervisor. Brian will be supervising 3–4 temp hires on spraying at Wahiawa and probably some work with nurseries as well.

Rachel Neville is on board as Outreach Specialist. Our new Americorps intern, Nani Nikcevich, started mid-January. Last year's intern, Alex Lau, is on full-time now as a regular hire.

The field crew structure will be slightly different: Josh's title will be Field Operations Coordinator; this position does overall logistics and field crew management, with about 2 days in the office per week. Another crew member will be Field Supervisor, with more than 90% of time spent in the field.

Mahina left for a position with DOFAW, and Pat Porter will also be moving to DOFAW. We will be replacing them.

We just hired Jean Fujikawa to replace Meghan. Jean is coming from FWS in Maine, she's originally from Hawaii. She'll start at the end of February.

B. Additional announcements

i. CGAPS. Priscilla Billig introduced herself. Her position, formerly with CGAPS, is now with HISC. She is available to help OISC out with media relations, PSAs and so forth.

Priscilla: To clarify, there was a slight shift in CGAPS over the holidays. I'm working more directly with Mark Defly. I'm still available to help Rachel with the coqui campaign, outreach materials and events, media relations.

Christy: Priscilla is really good at layout.

Priscilla: We've been talking about doing some radio info materials, coqui sounds. Whenever you guys are ready we'll do PSAs and try to get stations to pick them up. Maybe TV. We had Christy on last year, maybe someone from OISC would want to go on TV. Now we have some film, from the community projects, Cal Hirai's film. The community doesn't know about you guys being out there.

ii. February volunteer trip. Saturday, Feb. 11 there will be a Miconia volunteer trip in Waimanalo. Work trip info is available on the web site.

III. PARTNER AGENCY UPDATES

A. HDOA, Derek Arakaki and Becky Azama

Becky reported that they would be going to Castle Junction. Thirty-one fireweed plants were found on the hill and they are hand pulling.

HDOA is also working on long-term kiawe control. Different pockets have been found, in the Kapalama area, the pier area, Sand Island, Ewa, to Waianae. They are spraying to keep it from seeding and are working with Parks. The Sand Island area is hard, it's a big population. They haven't touched the Keehi population, it's out on the islands.

Mahina was working on fountain grass and false kava in Waihole leased land and in a ravine at Kahalu'u. No wild populations have been found; people are purposely planting *auritum*. False kava has been treated a couple of times to control and get keikis.

Tetrastigma—BWS is following up so Derek can get paperwork to move forward on the Likelike population.

Ryan said OISC hasn't looked into what it would take to do control in Koko Head. *T. pubinerve* was found off Likelike. This was the only population known until the Koko Crater one was found. A similar size population, ¼ acre combined. OISC will work with HDOA to test Likelike to see how hard it is to control, and also will work on Koko Head.

Action: Ryan will follow up with HDOA and Koko Crater on Tetrastigma.

B. Army Environmental, Joby Rohner.

Targets: *Senecio* will be checked every 6 weeks, less often than before. There were just 2 plants last time. Maybe OISC can go between Army visits, they'll negotiate access. Ryan said every 2–4 weeks is good.

Buddleja, it's time to go out and check the [East range?] sites again.

Josh said OISC has received access permission from Dole properties in Wahiawa and are changing frequency to 1x/year as control is good.

Joby said that Kahuku fountain grass is good; they got a couple of plants last time and are checking twice a year.

Nontargets: In Kahuku there's *Melochia* which is practically under control. There are only a couple of plants and it is the only site known on Oahu.

Army Environmental found *Rhodomyrtus* in the East Range. We've been attacking it hard, but there's a lot of it. They went again a couple weeks ago and found even more. It's sort of bounded, below the coqui area; interior, flat ridges between gulches. There's also a *Smilax* in there, a nasty spiny ground cover, no ID from Bishop yet.

Tibouchina, they're doing yearly now. They're finding small plants that are vegetative resprouts, but it's weird because they killed the matures 6 years ago. It's at an old botanical garden site at Whitmore. Manuka is also there.

Ryan said OISC is working on more BudMad [*Buddleja madagascariensis*] in the East Range. Only the population on the right fork is on Army property. The Mililani Mauka area, it's probably on Army land, we want to send someone up the stream.

Action: Ryan or Josh will follow up with Joby on Senecio monitoring and access.

Action: Josh will schedule crew for BudMad followup.

C. Department of Transportation, Chris Dacus.

Chris says he has been at DOT 2 years. Now they have two sets of construction specs. The contractor is now responsible for any noxious item. They now have 5–6 species on a list that contractors will be responsible for. This is being implemented for all future projects.

They are researching a grass mix for less than 40 inches of rainfall, a hydroseeding grass mix and a hybrid native shrub/tree mix. Rick Barbosa and Matt Sherman are doing this. DOT will be putting in a lot of this native mix.

Christy is getting funding for a poster, DOT is doing a folding brochure identifying 5 priority ISC and 5 priority DOT species to hand out to contractors. The 10-acre parcel for testing is near Halawa interchange on the Diamond Head side. On the Ewa side is a big grassy slope with 1 or 2 trees, that's the site. There's a PR component there to educate the public. Other states have had projects fail without good PR.

Mindy asked bout tracking companies responsible for weedy mix in the past.

Derek said that on fireweed, the seed source is the problem. They talked with the distributor, they're aware of the problem, but DOA has not gotten any more info about where else it was planted. They are notified of all shipments, but there's no guarantee they'll find anything, the seeds are so much like *Senecio*. It is from Australia, but is not a prohibited item. The contractors say they don't want to use carpetgrass anymore. Private contractors like the grass but are aware of the problem and don't want to be responsible, they are willing to try another variety of seed. But neighbor islands, when we hear where the seed went maybe we can make sure the sites are looked at. We have noxious weed people looking on other islands, Craig and Bob. The Big Island and Maui, they're big there, out of control, not monitored as well as Kauai and Oahu. Fireweed was found in a parking lot in Hilo. It looked like soil was brought from another site. The small population was taken care of.

Mindy said seeds from native grass mix propagated on neighbor islands may have fireweed.

Chris said the seed bank is problematic and they have to find new facilities, maybe Bob Joy on Molokai can help.

D. Board of Water Supply, Amy Tsuyenoshi

Amy said there's nothing really new, they're working on finishing up funding for milestone 3.

Ryan stated that OISC put in a proposal for continued miconia funding.

Amy said they just started a grant program, but our rules say recipients have to be 501c3. She's trying to clear it up.

IV. OISC summary.

A. Field Work Summary

i. Coqui

Brian introduced himself and said he started with OISC as a temp last May. We were the first dedicated group to hit the East Range, spraying 3–4 times per week in Wahiawa. OISC wants to collect all the data about coqui on Oahu. He explained that we work with Army and other ISCs, gather info. We are developing a control protocol to systematically drench and control in the East Range. Also single calls, we'll develop a tracking system for all calls to the pest hotline. We'll be able to track all calls, respond if necessary, do site visits, and we're also working with nurseries.

HDOA and DOFAW have taken the lead on nurseries but OISC wants to be involved in data gathering.

Systematic drenching: Lime was approved just last May. We're in the process of choosing citric or lime, working with Scott Williamson on the efficacy of lime over citric. Lime is more cost effective. Fifty pounds of citric is $50, vs. $14. We're looking at a 3% concentration of lime vs. 16% citric. We'll decide on that by mid-February; also whether to buy a new sprayer. One problem last year was having only a 100-gallon tank. We need a bigger, more powerful sprayer for drenching.

Josh asked if there is an entry limitation for lime.

Brian stated that according to the label, if using the dust form of lime, there is a 48-hour REI [restricted entry interval], unless you're using full PPE [personel protective equipment]. We'll use suspension, I'm not sure if there's a limitation.

Ryan said we were doing night foliar; now we can spray in leaf litter in the daytime. At Wahiawa, the thought was we'd drench 3–4 times with whatever chemical is decided on. That's the plan with the Working Group. We'll be on track for eradicating from Oahu.

Brian said they heard 1–2 calls at the end of last season. The original estimate was 100–150 frogs. We've been following up with DOFAW. Army and OISC have been going every 2 weeks. We've heard nothing for 2–3 months, but it is the quiet season.

Ryan said we'll probably drench it all once, then focus on any calls, then decide on more systematic drenches.

ii. Miconia

Ryan said that Miconia is our top priority along with coqui. He went over OISC's buffer system and aerial vs. ground survey.

We've found 9 mature trees, 5 of them in Waimanalo. We think we've found the source nursery for the mystery Waimanalo plants. There were 2 sites on Oahu beyond 800 m; we think we've found that one in Waimanalo. There were 2 immature plants off Maunawili Ditch Trail. We have done many more surveys and had no more findings. We will treat them like mature trees. The other matures were found in Kaalae, 3 plants, and Manoa or Nuuanu.

Haiku is a new miconia site as of last year. A pig trapper found it, across a stream from a nursery. The were cut at one point. Several keikis were found. We've been systematically surveying there.

Ryan said the next stage is beyond the buffers. We'll be having a series of meetings to strategize areas beyond the known populations. The high priority is to

check old abandoned nurseries and also wildland areas that seem like suitable habitat. That's another huge thing Rachel is helping with: private TMKs within buffers. We've tried to create a similar buffer system for all species.

iii. Blackberry and butterfly bush.

Ryan said we have treated all known sites and finished the surrounding surveys, based on our buffer strategy. We need to do a little more with *Buddleja*. Soon we will be on annual visits with continual retreatment. Especially blackberry, it's very tenacious.

iv. Fountain grass and beardgrass.

Ryan said these use a lot of our time because of quick maturation. We want to eradicate fountain grass from the Waianaes and remove it from high-traffic areas in the Koolaus, and remove the satellite populations.

v. Beardgrass: This is off H3 in Halawa, we're working with DOT some on that, they're letting us to do "no weedwhack" signs so we can see it to control it. We will follow up with the contractors doing weed whacking to check on spread potential.

Josh said it was worse in the past; the seed bank is almost exhausted.

Ryan said we're working with Chris to see if we can cover it with weed tarp and maybe test new plantings.

Christy siad they're trying to include this in the Halawa hydroseeding project with Matt. They also want to do koa planting. There may be federal funding to pay OISC for that work. They are in the initial stages of that conversation.

Ryan mentioned that OISC is trying to close the gaps with fireweed.

B. Outreach, Rachel Neville.

Rachel talked about her work getting access to private lands, also publications, an OISC brochure and the 2006 strategy plan, which is mostly a product of the species prioritization workshop. We hope to have that ready within a couple days. We'll put it on the internet and send a pdf out to everyone, asking for your comments. She's also been doing booths and events. She was invited to the Manoa tree sale in February. She invited everyone to let her know if they are having any events they'd like an OISC presence at. The species cards project is ongoing; cards include snakes, RIFA, banana poka. Christine did a list of rapid-response species. There would be two sets of cards, those species that are here and those we fear coming in.

Ryan said this is the tool we're using to meet with different agencies with eyes out in the field, from USGS to hunting groups. We'll do presentations to all these groups. We have wanted to do this for a while, hopefully we'll be starting this spring.

V. Addressing Invasive Species Statewide

A. Early detection update: Ryan Smith

Ryan said we just got funding for a grant with Bishop Museum for early detection. We got 80% of what we thought it would take; we're looking to fill the other 20%. We're starting to strategize with Bishop. It's year one of a multiyear project to develop capacity for early detection on Oahu. We will sart with pragmatic ground surveys, look at hotspots, where plants may be, nurseries, old CTAHR sites, botanical gardens, even the swap meet, where we've heard of Tibouchina being sold. We'll have two people on the ground and work on a model for continued detection: analyze sources, decide how often to resurvey sites and roadsides, make a comprehensive detection model. We'll build our capacity to detect and perform rapid response. The idea is to move away from legacy species and respond to new things as they come in. Especially in light of where we are with our target species; there is an end in sight. Instead of taking on a new miconia, have our organization move more toward rapid response. Hopefully this will get that ball rolling: Bishop Museum, Clyde Imada and OISC.

We're also looking for NFWF funding for miconia aerials, and tapping into C&C funding.

B. The Pest Hotline

Rachel asked everyone to look at a list of species and indicate if they are the one to call for any of those species. OISC will check out calls if agencies call us. There's also a marker for a backup agency.

Mindy asked if the list would go to airport staff, or is there something set up for odd calls that should be forwarded to OISC?

Ryan said that's what we're trying to determine; we want to know who needs to know about every certain plant that we find.

C. Coqui legislation

Ryan said that HDOA Plant Quarantine is in the process of implementing regulatory changes. There are increasing powers with certifying nurseries. If a nursery is certified, it's deemed coqui free and can ship interisland without treating plants. If it's not coqui free/certified, it has to do mandatory treatment before shipping interisland. They're also developing hot-water treatment containers. There's one in Hilo and one on Oahu. He has no idea of the volume of plants being transported now or whether these two containers are sufficient to treat anything not certified coqui free. More muscle is needed behind the certification process. The timeline for this is pending, maybe within the year.

Brian said Leilani Nursery had a demonstration of a hot water chamber, a 30-foot Matson-type container. It's 114–115 degree water, a 4–5 minute treatment. The water circulates through the container, and UV light treats the water [sterilizes so it can be re-circulated]. They plan to implement that on plants moving interisland.

Mindy said this is funded 50% by NRCS 50%, HISC.

Becky said the two chambers will be implemented but not all plants will be treated with that system. Treatment could also be chemical.

D. New species, Ryan Smith.

Ryan said that in the annual survey off H3 for beardgrass, we found new *Rubus* and *Tibouchina*. It might be *Rubus ellipticus*. We took it to Bishop. The *Tibouchina* may be *herbacea,* which has not been found in Hawaii yet. *Rubus ellipticus* is not known on Oahu. What's there now is minimal. We're following up.

Action item: Ryan will follow up with Bishop museum on Tibouchina ID.

E. HISC update, legislature, Mindy Wilkinson.

Mindy explained that she and Mark Fox with TNC and I track funding bills and other invasives bills.

Highlights: The Big Island delegation spent last year having 2 meetings per district, with community groups, working on a priority list. There are nine bills related to coqui. There is some duplication, companion bills for the House and Senate. There's $2 million for coqui on the Big Island, stopping transport, requiring that control groups only work within 1 mile of residential areas. Funding may be by conveyance tax. There are also fees for HDOA from landing fees or interdiction. If they scale funding to the amount of cargo, it makes sense. It could be expanded to declared produce and open containers with high-risk non-agricultural containers that might have fire ants, etc. The conveyance tax change is a big one, like the Kokua Bill last year. This would redistribute that to go not just to community housing and NARS but set aside 10% for invasive species. Some was going from NARS to the ISCs before anyway; NARS could only take out 3.3 million per year. This way we'd be separate so it wouldn't impact NARS. We'll be sending hearing notices to the ALLISCS ANNOUNCE list starting this week.

HISC got $4 million again this year, in the DLNR base budget. That's safe unless it's redirected to coqui. Project distribution is still about ___% prevention, for fire ants, for DOA (pest hotline etc.), how to export. Also finalizing their risk assessments at ports, like FAA inspection facilities and risk assessments. Honolulu gets 10 times more than Kahului. Forty percent is response and control, focusing on early detection. Even the ISCs haven't been doing this. Also the aquatic team. Research and Technology and Outreach projects get the rest. All this money goes to grant programs. Hot water treatment, Bishop early detection, about 28 other research grants. Ag concerns, like attractant for stinging nettle caterpillar, to see if it's here on Oahu. I'm trying to get money to not just fund a variety of projects but also figure out how to incorporate the best ones back into agencies so they continue. We need to push on this. Also communicating results of all the pieces and making it have an impact on what we do, give options to landowners. Right now, communication is me attending meetings, working group meetings, trying to get other agencies in, getting reports from outreach and grant projects up on our website, trying to do all these things and tie it all together.

F. CGAPS update, Christy Martin.

Christy talked about TV spots for invasives, through grants and partnership work CGAPS developed five messages that will run through April on OC 16, CNN, Oceanic stations. One week on and one week off. We'll run some or all of them again.

VI. Economics of Invasive Species, Kim Burnett

Christy introduced Kim as a grad student at UH Department of Economics, working on a

couple of projects related to invasives. They're looking at miconia and coqui, translating science into policy. She'll talk about how the data we collect is transferred into models that hopefully lead to better policymaking.

A. Miconia

Kim explained that for miconia, the question she's asking is how much damage it is expected to cause. She explained that it's problematic with miconia because they are always working with nonmarket values. Changing hydrology, forest structure for native birds, etc. are not easily observable values: an endangered bird, a million-gallon per day recharge loss, etc. It takes creative measurement on our part to assign values.

Coquis though do damage things like market values—property values perhaps. Houses have prices. There's a unique opportunity to look at this. We're only looking at damage. We can't say "If you spend this much more it will get this much better." Now we can only say whether frogs are having an impact on property values, we can't say what optimal spending on frog control is.

She hopes to get data from the ISCs that will impact their models, which are only as good as the data that goes in.

They also want to look at the future, so when we solve for the optimal population, we solve for where we should stay, given costs and growth. Do we need to spend more money today and contain at that level, based on a growth function to get some number like cutting 200 trees/year? Zero is unlikely to ever be the number unless costs are very low, because we'd need to keep it there (say at 0) for the next 200 years.

So what are the policies? Status quo would be spending the same as this year, forever. What is the value of each policy at present?

For Oahu, a reduction and maintenance policy is cheapest, we're nearly there now. We also need a best policy for the other islands. If we had better data, we'd have better models. If we spend a dollar, what happens? Better data leads to better policy and less damage.

B. Coqui

Kim said that this is a unique opportunity to use market data/prices to see how much frogs are impacting these things using hedonic price theory. The price of a house is determined by several things, including environmental factors.

The question is, do the frogs matter? She used multiple regression analysis to identify the magnitude of the positive or negative impact on each pricing characteristic.

All the data she presented was from the Big Island. There were 50,033 transactions 1995–2005. There were 9 main districts I looked at. I used frog complaints registered to NWRC Hilo 1997–2001, and used GIS to see which transactions occurred after a complaint within 500 and 800 m of a particular parcel.

She used only Hawaii buyers to control for information effects, since local buyers know more about the market. They're willing to pay less. [Handout: "Percentage of transactions with frog complaints prior to sale."]

The presence of coqui cuts the price by $135,957, within 500 m. At 800 m, it's not statistically significant, at minus $6,816.

In future they would like better data about all the variables, growth and costs. The ISCs are getting better data now. We also need more coqui year data, maybe some Maui data. There are other damages; what is the impact on horticulture? Are there reduced revenues if people don't want to buy? If the legislation for certification goes through, there's a cost to that. The frogs are also prey for the brown tree snake.

VII. Final comments

Diane had come in late; she introduced Christine Volinsky who is here as a contractor for a year. She's a wildlife specialist. She monitored the stilt at Chevron, she lives on base. She's doing a lot of wildlife monitoring for the Marine Corps. She was on the fountain grass search. Thanks to OISC for your work helping with Bellows. Let me know if you want a letter to your boss, we couldn't do it without you.

The next general meeting is scheduled for Monday, July 24.

The next strategy workshop is scheduled for Thursday, September 14.

The meeting was adjourned.

Attendees

Shahin Ansari, UH Botany
Derek Arakaki, HDOA
Becky Azama, HDOA
Priscilla Billig, CGAPS/HISC
Kimberly Burnett, UH Economics
Brian Caleda, OISC
Chris Dacus, HDOT
Diane Drigot, MCBH Environmental Dept.
Joshua Fisher, OISC
Rob Hauff, DOFAW
Mary Ikagawa, OISC
Alex Lau, OISC
Christy Martin, CGAPS
Katy Metzler, OISC
Christine Meyers, OISC
Rachel Neville, OISC
Nani Nikcevich, OISC
Patrick Porter, OISC
Joby Rohner, Army Environmental
Ryan Smith, Coordinator, OISC
Amy Tsuneyoshi, HBWS
Christine Volinski, MCBH Environmental
Mindy Wilkinson, DOFAW

Abbreviations

CGAPS, Coordinating Group on Alien Pest Species
DOFAW, Division of Forestry & Wildlife
HBWS, Honolulu Board of Water Supply
HDOA, Hawai‘i Dept. of Agriculture
HDOT, Hawai‘i Dept. of Transportation
HISC, Hawai‘i Invasive Species Council
MCBH, Marine Corps Base Hawai‘i
OISC, O‘ahu Invasive Species Committee
UH, University of Hawai‘i