

Meeting of the  
O‘ahu Invasive Species Committee  
December 9, 2010  
at  
Ho‘omaluhia Botanical Garden  
45-680 Luluku Road  
Kaneohe HI 96744

I. Welcome and introductions

II. Partner updates

- A. DOFAW, Rob Hauff. Rob is hiring an early detection forester. They are optimistic to hire by January 1. The new hire will probably be working out of the Department of Agriculture (DOA) on the Big Island. They are also working on a travel budget so the person can survey on O‘ahu. Kaulunani (contact Teresa Truman-Madriaga) has a remote-sensing urban forestry canopy assessment going on O‘ahu as well, so they might be able to target high-risk areas here.

Rachel: Will they still need a vehicle?

Yes, maybe we can team up with OISC to save on the budget, get them a vehicle and work with OED. New developments might be a good place to target, they bring in plants, not always from O‘ahu.

Rachel: Maybe Jonathan can work with them too, on little fire ant.

The acting chairperson now is William Aila, he’ll be going before the legislature to be officially appointed in January. He has been with DOBOR. Sandra Okimoto is acting at DOA through this month.

The strawberry guava environmental assessment will be signed off by DOA, they are ready to do releases once it has been signed. It has not been decided where the first releases will be.

Rachel: Is there a monitoring plan for after the release?

Rob: Yes, Tracy will be working with DOA, he is the entomologist with the Forest Service. They will be controlled releases and he will be researching how the biocontrol interacts with chemical and mechanical control to see what is the best way to do control in natural areas. We are looking at specific impacts and how we can better manage strawberry guava throughout the state using this as one of the tools.

Rob: National Pollutant Discharge, under the Clean Water Act, is a new permitting system that will be managed under the Department of Health. There is a lot of ambiguity in the ruling, so we are still working out what pesticides will fall under it. Mostly it applies to pesticide applications to open water. Spray drip and storm water runoff do not fall under this. The rules come into effect April 9. Citric acid might be affected, it is a pesticide under this, where it isn’t under FIFRA. For example if there is a new population

needing treatment in a gulch where there is running water. We'll be working on that issue. The permits aren't cheap. We have also talked about rapid response, for things like ants. It sounds like we can work that into the permit, where if we need to go out immediately and treat something we can. You are allowed 30 days after the treatment to do the notice of intent. What constitutes an emergency is not yet decided, we do not know if that has to come from the governor or what.

- B. PCSU, Cliff Morden. Today is the last day of the semester so things will be clearing up for Dave and I. The RCUH staff will be furloughed after finals, so any proposals that need to go to ORS or something like that will not get processed for two weeks after the 17<sup>th</sup>.
- C. Marine Corps Base Hawaii, Todd Russell. We have been working with ants and shearwaters quite a lot. Yellow crazy ants. We are working with Sheldon Plenovich. As soon as the crazy ants stop, the birds start. There are people in there walking their dogs, it's right on the Kailua Bay side.
- Rachel: Do you know anything about the *Senecio madagascariensis*?
- Todd: Bellows was closed for a while and we did a wildlife and plant survey and a couple fireweed plants were found and pulled up. We will look for more when we do our annual fountain grass survey January 6.
- Rachel: OISC will be helping with the fountain grass survey. Diane thought maybe campers brought it in on a vehicle. There's no hydromulch there.
- Diane Drigot, MCBH (came in late). We always want to thank you for helping keep the fountain grass out of Bellows. The new fireweed could have come in on a camper's tent. The base really appreciates OISC's work. We have shown a steady drop in fountain grass points. The botanist did find some on the other side of the fence. We are developing a fire management plan and are very concerned about keeping the fire down. Guinea grass was controlled when there was a cattle grazing lease on that area. We may look at getting cattle on there again. We inherited a weed patch. Your efforts to keep additional flammable grasses out of Bellows is much appreciated.
- D. DOFAW O'ahu Branch, Dave Smith. We're just trying to get that baseyard stuff done and transitioning when you guys move over.
- E. Honolulu Botanical Garden, Naomi Hoffman. I am still mapping and doing inventory. I am going to use Alex and Danielle to help identify some unknown plants. There are a lot of palms, which aren't too worrisome.
- Rachel: They do want to work more closely with the botanical gardens.
- F. Army Natural Resources, Jane Beachy: We are working on the same suite of species. *Acacia mangium*, *Senecio madagascariensis*. We were able to get into the south range, a known *Senecio* site, where training has been so heavy. We did a survey and didn't find anything. *Tibouchina urvilleana* is on our schedule to check annually. We haven't been there in recent months.

Rachel: Would that be easy for us to get access to?

Jane: Recently it has been hard to get to. Maybe it will get more priority as a joint visit.

*Melochia umbellata*. This is wind dispersed. We have been trying to control this Kahuku population for years, right along Drum Road. We did not find any more there but did find it at a stream crossing elsewhere in Kahuku, I don't think it moved on a contractor vehicle, maybe a range maintenance vehicle.

*Cordia alliodora* at Waimea Botanical Garden, David Orr showed me a huge stump of the original tree. It is naturalizing on one side of the gulch, it would be a great place to do a treatment trial. We have been working a lot with James Leary, he's interested in a *Cordia* trial too, incision point application. Cut with a hatchet or machete and apply a ml of straight undiluted herbicide to see if this is effective. Maybe sometime in January or February we can do that trial and look at doing it in Makaha, which is the area where we are really worried about it.

The other project I have been working on with James is the herbicide ballistic technology (HBT). We have had some very positive results with strawberry guava using 16% Garlon IV projectiles shot on relatively small strawberry guava. That might help us do some work without creating trails in. We just did an aerial trial on Australian tree fern and ginger right below Ka'ala in high-priority native habitat, to see how effective it can be while minimizing nontarget impacts. It might have good applicability, especially on cliffs. A 3 m plant might take 12 paintballs. It's not the cheapest way but for really remote areas and cliffs it could be really good, maybe used in conjunction with the spray ball.

Manuka is also a trial species, it's really problematic.

- G. NARS, David Anderson. We are waiting for the helicopter contract to go through so we can start going up to Poamoho. We have been doing a lot of koa haole removal at the sand dune/naupaka area at Ka'ena, it will be years before the seed bank is gone though.

Dave Smith: it looks great. Seed bank longevity is unknown. It has been at least 3 years since I've been working out there.

- H. Patti Clifford, Weed Risk Assessment for HISC. I have been here for 2 years. Do you all know Chuck on Maui, he's very involved in the biofuels. He is working with a group from Switzerland, trying to create some standards for biofuels. We were pulled in as experts in conservation. They are not focused on invasives but conservation and sustainability. We've been trying to educate them. They're looking for people's comments on what we from Hawai'i think about their sustainability plan. Biofuels will be here in the near future, they want to look at how it can be profitable for farmers. The group is called the Roundtable on Sustainable Biofuels. One of the big issues that came up is food security. Danielle had pointed out *Solanum [mauritianum?]*, a major environmental weed in New Zealand, and a forest weed in South Africa. It is competitive with guinea grass. It got a 24 on the WRA, because it is very weedy and there is a lot of information on it. It was found at the top of Kipapa Trail. It is moving from abandoned ag lands to natural areas. It is a contaminant, not a biofuel species. Mark Fox is on a different organization, he brought Chuck and I into this group.

Moving species doesn't seem to be an understood issue with them. There's been so much talk about biofuels being weedy, that might be overdone.

DBED has sponsored a lot of the forums. Who is the lead organization locally for this?

### III. OISC Plan for 2011

Rachel Neville. In previous years I produced a spreadsheet showing what percentage of time we would be spending on each species. We haven't gotten rave reviews on that, so this time I'm going to show you basically maps and the broad strategy.

A. *Andropogon glomeratus* var. *pumila*. Goal: eradicate from Halawa Valley. In 2008 we found a significant range extension so now we're only concentrating on H3. We feel like it is a containment issue, there is nice native forest at the summit that should be protected.

We will continue monthly visits to known infestation spots. Check terraces during monthly visits if there's time. Once a year do a comprehensive survey to look for outliers. The number of matures has dropped steadily since 2003. In 2010 through November we found only 38 mature plants. Hopefully the trend will continue.

B Smoke bush, *Buddleja madagascariensis*. We have not seen it for a while. We killed three in different points on the island in 2003, 2004, and 2005. If we don't see any more we would like to put it in the official eradicated file. The reason we don't have anything officially on the eradicated list is because of seed bank issues. There is a reference showing the seed bank of \_\_\_\_\_ is about 2.5–3.5 years. It is on the noxious weed list for HDOA.

Jane: We could probably do a seed trial, if we can get seeds. It's on our list too. We can do a storage or a bury trial. Maybe Katy Cassell has done something, or could run it, there on Kauai.

C. Pampas grass. The map shows quite a lot of removal sites across O'ahu, mostly ornamental plantings. *Cortaderia selloana* is preferred as an ornamental, and the females are also preferred. People thought if there were only female plants here we wouldn't have to worry about it. There are two points here, on the cliffs above Haiku. This was pampas grass found during a miconia aerial survey, so we have another naturalized record. There are still about 15 left at Ko Olina Golf Course. We have a grant to replace them with native plants. The golf course director still has not given permission for the last ones to be removed. There is still a nursery in Waimanalo selling it, Sharon's Nursery, Robyn. O'ahu Nursery Growers Association said they wouldn't sell pampas grass anymore. Seedlings were found at Royal Kunia.

They are going to do more aerial surveys at Haiku. If it hadn't been flowering it would have been really hard to tell it apart from *Carex* and other monocots in the area. We flew over that area last week and those plumes are gone.

You may not be able to apply preemergent from a spray ball, there are rules against what you can use in a spray ball.

We will continue to work on Ko Olina. That one we found along Kipapa Trail, we did delimiting surveys there. KMWP is working at the summit, I'll give them pictures and

ask them to look out for it. We suspect it came from Royal Kunia, we don't see any other spread.

- D. *Miconia*. *Ground strategy*. The first priority is to finish the 2010 rollover that we have access permission for, that's about 150 acres. The second priority is to survey 450 m around mature trees that is up for 2011. Third, survey the rest of the 800 m ground buffer, the total up for resurvey is about 2,000 acres. The aim is for 2–3 days per week on miconia, or 50% of available field hours.

*Aerial strategy*. We will cover the “too steep to walk” resurvey rollover from last year, about 97 acres. Second, complete the too-steep acres up for 2011, about 227 acres. Third, initial acres in the aerial buffer, about 3,457 acres. We'll do this as funds are available and weather allows. We have had some trouble getting OAS-certified pilot availability. The weather hasn't cooperated either. For next year maybe we can get more flights, since we have this new OAS-certified company that also flies on Kauai.

Volunteers: We still have the elite volunteers who were controlling miconia before OISC even existed. We'll keep doing those trips once a month. Also we will ask people who enjoy regular volunteer trips if they want to joint the elite trips. We have two volunteer days a year for miconia.

- E. *Pennisetum setaceum*. The goal for this species is eradication outside established populations. We will remove sites from the quarterly visit list if the plant has not been seen there in 2 years or more. Susie: Seedlings are popping up all the time around Diamond Head and Lanikai, we don't have the manpower to get them all. The focus for us has been on major roadways. James Leary came and shot some matures on the side of Diamond Head. With imazapyr it takes a long time for the plant to die. Jane: It takes 6 months or more. We have these closed PenSet sites at Heeia where nothing has been seen since 2004. Our surveys are 1 mile around established populations. A seed bank study showed longevity to be about a year, but Teya disagrees with that.

Cliff: Curt Daehler's studies from Kona show it is short in that area.

We will continue quarterly visits to sites where PenSet has been found in the past two years. Annually check historical sites and good habitat in Waianae. Survey 1 mile around established populations during down time.

- E. False 'awa. *Piper auritum*. This used to be an OISC target species. We found there are too many people cultivating it to get rid of it, so we focus on Tantalus, WCC, and Hokuloa Condominium since they border natural areas and there's not too much. We treat with Roundup/Garlon. It spreads vegetatively. Misinformation is mostly why it's planted, people think it's another variety. Most of the people we talked to thought it was real 'awa but they only use it for an ornamental. We could still do outreach for it.
- F. Himalayan blackberry, *Rubus discolor*. This is restricted to Palolo Valley. Escort seems to be working. The field crew went out Tuesday and Wednesday and only found 13. I am hoping in a few years there won't be any. The one sticky point is that the people who live in this one spot requested that we don't use herbicide. We have tried hand pulling but it is not working, so I'm going to try to get them to let us use herbicide. Some of it is on Board of Water Supply land, and in order to use herbicide there we have to get a pesticide use

permit, which requires insurance against spills. The cost for that is \$12,000–\$14,000 per year.

We are planning to do more outreach to that area, the back is very rural.

G. *Tibouchina herbacea*. We continue to coordinate data sharing among OANRP, NARS, DOFAW, KMWP and OISC. We need to conduct wider ground surveys, and we are looking at whether we can use preemergent in the area where the sprouts keep coming up. I will get some more information about what it would look like where the preemergent is applied. It might be Kamehameha Schools land, we need to check that.

Jane: I think we have an agreement with KS. Right now part of it is on leased land and we have a lease and can use herbicide.

Rachel: Every time Emma goes up she finds one or two, and OISC does too. It is a very small area.

H. *Tibouchina urvilleana*. The goal is to eradicate this from O‘ahu. It doesn’t reproduce by seed. There are some places where someone probably tossed it from their yard and it re-rooted. It will only take a day or two but there are some private property sites, with permission, on Tantalus. The other sites, we haven’t spotted it for a long time.

#### IV. Early detection

Alex and Danielle spent three years driving around O‘ahu inventorying species. Now they are working on the database and threat evaluation. We will be doing delimiting surveys, getting access permission, and doing some control work before all the assessments are done.

*Caesalpinia crista*, there is one plant on Tantalus. It is like cat’s claw but worse.

*Cissus repens*. Delimiting surveys have been completed. We will check twice a year for regrowth and continue to treat as needed. We may need to drop this one.

Dave: Milestone works great on legumes.

Jane: Milestone kills acacia too.

*Delairea odorata*. This is in the Palehua area only. We have a cooperative landowner. There are a lot of plants, but systematic control is feasible. The goal is to finish the 200 m scour and 800 m good-habitat survey. Treat all known plants and then put it on a monitoring schedule. Susie’s research shows it is responsive to herbicide. It is going to be a big job but I think it will be worth it as the threat is high. The Gills have said they would speak to the other landowner for us.

Rob: The Mauna Kea Forest Restoration program treats it regularly so they may have a protocol. Rob Stevens.

*Parkinsonia aculeata*. There is one plant in Waianae that won’t die. We will try Milestone next if the recheck shows it is still alive.

Others we are going after are small populations of *Pennisetum villosum* (in Aiea and Wailupe), *Rauvolfia vomitoria* (removed by Honolulu Botanical Garden, we’ll survey), *Suriana maritima*, there is one in a yard in Kailua.

OED is finishing SNIPP surveys, surveying Navy land, finishing the assessments. They will continue plant IDs for partners, including Kure folks. They will work on the internet imports problem, and approach botanical gardens about doing more comprehensive surveys

for them. Most of the really bad plants seem to have been ordered over the internet. It is very unregulated. Maybe we can write to some of the sellers.

Jane: *Cordia alliodora* was found by Army on the way to Makaha, on Board of Water Supply land. We're wondering how to do a delimiting survey. We wondered if Resource Mapping images might be useful, but they didn't go over that area. It's a tree. It was planted at Waimea Botanical Garden a while ago. Rachel: I talked to Yumi and Marigold to see if they would be interested in it. They don't have a field crew, but maybe we could do something as a volunteer thing. OISC is not jumping on it as a new target because it is in two locations and is not a target for islandwide eradication. Dave: Lanky has access to the CCC crew and he might be a good person. Jane: We just need to figure out how to control it, they're good when you want to kill everything in the area.

## V. Coqui Frog Working Group

Jonathan Ho. I used to work for HDOA Plant Quarantine. I have a lot of experience working with frogs. I started right after the holidays. Since then there have been three areas with frogs. Hau'ula, this is a potential naturalized population. We surveyed but didn't find anything. We are going to take turns with HDOA, going out every two months. We had a couple of people saying they heard frogs driving over the Pali, so I did some outreach, the neighborhood will call if they hear anything. Plant Quarantine guys have been going to Nu'uaniu, nobody has heard anything. HDOA has been catching them at nurseries. We're thinking about a coqui-free nursery program like Maui has. We're trying to think of a good name. Maui gives banners and stickers to nurseries. We don't want to use the word "free." We want nurseries to be able to use these best management practices, so if you can think of a slogan, let us know. HDOA is advocating for the guys in Hilo to use certain control practices. Whether they will or not remains to be seen. They want to try doing outreach at the Waimanalo Community Association. At Hau'ula it was two years before anyone recognized what it was. We're trying to standardize the method for data management. The flyer is Best Pest Management Practices to give to nursery people. It is laminated and shows control steps they can take at the nursery.

Rachel: I presented the best management practices at LICH, they didn't have any dissenting opinion. So most people will probably try to follow them, nobody wants coqui.

Jonathan: I went to Hilo on Monday and met with Cas. O'ahu's HDOA PPC has different protocols from Cas, I need to decide which one to follow for O'ahu. Where you put the baits, where you survey, bait spacing, is different. HDOA will be doing all the retail guys and certified and uncertified nurseries. I'll be doing everything else. They've been telling me where to go, where they don't want to. Coconut trees are apparently prime spots. Banana trees, any palm. I don't have access to ports but cargo is a problem. I would need HDOA access for the airport. The survey takes 60-90 minutes. I'm just getting started, getting all my supplies and stuff.

## VI. Outreach

Rachel Neville. CGAPS has created a Plant Pono flyer. When Chelsea left, we partnered up with the Wee Risk Assessment program and did not rehire a full-time outreach person because I wanted more money for field crew. Christie presented at the first Master Gardener's annual conference. Patti and I met with the woman who coordinates that program for CTAHR, and talked about the ways we could make sure everyone knows about the WRA. Patti will be presenting to the Master Gardener's advanced training class. On March 12, we're going to do a talk, I'm going to talk about why you should love the Hawaiian forest and Patti will talk about what you can do to protect it. We have a top 10 list of things you shouldn't plant. We're going to use this Plant Pono logo. Christie Martin came up with this Plant Pono campaign. Patti is working on list of noninvasive species.

VII. Funding: We have a year of funding, so we have 12 months to raise money for 2012. Some of the grants we have may not be available in the future, and I don't think State money will ever go back to previous levels. I will send out an email to people to schedule an OISC meeting for late January or early February to talk about funding instead of field operations. Do we want to start looking 5 years out, 10 years out.

VIII. The meeting was adjourned.

### Attendees:

David Anderson, Department of Land and Natural Resources (DLNR) Natural Area Reserve System

Jane Beachy, O'ahu Army Natural Resources Program

Diane Drigot, Marine Corps Base Hawaii

Patti Clifford, Hawaii Invasive Species Council

Rob Hauff, DLNR Division of Forestry and Wildlife (DOFAW)

Jonathan Ho, OISC

Naomi Hoffman, Honolulu Botanical Garden

Mary Ikagawa, OISC

Susie Iott, OISC

Cliff Morden, Pacific Cooperative Studies Unit, University of Hawaii Botany Dept.

Rachel Neville, OISC

Todd Russell, Marine Corps Base Hawaii

David Smith, DLNR-DOFAW