O'AHU INVASIVE SPECIES COMMITTEE

Oahu Invasive Species Committee
General Meeting
March 12, 2009
9:00-12:00

Bishop Museum
Natural Sciences Building
Paki 2

I. Welcome and introductions 9:00-9:10

II. New OISC Chair 9:10-9:15

III. Partner updates 9:15-9:45

IV. Rob Hauff, DLNR, Early Detection of Urban Forestry Pests 9:45-10:15

BREAK 10:15-10:30

V. OISC updates10:30-11:30

Miconia estimates for next few years
Species news
Early detection updates

VI. News from Tahiti, Ryan Smith 11:30-12:00

VI. Adjournment

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MEETING NOTES

I. Welcome and introductions

Everyone introduced themselves. Rachel mentioned NOAA's rfp for coastal and wetlands restoration.

II. New OISC chair

Rachel talked about selecting a new chair. Happy to announce that Josh Fisher is the new OISC chair. Thank you Josh for volunteering! Thanks also to Chris Dacus for serving as chair for the past year. OISC chairs serve a one-year term. Please think about volunteering for next year! We try to make it an unburdensome role. You do have to do the manager's performance evaluation and may have to represent OISC from time to time.

III. Partner updates

A. HISC. Priscilla Billig, HISC outreach. I'm working on an article about a Philippines floral festival, the winner was a giant miconia plant. The article mentions that this is not a prize-winning plant for Hawaii. In the Philippines, miconia is viewed as a nice ornamental, the article says that it is not welcome here. There is a lot of communication between the Philippines and families here.

Another article I just finished was for American Bird Conservancy's magazine on the impact of invasive species like cats, rats and ants on Hawaii's birds.

It would be helpful to get more photos of your invasive species field work. For the public it's out of sight, out of mind. Photos of various organizations working in the forest with all the gear are useful and we don't get enough of them. It's impressive when you see that. Most of the public doesn't get out there. We're also trying to finish the ISC brochure, which has had several incarnations. Instead of the same old pictures of species we'd like to have more shots of people in the field.

Patrick Chee gave a legislative update. Pat showed an online Google Doc with all the invasive species bills he's been tracking, some he has been assigned to do testimony for. Several bad ones have already died. 1433 is a good one, it puts in fines for those who fail to pay the cargo fee. Before, there was no consequence for this.

1684 died but may come back, we should watch for it.

1741 suspends distribution of the conveyance tax to NARF and the land conservation fund, for 6 years.

1678 collects tax for internet sales.

Mindy will be back in September, so Pat is looking for a job.

Rachel: We want to say thanks to Pat for taking this on and working to find us funds. Also, I had been under the impression that we can't do anything at the legislature. But now it looks like we *can* submit testimony as OISC, as long as nobody signs it. For 1741 I submitted testimony as a resident, but I think it would be more effective to submit as an organization. Do you guys strongly oppose OISC being involved, or do you want to get information about bills OISC is submitting testimony on?

Rob: You should coordinate with Patrick.

Pat: HISC testimony has to be the position of the Administration.

Rachel: If you do want to know what we're saying, email me. I'll let Pat and Josh know what we're going to do. If it becomes a problem we'll stop. This is an important legislative year.

B. Hawaii Department of Transportation. Shahin Ansari talked about the SNIPP program being underway. They have started to get the Integrated Roadside Vegetation documents together and are talking about what has already been done.

Chris Dacus: This is a 3-year pilot program, on Oahu it is only for this length of time. OISC is one of the sub-consultants to advise SWCA, to put together an invasive species early detection program on a statewide level for areas along state roads. Highways are a major vector. There's a 10-year strategic plan for data gathering (some use of GIS sources), tracking, control. The first year there will be very little control, the third year is mostly control. We are looking for partnerships with owners of adjacent properties. An Integrated Roadside Vegetation manual is to be written. The maintenance manual will look at ways to prevent erosion. In the fourth year the program will roll out statewide. OISC will be important on this island, the other ISCs later. There's $1.5 million/year. For OISC, DOT is going to start paying them for all the work being done along the highways. It will be coming from a consultant and not the state so it can be used as matching.

Another ongoing thing is the Weed Risk Assessment and the landscape industry. We've finally come to a conclusion about what the industry will stop using and will be cautious about using. It has taken 3 years to get a consensus. There were 168 plants rated when Shahin was still working at WRA. There are now 134 that won't be used after this year, and 34 that will be used with caution or on a limited basis when there is no good substitute. The list will be published in LICH's publication, which goes out to about 4,000 industry contacts. There are a lot of small organizations out in the country. We're trying to reach people who are sort of hard to reach. There are another 100 plants that have been identified as potentially invasive that we'll try to evaluate over 2–3 months instead of 3 years. Eighty percent of the plants that have plagued land managers are off the list. Strawberry guava has an emotional attachment. It's still on the list of the 34 "use with caution" plants. Now that we've gone through the educational process, it would probably be on the "do not use" list. It may move there in December when we look at this again. Attitudes have changed a lot in the last couple of years.

Ryan: Dealing with plants OISC might be interested in, how do you handle those that are spreading beyond roadsides?

Chris: There is an advisory panel of non-DOT people who will advise on how to handle various situations. DOT land is a thin sliver that passes through conservation lands. Also we're not going to do things that are just a bottomless pit.

Rachel: the Veg manual and the 10-year strategic plan are key, these can make sure best practices are adopted.

C. Army Natural Resources. Rachel: Jane couldn't be here today, but she told me that they did a delimiting survey on the *Tibouchina herbacea* that we talked about at the last meeting and nothing was found.

Ryan Smith: Karaka nut is a new species we found, on Palikea Road, ¾ of the way up. Probably an escaped ornamental. They saw it in some of the gulches. This may be island eradicable.

Rachel: We're going to wait for the ID.

Ryan: *Pterolepis*, this is in the Koolaus and on Kaala Road. We will survey buffers around that and wipe it out. Fountain grass, nothing from Dillingham or Kahuku. It has been several years now. *Acacia magnum*, we found a mature tree in Kahuku and are resuming surveys for this. *Melochia*, continuing control, we are still finding mature trees, we found one fruiting. The more you look, the more you find. At one point they thought it was under control but looking has turned up more.

Rachel: The crew went to Punaluu with KMWP, there's so much there would be erosion problems if it was controlled.

Ryan: *Senecia madagascariensis*, still nothing since a year ago. There is *Cryptostegia* on the road up to the Nike site. I talked to Jane, she said she'd be happy to send Army staff, if OISC can deal with access. This is the only known site in the Waianaes.

Alex: It's common along roads, we see it naturalizing near houses. Not in natural areas.

Pat: Does Army manage the road to Kaala?

Ryan: It's FAA. The State and Army do weed surveys.

Pat: The other day Betsy and I found invasive *Begonia* along the road, and manuka near mile marker 60. It's not known from that side, maybe we could go get it.

Lanky: Coordinate with me, as NARS rep.

Alex: Bring the *Begonia* in and we can ID it. This has been seen before.

Ryan: It would be good to know which manuka too. It's on the Waianae Kai side.

Action item: Ryan will get a point for *Cryptostegia*, and ask Army to let Rachel know who to call.

D. NRCS. Greg Koob. The Plant Material Testing Center is testing *Eragrostis* from Laysan on Molokai, it's growing as a solid clump 2.5–3 feet tall. The growth form is staying true so far. If it stays that way we'll release it as an anti-erosion substitute for things like fountain grass and pampas grass. I don't know if people have issues about

variants being moved around. It's blooming at a different time on Molokai than the regular *Eragrostis*, interestingly.

E. Marine Corps Base Hawaii. Todd Russell. No plant updates. Last month was pretty busy. We're crushing pickleweed to open the mud flats for the stilts. We hosted a monk seal that had been biting people, until they can get it moved to the NWHI. We had a pesticide-use FWS NCTC course. This month we're hosting an Ecology Camp for kids. This is a high school hiking club, a national group. It's a week long, we'll do service projects, pull mangrove and California grass, learn about cultural sites.

F. DOFAW. Rob Hauff. We went over the Forest Service grants last time, it's the same this year as last year, about $90,000. We're still hoping there might be some stimulus funds coming to HISC, they're on the list and we're working with Inouye's office, we'll keep you updated on that.

The Forest Service is handling the EA for the insect to control strawberry guava. They hired a contractor for the cultural part of the EA. The week of May 11 there will be meetings. I'm working with C&C to see if we can get McCoy Pavilion, it would be great if people can turn out for that. We'll probably break up into small groups, not have people yelling at Tracy Johnson. Make comments if you have an interest. If only those against control make comments it will be difficult. Anne Marie LaRosa is the contact. Hawaiiinvasivespecies.org has some basic information about guava and the insect. It will be posted there when we have a date. The EA will be done at the end of May, about a week after open houses, so get those comments in. The draft will be in the *OEQC Bulletin* for a 30-day comment period.

Rachel: If you have questions you can look at that web site or talk to Tracy Johnson who did 15 years of research on this, he's very accessible. Or Anne Marie.

BREAK

G. Oahu Early Detection. Alex Lau. (Alex showed a map of the road surveys they did in 2007 and 2008.) There are about 788 miles remaining, which we hope to have done by the end of this year.

We've found no new PenSet locations in the Waianaes, no miconia in yards. Most finds have been submissions from other agencies. There is a fern, *Blechnum orientale*, native to the Pacific region. It's not known from cultivation here. We're not sure of the threat.

Hawaii Trail and Mountain Club uncovered *Guzmania lindenii*, a bromeliad, at the summit of Bowman Trail, in the north side of Kalihi Valley just before the summit. There are about 400 plants in one area, with outliers. It is prized in cultivation, so it's hard to eradicate. We also found *Parkinson aculeata*. It's very incipient. We believe we can get this one. It is in lower Waianae Valley behind the intermediate school in a field. We didn't survey mauka of there, we have delimiting surveys coming up. It's in the Fabaceae. It has a pair of spines at the base of each leaf. It scores at 20 in the WRA, it's invasive elsewhere. It looks similar to klu and kiawe from a distance, has a similar habit, but the flowers are very different of course.

Contact us if you see it elsewhere. There are also two botanical gardens that have it. Control work is in April for this one site.

Cissus repens, we're going to remove that from a couple sites in April. We're finally looking at some eradications from our road survey.

Rachel: You went up with Lanky and looked at the *Guzmania*?

Alex: Yes, we tried to do delimiting surveys but couldn't get it all, we saw outliers. We're not sure how it got up there, but there's a lot of wind coming upslope from the botanical garden and it's wind dispersed.

Lanky: There are thousands of keiki there, hundreds of larger ones.

Rachel: It's a 7 on the WRA, which is the lower end of high risk. We met with KMWP and Lanky to see if it's something we should deal with. There isn't a good control method for bromeliads.

Alex: The International Bromeliad Society was interested in this population because naturalizing bromeliads are rare. But we found that there is a subfamily that seems to tend to be self-fertilizing.

Ryan: You might get HTMC to come on a work trip, get some more people power to control it.

Rachel: If you have strong feelings about it, let us know. It might be expensive to control because of its location. We'll continue to update you about it.

IV. Early Detection of Urban Forestry Pests, Rob Hauff, DOFAW Forest Health Coordinator

Rob presented some slides on early detection of forest pests. He has been working on an early detection project with DOA (OISC is a partner), funded by a HISC outreach grant and the Urban Forestry program. It's housed at DOFAW. Many of our landscape plants have native relatives here. Pests are typically introduced in urban areas before jumping to forests. Landscapers/arborists are often the first to see pests or damage. They could report this as an early detection method. We encourage them to use the pest hotline, and came up with some criteria for identifying targets. Unfortunately we don't have a risk assessment procedure, but we're working on that. The targets should be identifiable by non-experts. There are a lot of palm pests moving around the Pacific now.

The outreach strategy is to print descriptive materials, make some things like baseball hats with the 643-PEST logo, present at landscape meetings and maybe offer a standardized talk that arborists could get continuing education credits for. There is a pest web page in development.

Control is usually done by trapping, also surveys and sentinel trees you can plant. I talked with Rachel about whether OISC would be interested. The Forest Service has funds for early detection for the whole family of Scolytidae beetles. Dan Rubinoff has been looking at the native ones. We can talk about whether OISC would want to be involved in surveys, etc.

Rachel: What is the control? Spraying, or …?

Rob: It depends on the pest. Some haven't been well studied. Usually it's culling, sometimes spray. On private lands there can be an issue, people don't want you to cut down their tree.

Chris: I don't think that will be a huge problem here, we have 4 or 5 of the best arborists in the world here on Oahu. They're very concerned since the *Erythrina* gall wasp.

Ryan: What is OISC thinking about doing for this?

Rachel: We would want to help with outreach and maybe some other things, like hitting a spot where plants are outside the areas landscapers cover, maybe we can help fill the gaps.

V. OISC updates, Rachel Neville

A. General. The International Miconia Conference is upcoming in May on Maui. People from Tahiti, weed managers from Australia will be there. It's at the YMCA camp on the Hana coast. All the ISCs will be there. Jean-Yves Meyer will be there.

Action items from the last meeting: We talked about the C&C transit project, we sent a letter asking them to include invasives considerations in the contract language. I just got the confirmation yesterday that they got it, I sent it before Christmas.

Jane was going to check on the history of the golf courses, to see if any that could have planted *Cortaderia selloana* might have gone unchecked. There's nothing we haven't checked that's still an open area, they built housing on the only one.

The pampas grass at a residence has been removed. We just have two more golf courses that we know of. That's it as far as we know but there's probably more out there so let us know if you see it.

B. Miconia. Jean made a chart that projects how many resurvey acres we have for miconia into 2010 and 2011. Resurveys are really important. Over 1,300 seedlings were found in the last round. There are 230 acres of initial survey remaining. It was 60 acres but there's an aerial patch with very thick cover so that will be done on the ground.

The acreage for 2010 is 1652 acres. We need about $90,000 to finish the initial helicopter surveys. We're looking for funds for that, as well as for regular staff, since we're facing budget cuts.

The average per-person, per-year acres surveyed in 2005–2008 was 503.

Rob: Are you going to turn these figures into dollars so you can let people know what your funding needs are for 2011, etc.?

Rachel: Things will change because we'll have a list of species from OED.

Josh: Some areas take longer to resurvey. We were going to disparate places before, then switched to get an entire area at one time, a windshield-wiper shape.

Susie: An entire area is never up in one year because of the way it started. We're going to be focusing first on things that were up for resurvey last year that we didn't get to, some are getting into the fourth year.

Jean: We're trying to stick to sweeping one whole valley at a time.

Josh: Then you can get an average for a whole valley, since different pockets have different characteristics.

Jean: It does translate to that type of average, the way we're doing it, even though it's not necessarily all done in the same year. It's quicker for us to focus on one area at a time.

Rachel: A tree was missed. Zach and Aka were on a survey in Kalihi and a resident said he found one and chopped it down. They went there with the guy, here is a map. It was surveyed on a 2006 volunteer trip, it was in the middle of hau. Back in 2007 we stopped doing miconia surveys with volunteers, so this is less likely to happen in the future. This is the first time this has happened in 8 years.

Susie: We surveyed around and above it on Saturday and didn't find any other plants. When Aka went back they bagged all the panicles and fruits they saw. There were a lot, but no keikis. This MAY have been the first time it fruited. We still have to survey the flatlands below it. The fruit was mature.

Josh: I think it takes it a little time to come up. In Kaalaea this happened, there were no keikis at first but then they started to come up.

Rachel: The Maunawili tree found in October 2007, recently the crew found an immature tree near the 800-meter buffer limit, so that gets a 500-meter buffer that will add to the ground surveys.

Susie: There is a lot of pig activity there, also hikers and hunters. It's right on the trail, so it could have been brought out there that way.

B. Blackberry: At the last meeting we talked about blackberry, and people expressed a concern about the way OISC is testing herbicides for effectiveness against blackberry. Jean created a graph from the database. In 2007 we found new populations, and found that someone had planted it. We also found out about Escort. So we started working on this one patch and using it for testing. We didn't have enough crew to do much extra. You can only re-treat every 6 months. There are only 5 data points, the last one from December 16.

Thanks to FWS, we sent Keoki to that week-long pesticide course, and he said we might want to rethink Escort. The FWS contaminants people don't like it. From the graph it's clear that Escort works, at least for this time period. We're still doing trials. The area is pretty small, 8 m.

Action item: Rachel will talk to some USGS people about Escort and how much it would cost to test downslope of it.

C. Pampas grass: We got $20,000 from HTA to replace Ko Olina's plants. Hopefully we'll be ready to do the replacement in the fall, and hopefully they'll like some of the replacement plants.

D. Bush beardgrass: Zach and Aka did an aerial survey of upper Waimalu and didn't see any.

E. Outreach: We've been doing pretty good, thanks to Chelsea who has taken over a lot of the outreach responsibilities. We had three articles. The Coqui Working Group did a press release about the eradication in Wahiawa, Christy got OISC on the front page of the paper. Chelsea has also been working with the Hawaii Kai community. I did a presentation to Army Natural Resources about guava biocontrol. I also submitted comments on the Navy's integrated resource plan. It looks like they have a lot of procedures to prevent new introductions. Chelsea did the CTAHR awareness day. The real outreach season is coming up in spring. April is the main one, lots of groups do an Earth Day.

F. Staff: We hired Keoki in January, to be an invasive species program assistant. He's replacing Lara, who left in July. Christian Sousa left in January, and Katy Metzler went to be a wildlife biologist with DOFAW. She's not going very far, so we still have that institutional memory. Susie Iott will be taking Katy's place. She has already done a lot, it will be a smooth transition. Katy was with OISC for 5 years, Susie has been with us for 3.

G. Kipapa is taking us away from miconia and blackberry. We're going to give it to KMWP as they're happy to take it over. We're going to do some work at Kawainui with DOFAW, which doesn't require long camping trips. Even though it's not focused on our target species, it won't take us away from them as much.

H. The budget: We're okay until December. I don't know what's going to happen with the legislature. I'm not replacing staff until we see how much money we'll have.

VI. Tahiti miconia, Ryan Smith

For a while now there has been a lot of talk about trying to understand the hydrological and downstream effects of miconia. In essence this project uses miconia as a poster child for all invasive species. There are a lot of presumed implications—erosion, aquifer recharge issues—and not much science to back that up. There was some money from FWS to look at that. We met with a bunch of people to try to get some on-the-ground research. We are also looking for worldwide input.

The initial work was done on the Big Island by Tom Giambelluca's staff, measuring rain and soil. They didn't find good study sites. On the Big Island all the sites were so altered through time that it was impossible to isolate miconia's erosional impact on the soil.

The ideal study site would be a previously undisturbed native forest that miconia invaded, and a nearby undisturbed native forest. So we went to Tahiti to look at that. Miconia was most everywhere, but not always in monotypic stands. There were really thick areas of it that are astounding.

In Tahiti it grows up to 1200 meters elevation. There's a thick belt at 700–1000m. Topsoil erodes away and there is clay under that, a lot of exposed roots.

A researcher from Japan studies raindrops: size, velocity, and the impact on individual forests. Miconia leaves funnel water, which creates really huge raindrops that hit the ground with a lot of force. Regular layered canopies have a different effect. He found

that some of the biggest raindrops he's ever measured in his life were coming from miconia leaves. He compared it with ohia and other canopies, and preliminarily at least has found significant difference with miconia.

Light penetration, there is a very dramatic reduction in miconia forest.

One positive side is that, being far beyond mechanical control, they're using the same biocontrol that was released in Hawaii. It creates holes in the leaves, which doesn't stop plants from maturing, but it allows some light to penetrate. Jean-Yves is finding that the reduced light favors the natives better than a huge light gap, so he's seeing native recruitment under those areas where the biocontrol is taking hold. It [the biocontrol] likes higher elevation, 700–900m, which is probably why it isn't having such a strong control effect here. There was a second biocontrol released here that can't be released there because Tahiti has native melastomes.

They're seeing dieback in some locations that seems natural, maybe senescing. Weeds are springing up, unlike the natives coming up in the less open areas.

The miconia conference is coming up. We're trying to put together funding proposals to get back to Tahiti to do this study with Tom and Ross, to measure and quantify the hydrological impacts of miconia in order to model its economic and environmental impact. The hydrological impacts of invasive species are poorly understood and we would like to test the current presumptions that miconia negatively impacts the functional hydrology of an ecosystem

This summer they'll be handing in more proposals. Then it will be Tom and Kim taking the lead.

VII. Adjournment

The meeting was adjourned.

Attendees

Shahin Ansari, SWCA Inc.
Chelsea Arnott, O‘ahu Invasive Species Committee (OISC)
Priscilla Billig, Hawai‘i Invasive Species Council (HISC)
Patrick Chee, HISC
Chris Dacus, Hawai‘i Department of Transportation
Joshua Fisher, US Fish and Wildlife Service (USFWS)
Jean Fujikawa, OISC
Danielle Frohlich, OISC
Rob Hauff, State of Hawai‘i Department of Land and Natural Resources, Division of Forestry and Wildlife (DLNR DOFAW)
Naomi Hoffman, Honolulu Botanical Gardens
Mary Ikagawa, OISC

Susie Iott, OISC
Gregory Koob, USDA Natural Resources Conservation Service
Zach Luechauer, OISC
Lanky Morrill, DLNR DOFAW
Rachel Neville, OISC
Todd Russell, Marine Corps Base Hawai‘i
David Smith, DLNR DOFAW
Ryan Smith, OISC
Denise Weidenheft, USDA NRCS