

OISC General Meeting Minutes
November 6, 2002, 9am-12pm
Ho'omaluhia Botanical Gardens

Attendees: Shahin Ansari, Melissa Chimera, Laura Clint, Coleen Cory, Rob Cowie, Domingo Cravalho Jr., Diane Drigot, Leilani Durand, Meghan Halabisky, Rob Hauff, Mike Leech, Christy Martin, Lydi Morgan, Lisa Nakayama, Duane Nelson, Alenka Remec, Ryan Smith, Jason Sumiye, Amy Tsuneyoshi, Ron Walker, Mindy Wilkinson, Scott Williamson

1. Welcome and Sign in

2. Introduction of new OISC staff and DOFAW Invasive Species Technician:

Meghan Halabisky and Laura Clint began on October 28 as our new OISC field technicians. Meghan comes to us from KISC, bringing coordinating and database experience to the crew. Laura is coming from TNC with lots of O'ahu field experience. The OISC paid staff now total four field crew and one coordinator.

Scott Williamson started three weeks ago as the new DOFAW Invasive Species Technician. He will work closely with OISC staff by specializing in the issue on the invasive frogs, and will also be available for work on rapid response species.

3. Approval and corrections of previous meeting minutes

4. Announcements

- Diane Drigot, who works with Marine Corps Base Hawaii, announced the availability of the draft copy of their recently revised Resource Management plan. She requests comments on the draft by mid November. The Marine Corps has been gaining lots of experience with invasive species control, specifically with the removal of pickleweed and mangrove. Mangrove has been eradicated from Nu'upia ponds over one decade of work with the help of thousands of volunteers. Now the organization is continuing up the shoreline of Mokapu (facing Kaneohe bay) in an effort to remove mangrove there. Propagules are still coming from around Kaneohe bay so the control effort has to be a partnership with the bay. Volunteers are constantly looking out for keiki mangroves, which is a good project for elementary school groups.

Pickleweed is also a major pest, with biocontrol the only option for widespread removal. The Marine Corps keeps it under control with ploughing, which allows for better bird nesting. Cat and mongoose control work has allowed the Hawaiian stilt population to double in numbers over the last decade and a half. The Sikes act (??) has been a Congressional law since 1966, allowing the establishment of 800 Natural Resource Manager positions (??). The act is updated annually(?). It is the first effort to bring resource management to all military bases. Soon after the executive order for invasive species plan was established in Hawaii (this year?), MCBH received federal money to update their plan. A half

million dollars was allocated for continuous improvement of the plan. Please review the draft and send comments to Diane at drigotdc@mcbh.usmc.mil.

The Marine Corps is involved in both coral reef management and invasive species control projects, overseeing properties on Molokai and O'ahu, including Bellows, Pu'uloa, Camp Smith, Manana housing, and a piece of Waikane valley. They had help from EEWf workers for 4 months last year, and worked with HIARNG on control of fountain grass at Bellows where they monitor annually for this invasive weed. The next walk through for fountain grass at Bellows is in January and volunteers are welcome. The Sikes set requires no net loss of resources OR training opportunities, and invasive species, such as fountain grass (causing brush fires) are bad for both.

- Christina Crooker has stepped down as Deputy Chair due to an overloaded schedule, and OISC hopes to find a replacement by the end of our next All-OISC meeting (February). This position requires approximately 10% of the volunteer's time per week, and the intent is for the Deputy Chair to become familiar with how OISC works, so that the Deputy Chair can take over as Chair when the yearly turnover occurs. Mindy Wilkinson spends 10-30% of her time per week as the OISC Chair. The Chairperson is the interface between the committee and field crew, whereas the Coordinator has control over the field crew and staff hiring. The Chair position rotates to Emeritus Chair who dedicates only about 1% of his/her time per week.
- Several reference materials are available for borrowing from the OISC staff, including the California Invasive Plants book, and the National Management Plan for invasive species (which is also available for downloading from the web). ELI's review of O'ahu is also on the web, as well as the Global Invasive Species Program's tool kit. Web addresses will be sent out.
- Working group meetings: OISC originally relied heavily on volunteers and was broken up into working groups which each held meetings every three months. Since then the staff has taken over most of the responsibilities, requiring less frequent meetings. We now rely on having ad hoc meetings when necessary. The coordinator and chair will seek out volunteer help when needed. Any announcements will be posted on the web. Anyone interested in commenting or attending meetings can do so. Please email oisc@hawaii.edu.
- Duane Nelson is moving back to California to work on reforestation and timber stand improvement for California reserves. He encourages Hawaii's conservation community to continue to capitalize on our ability to put together our limited resources through the collaboration of different agencies. We have been able to get much accomplished, with Invasive Species Committees on all islands, CGAPS up and running, Christy Martin on PR, and the Weed Risk Assessment program underway. We now need to focus more on public education and to keep the agriculture and horticultural industries involved. We need to get the new administration engaged by making it clear that invasives are detrimental to a healthy economy. Make biosecurity an election issue. Duane cautions us to not burn out, and to use the word 'eradication' less often. Keep new energy coming in. Rotation of leadership is important.

Many threats exist for us beyond what we already face. BTS may already be here, and RIFA. Sudden Oak Death is a pathogen that infests 17 different hosts spanning 7 different families, and it has direct access here. We don't know its full host range. Five species of Asian bark beetles are established on the mainland, killing trees, and will likely be problematic in Hawaii and in the Pacific.

At this point Hawaii does not exist on the national forester's lists. We need some 'sudden oak death' stories that will get national attention. Hawaii needs special consideration under federal law, and Akaka and Inouye should be approached concerning this. We need to keep up the good work and be patient! Contact Duane at Dnelson03@fs.us.

- Christy Martin started on October 1 as our statewide PR person. She recently took a trip to New Zealand where quarantine procedures are highly effective. She stresses the need for more public outreach here in Hawaii. We are starting a new public education campaign, based on the Weed Risk Assessment program. Presentations were made around the state to landscapers and nurseries starting Oct 3, encouraging people to make better decisions about what they plant in yards, forests, etc. Another big project is the pest update. One was held on Maui, where 150 people attended. People were informed of surveys on air cargos, which had great results with insects coming in. Presentations on O'ahu will be held soon, especially focusing on why we may already have snakes and how to keep them out, as well as discussions on coqui, Miconia, algae, west Nile virus, and the plan for Weed Risk Assessment. Bills going to the legislature this year will be discussed. Post cards have been sent to 250+ officials. Please take fliers and post. Anyone with political connections, call them and have them attend!!!

Weed Risk Assessment (WRA): a tool for selecting non-invasive species for plantings. Since 1778 over 10,000 plants have been introduced to Hawaii, at 50 plants per year. Some are not invasive, some are. President Clinton's executive order says: alien species are those that cause harm to the economy, environment, or human health. In the United States, \$34 billion is spent in dealing with invasives every year. Close to \$4 million is spent on Miconia in Hawaii each year. Plants on the Federal Noxious Weed List are agricultural weeds and must threaten a substantial portion of US (where Hawaii is a tiny speck on the map). Regulations aren't working because costs of invasives are increasing.

Protecting Hawaii: we need to be asking the right questions about incoming species, including its invasive characteristics and whether it is invasive elsewhere. Other country's programs ask these questions scientifically. Kurt Daehler and Judie Denslow are working on a Weed Risk Assessment system which is specific for Hawaii. The goal is to develop a system to identify plants that are likely to become pests. The system must be objective, transparent, science based, repeatable, and reliable. It can be used for import decisions, planting decisions, and to prioritize control efforts. Hawaii's Weed Risk Assessment is based on systems from Australia and New Zealand. It includes 49 questions on climate and distributions, weed history, characteristics, reproduction, and persistence attributes. Each species gets a numerical score: <1 not a pest, >6 likely to become a pest, 1-6 evaluate further. It takes about 5-6 hours to answer the questions for a species. In NZ experts can profile a plant in one hour. For

example, *Miconia* has a score of 14: it is a weed elsewhere, shade tolerant, self-compatible, very reproductive >1000 seeds per square meter. *Plumeria* got a score of -5: it is not a pest elsewhere and has a specialist pollinator. Scores btwn 1-6 receive a secondary test which asks more questions depending on what type of plant it is—tree, shrub, vine.

Dec 2001 through June 2002, 2000 plants were screened for Hawaii. Most were found on planting lists in Hawaii. After scoring, results were compared with what was seen in the field. 18 experts gathered to discuss the results. Questions included each plant's current status and estimated future status. Individual opinions varied based on different experiences. A species was declared a major pest if at least 3 experts agree on that status. The same is true for determining a plant to be a minor pest, or not a pest.

WRA scores were then compared with the expert's opinions. The Weed Risk Assessment screened out 93% of major pests and accepted 83% of non-pests identified by the experts. Experts agreed on 80-86% of scores determined by the Weed Risk Assessment. Some disagreements could be due to lack of experience of some experts in some areas.

The Weed Risk Assessment has no legal standing and the goal for now is to work with nurseries and have them adopt the system. The screening process can be easily revised; the system is 80-90% effective and may make occasional mistakes (though the same true for experts), but the benefits will outweigh the costs, and it is better than what we have now. Details are at www.botany.hawaii.edu/faculty/daehler/wra/ including the ratings for 178 species.

5. Accomplishments

- OISC's Strategic Plan for 2002-2003 is finished. Color copies are available for donors. Black and white copies are available to all interested individuals. Thanks to Coleen, Mindy, Melissa, and the OISC staff for putting a lot of time into the Plan. The plan will be up on the OISC website within the next month along with other changes to the website.
- Target species: a revised "top-10" list was determined at reprioritization meeting in August.
- Control updates (August through October):
 - *Miconia*: 163 plants, 130 acres, 654 people hours, one mature tree found during aerial survey in August in Manoa new infestation.
 - Coqui frogs: 22 (hand captured), 72 people hours, hired Scott Williamson to focus on frogs: he has established contact with all those involved, working mostly with Domingo, Nilton, Fred Krause, and Earl Campbell, and attended the Coqui frog working group meeting in Hilo in early November. He is working on consolidating the various reports into one database and will be following up with calls and control work. He will work on determining the extent of infestations and mapping them. DOA has been approached by a pest company wondering what to do about the frogs. We will be able to expand our search with their help (gathering reports). Domingo reports that the caffeine permit has expired and was not

renewed; we are hoping that labeling will soon be finished for citric acid and that we will be able to start using it as soon as possible. We need to be more involved with communicating and educating the public. One hotel was not cooperative with Scott. Nilton developed the capture tube which has helped with hand capture. Its description is on the BIISC website and will be sent out again on the OISC list serve. Citric acid is exempt but a label needs to be approved. No testing is required but guidelines for spraying need to be established, hopefully by the end of November. Citric acid has phytotoxic properties causing some damage to plants. Testing by CTAR found that 25% citric acid made some spotting on plants, and burning of leaves. Citric acid is effective on frogs down to a concentration of 15%. By spraying the chemical on plants, leaving for 24 hours, then washing it off, plants were not damaged. As far as is known, citric acid kills the frogs on contact, but testing is still being carried out. So far tests show that frogs will die even after hopping on a plant that has been sprayed with citric acid.

- Blackberry: 810 plants treated, 45 people hours; a new population has been found in the back of Palolo. Regrowth of treated plants is occurring at the main population, where snip and drip with 20% Garlon4 method has been used. Based on data from California invasive plants book, we conducted 2 more experiments at the main population; results are pending. We tried a foliar application of 1.5% roundup, and also a cocktail of roundup and Garlon3a (1.5% each). Duane Nelson reports that Escort is the chemical of choice for *Rubus* control.
- Fountain grass: 2 main populations, 8-10 satellite populations. 5713 plants treated, 84 hours; finished inside of Diamond Head crater; controlled far end of Lanikai population; focus on keeping it out of the Waianae's. Melissa: in the past, control work at Diamond Head hasn't been as complete as now, hopefully there will be less resprouting this December. Outside of crater: mike is in contact with state parks (still working on that). Satellite populations are priority, but hope to soon start controlling outside the crater.
- *Morella faya*: OISC staff made a two day trip to Honouliuli in the Waianae's with TNC in late October. 133 plants (almost all large trees) were treated, 112 people hours.
- *Schizachyrium condensatum*: a fire-promoting grass with populations at H-3 and temple valley. 1350 plants treated, 58 people hours. Working with H-3 staff to be able to spray herbicide there, but for now we are removing flower heads and manually removing clumps.
- Manuka: a large new population of *Leptospermum polygalifolium* was recently found on another ridge (Wiliwilinui). We need to work with forestry to develop a restoration plan for the area. The other 2 small populations have been controlled.
- Rapid response species:
 - 3 *Cortaderia* plants have been found in 3 different locations. Two at private residences, along Pali Hwy and on Aiea Heights Dr, and

one at Keaiwa Heiau State park. Samples are being taken to Bishop Museum for species identification. *C. selloana* is Geinodioecious—normally male and female flowers are on separate plants, but sometimes both sexes on the same plant. *C. selloana* is a huge problem in Australia, New Zealand, and California (Big Sur). Christy says the picture of the plant from Aiea is not a female plant. *C. jubata* can spread anywhere from a single plant. On Maui both species are definitely naturalizing.

- *Buddleia* (smoke bush or butterfly bush): a small population was found on Tantalus. Need to survey around, and see if more are being planted. Koke'e is doing lots of removal—need to wear mask because of allergenic pollen; stems also re-root frequently, so control is difficult.
- Education and Outreach: OISC staff held a teacher workshop at Lyon Arboretum in October. The 1.5 hour course provided 10 teachers with education materials (K-12), curriculum, images, TNC invasive species cards, and our contact info. Mike did a presentation on invasive species for one of Dr. Duffy's UH classes. He also presented at an HTMC meeting, letting them know of our targets, and rapid response species, in order to have them assist in detection. Mindy developed laminated OISC invasive species ID cards which include our target and rapid response species. Draft sets are available, final set will soon be produced.
- PR and Media: LA Times reporter came out with OISC staff to the Wahiawa frog population, and did a story on conservation issues in Hawaii. No word on that article yet. Mike has been contacted regarding filming for an Animal Planet special. Christy Martin will be arranging dates and events for Howard (Animal Planet, Canada) while he's here for two months. Email her to arrange anything. Most of his time will be spent on the Big Island, with 4 days spent on O'ahu during which time he will probably go out with Domingo to see airport procedures. It is unlikely that the show will air in Hawaii though Christy will find out.

6. Budget/Purchases/Updates:

- The OISC staff has just made the big move to the new Pearl City office. Address: 2551 Waimano Home Road, Pearl City, HI 96782. Phone: 453-6111, 453-6112. Fax: 453-6113 (not yet available). All office equipment was donated by DOFAW, USFWS, TNC, and BWS. Special thanks to those organizations! Due to the amount of time spent in the field, it is best to reach OISC on our cell phone at 286-4616.
- OISC received a new state vehicle in July.
- Spending: OISC has purchased backpack sprayers, backpacks, and herbicides (\$2K); made a contract with bishop museum to geo-code our top 15 targets (115 specimens) with background info on locations, etc (\$525); set up a contract to build a staging unit for our new field container (\$2-4K); \$35K is available for OISC to hire an administrative assistant specialist. We need more staff time for office projects because Mike is getting overworked in that area. However, Duane Nelson cautions that we've been getting criticism for being top heavy. OISC staff

report that we spend the majority of our time out in the field. Maui and Big Island ISC's have someone in the office every day. Maybe OISC should have one full time administrator, one half office/half field staff position, and the rest field crew. Mike will draft a position description and send it out to the OISC list-serve for comments. We will plan an ad hoc meeting to discuss the topic.

- OISC plans to purchase a Trimble XM unit (\$5K). We currently use Garmin units which are less accurate. This will also help us to standardize data collection methods statewide with heritage.
- We are thinking of getting dedicated gear for volunteer Sierra Club Miconia trips. Joby and Pat Conant have said that it is not necessary because we usually don't walk through areas where there are mature trees. But some say it is worth the money to eliminate the risk of spreading seeds.

7. Upcoming Events:

November 9: Sierra Club Miconia hunt at Pauoa flats

November 14: Hawaii Pest Update

November 16: Algae removal, 8-12 Waikiki aquarium

November 23: Lyon Arboretum plant sale 8-2 at Lyon. OISC will set up a booth to increase public awareness. Please volunteer! (For big Lyon sale, Lyon gives DOFAW's invasive plant list to vendors and tells them they can't sell those plants—check out the list and give comments).

The field crew's schedule for each month is available to those interested. Volunteers are always welcome.

8. Legislative Review: (Mindy Wilkinson)

CGAPS legislative subcommittee has met 2-3 times. Funding, land access, and liability issues are priorities. Potential upcoming bills: Hope to be able to use 1% of airport and harbor fees to improve inspection and quarantine; There will potentially be an increase in conveyance tax for the protection of natural areas; Landowner liability: release landowners from liability when volunteers are allowed on their land; possibly include 'vertebrates' on DOA task list (right now it's not a target). Email suggestions to Mindy very soon for new bills.

9. Species Presentation: (Rob Hauff)

Cinchona pubescens (Rubiaceae), quinine: Native to South American Andes and Central America. Grows on east slopes in moist areas. Its name is from the Countess of Cinchone, whose malaria was cured by the bark of this tree. Roots and bark have medicinal properties. Three other *Cinchona* species were planted here, all are hard to tell apart. This species was spread throughout world in 19th century as a cure for malaria. In 1944, the alkaloid was synthesized, but the plant is still commercially cultivated. It is still used where the synthetic is not available. 10,000 seedlings were planted in Hawaii between 1944 and 1946. <200 were planted on O'ahu. It is naturalized on Maui and the Big Island and is considered a forest pest. The only specimen from O'ahu was collected on Tantalus in the 1950s. *Cinchona pubescens* is a small to medium tree, opposite leaves, often has red petioles, but not always. Has terminal stipules which fall off later. Leaves turn bright red/orange when older. Two forms are found on Maui with small leaf and big

leaf. Has terminal panicles, whitish pink, fragrant, fuzzy, five petals. Fruits are woody capsules, long, split open, tiny winged seeds, wind dispersed. Maui says they have only found seedlings within 100m of adult trees. Invasive traits: prolific seed producer, winged seeds, grows quickly (1-2m/year), sets fruit within 4 years, germinates in dense understory (uluhe), root suckers, sprouts from damaged stems, out-competes and replaces other vegetation. Shade tolerant, and colonizes disturbed areas. Produces monotypic stands. Control: no trials going on in Hawaii. A known weed in the Galapagos. Info from the internet suggests manual control (pull out plant, but roots can regrow), or chemical treatment using triclopyr, etc. OISC should survey, submit specimens to Bishop Museum, create public awareness (hiking groups, newsletter), discourage import or planting, drop from target list if none found? (how much searching is necessary?). The species hybridize so check with Bishop Museum for specimen identification. But the genus is easy to ID in general. A human interest tree, but not a big commercial industry tree, probably not used for ornamental purposes.

Ron Walker reported the spread of a 15ft, woody plant, big leaves, white veins, orange flowers, narrow seed pods 6-8 seeds each, in his back yard. One plant was observed there a year ago, and now there are 12. It is fast growing, adaptable, likes cool moist areas, shade or sun. Committee response: Native to Equador, *Sanchesia nobilis*. Found in He'eia stream. May be from Haiku plantation. Will run it through the Weed Risk Assessment.

10. Next Meeting:

February 5, 2003, 9am-12pm, Wednesday.
New DOA conference room