

MAUI INVASIVE SPECIES COMMITTEE
MEETING MINUTES
December 5, 2008

ATTENDANCE: Philip Thomas, Randy Bartlett, Jeremy Gooding, Karl Buermeyer, Pat Chee, Pat Bily, Bob Hobdy, Forest Starr, Kim Starr, Teya Penniman, Adam Radford, Mike Ade, Lissa Fox, Brooke Mahnken, Elisse Deleissegues, Dave McPherson, Elizabeth Anderson

- The meeting was called to order by Randy Bartlett (MPC/Chair) at 9:10am. Introductions were made around the table.
- Minutes from the October 3, 2008 meeting were approved. They will be posted on the website.

ANNOUNCEMENTS

- Teya: CTAHR has created a position for a specialist on invasive species with a statewide focus. The position will be housed on here on Maui. I am on the hiring committee. The field has been narrowed down to three candidates. Each of the three finalists was asked to give a seminar. The first one gave a presentation on Tuesday on Maui. The second candidate will be here at 10:30 am today to give a presentation at the end of our meeting. This is an opportunity to have CTAHR and members of the ranching community to come to MISC. We are continuing to work toward having a stronger connection with the agriculture and livestock communities. We will have the opportunity to ask the candidate questions and evaluate the presentation. Karl: is it possible to see the position description? Teya: it is a tenure track position with a fair amount of leeway – obtaining funding, developing research projects, working with stakeholders to figure out the needs in Hawaii, etc. It is an extension position and the incumbent will also be expected to do outreach and some mentoring of students. Pat B: technical expertise on herbicides would be a great asset.
- Philip: I want to thank everyone involved in obtaining the HISC funding to support my assistant Patty Nakao. This will be the first direct HISC support that HEAR has received. She is a critical component of HEAR and without the additional funds she wouldn't be employed after the end of the year. Patty maintains the ISC websites and the list-serves, maintains job postings, etc. She does a lot of behind-the-scenes stuff.
- Teya: there are ongoing efforts to address the Natural Area Reserve (NAR) funding situation. We are drafting a cohesive public relations message for the public and the Legislature. At the request of PCSU, I am spending more time working on statewide issues.
- Forest: we have begun work on the landing zone study. Thanks to everyone who has helped out so far. We are making progress.
- Pat B: there is some research occurring in the western Himalayas on *Hedygium* biocontrol agents. It sounds like they have some good leads and cooperative support. Biocontrol is critical for kahili ginger control - we aren't going to do it on the ground. It is important research and they need more funding (\$150,000, although they could work with less). There is a seed borer for the ginger pod that is looking very promising.
- Jeremy: Steve hoped to be here today; however, he is working on getting us more funding for miconia.

MICONIA

- Teya: Brooke has been busy making maps so we can review what we have done in the last three fiscal years and take a look at where are we going next. He will also propose a priority and feasibility model today. We would like committee input on whether is it a viable model. An overview of work completed in both aerial and ground units for the past three years (FY06-08) was shown.

Status of Control Work & Highlights - Aerial

- Jeremy: we have extended the aerial units up one more step in elevation. The units now top out at 4,000 feet for recon. We were finding plants close to the old search boundary. We have spent a significant amount of time refining our management units so there is less overlap between ground and air efforts. We pushed the boundaries back so we cover what we can by air, but we don't overlap with ground efforts.
- Jeremy: our 2008 aerial acres are down, but we still killed a lot of plants. The reduced effort reflects five months in 2008 with no Federal funding for aerial work. We will be playing catch up in 2009. Aerial units have been extended to Kaupo. Pat B: why aren't there more mauka units around the core? Jeremy: we are confident that we are searching the area that needs to be searched. The area above the core is not really suitable. We top out way above the core. The area southwest of Kipahulu is of more concern. The area is hard to search effectively due to the tall multi-tiered canopy and rugged terrain. It would be bad news if we found miconia in that area. The aerial units are covered as systematically as we can, based on weather. We always start with the areas that are hardest to get into. We are on an 18-month repeat schedule for aerial recon units. Teya: we are getting really good aerial coverage. Where to go next is not a big issue because we are covering everything. Over the last three fiscal years we did not see a huge change in mature plants even though the acres inventoried went down in 2008. This is a function of where we are working. We did a lot of work in the core this past year.

Status of Control Work & Highlights - Ground

- Brooke: not all the ground management units existed in 2006 and 2007. Forest: what about West Maui? Pat B: the last one was pulled years ago. It was not really in suitable habitat and it is unlikely it would spread. Jeremy: in Keanae some of the ground units have never been done. They will be refined as we go in. Brooke: our 2008 goal was to cover the areas all around the core. We are doing well with that. Jeremy: miconia doesn't really like hala forest. We had a new find of two plants in the south this year reported by a Hana pig hunter. Elisse: the number of plants controlled is somewhat an artifact of where we are working. The 2008 plant numbers are high because we were buffering the core. Teya: we obviously haven't achieved our goal of zero mature plants yet.
- Jeremy: we started our analysis with 2006 because our data is more complete. We will eventually go back to the pre-2006 data. Our goal is to compare the same units over time. Pat B: trends won't be visible on an annual basis. Philip: finds per unit search time would be meaningful to look at. Teya: we always destroy what we find. It is too hard to get into these places to not kill as we go. Brooke: plants per acre covered is a meaningful measure. Teya: the number of plants per acre inventoried depends on where you are looking. We will cover fewer acres per hour when we are finding more plants. Philip: what I haven't seen is unit of time per plant. Brooke: different plants take different amounts of time to kill. Jeremy: we have looked at that for specific units. Effort per plant = cost per plant. Philip: a greater cost per plant is what you are looking for. Jeremy: we see that trend in areas that have received multiple entries. It is meaningless if you do it by year. Philip: you can show for a unit that cost per plant is increasing. That won't be true in the core. From the viewpoint of funders you want to see the cost per plant go up. Elisse: aerial reentry is 18 months and ground reentry is 3-5 years. We don't have data to compare yet. Pat C: to establish trends you need repeatable, controlled units.

Future Priorities Discussion

- Brooke: I think we need a model to help us determine which ground units to cover next. Because our current ground coverage isn't adequate, we should focus on the most important areas to sweep. Teya: we cover up to 30% of the ground area each year. In three years we have covered 70%. We are short. Brooke: the model assumes that the firefighter approach is best – working from the outliers into the center. We need to determine what the most important areas are and then weight the important areas. High value areas include quality native environments, important watersheds, upper elevations, etc. We need to identify these areas (Kipahulu Valley, Hanawi, etc.) and determine the physical boundaries. The areas further away from these high-value locations are less important to cover. Elevation is often an indicator of these areas. Jeremy: 4,000 across the windward side. Pat B: the majority of areas above 2,500 feet have 70% or more native cover. The entire East Maui Watershed until you get west of Honomanu is very rich habitat and is susceptible to miconia.
- Brooke: the components of the model are weighted against each other based on importance. Teya: there are some watersheds that have very few native species, but are still functioning as watersheds. That is a separate category. Jeremy: it is important to recall that the intent with modeling is to make us more efficient. The entire known infestation is under a goal of total control with the exception of the Hana core and the Keanae core. Brooke: the model will also take into account other aspects such as probable infestation – we can project where we think miconia is. Our aerial and ground data don't entirely match. We don't have a point for every ground kill, but we do have it for aerial kills. As a result, the ground data is a polygon of density. We do need to go to places where there are immature plants, but this is not as important as mature plants. Stream vectoring is another important component. If you have limited time, you start at the source and look at a diminishing likelihood of finding plants. This would be taken into account when projecting probable infestation. Outlying infestations are more important than the core population. The less dense the infestation is, the more important it is to cover it based on the firefighter concept. The model would combine information regarding where the plants are and the probable infestations. Weighted together this will yield high risk areas.
- Brooke: after determining the high risk areas you add in feasibility and ground accessibility. This is a function of slope and travel time. You add together distance by road, distance by vehicle off road, and distance by established trails to determine travel time. Combine ground accessibility with high risk areas and then weight them. Next you eliminate recently covered areas (within the last three years) and then apply our budget to look at the gradient of most important to least important. The proposed model is not entirely worked out. I need input - is this a valid model to work toward? Bob: the stream dispersal is important to consider. When we first found clidemia in Makapipi, it got into the ditch system and exploded from there. Forest: is there a potential distribution area? Brooke: yes, we don't need to run the model on the entire island. The model would need to be rerun and updated as we get more information. Randy: it looks like a good start. You have put a lot of thought into it. Please send out a summary of the points you want input on to the Committee. Pat B: there are a lot of positive things you should be able to do with this.

Resource Needs & Funding

- Teya: we are covering the aerial units adequately, but we don't have adequate resources to cover the ground. One reason we have been able to keep forging ahead is because of the NPS Centennial Challenge initiative. We are fully funded aerially through May or June.

Miconia Conference: Pulling it all Together

- Teya: the conference will be held May 4-7 at the Keanae YMCA. We are working on obtaining funding. To date we have funds committed from HISC, FWS, TNC, and the Maui Garden Club. Lissa: the website has been launched - <http://www.hear.org/conferences/miconia2009/>. If you have feedback on the website, please get it to me ASAP. Teya: the deadline for poster and presentation abstracts is January 31, 2009. I will be pulling together a presentation on miconia status and history across the island chain. I will be asking for committee input.

PROPOSED MISC MEETING SCHEDULE 2009:

- February 6
- April 3
- June 5
- August 7
- October 9
- December 4

PRESENTATION BY DR. GUNASEKERA – candidate for CTAHR position, Invasive Plant Control & Management Specialist: *Establishing an Integrated Invasive Species Management Program in Hawai'i.*