SEMI-ANNUAL REPORT – APRIL 2012

NEW BREEDING SEASON BRINGS NEW RESEARCH CAMP

Some of the fall banding biologists in an ohia tree: (from left to right) Robert Rankin, Zara John, Peter Motyka, Laura Berthold, Branden Moss, Agneta Heuman, and Alex Wang.

After six seasons of collecting demographic data on the Maui Parrotbill in the core of the species' range, the State of Hawaii's Hanawi Natural Area Reserve, the Maui Forest Bird Recovery Project is now moving their studies to the far western extent of the parrotbill's range within the Nature Conservancy's Waikamoi Preserve.

Research from the parrotbill population in Hanawi provided good survival and productivity estimates that we are able to use to determine population stability. We were also able to give support to earlier theories about weather playing a significant role in limiting productivity and the lack of available habitat for juveniles to establish their own home ranges. Moving our studies to the Waikamoi Preserve will enable us to determine productivity and survival levels at the edge of the species' range in a much more recently ungulate free habitat.

To begin this transition, we began marking parrotbill with color bands in order to identify individuals and pairs during the field season. This fall, with the help of volunteers (Angela Beltrani, Rebecca McIntyre, Anthony Miller, Agneta Heuman, Robert Rankin, and Branden Moss) we were able to band 8 new parrotbill in Waikamoi. We appreciate all the efforts our volunteers put into this endeavor. Staff members also took on the project of building a new camp for our field biologists. With some help from the Maui Invasive Species Committee and others, we were able to build a water catchment and create a campsite.

The breeding season began in February and will continue until June. Jaan Kolts, Katherine Caldwell, Matt Boone, Jonathan Gunther, Jennifer Milikowsky, and our AmeriCorps, Peter Motyka will be joining staff on the search for nests, juveniles, and banded and unbanded parrotbill this season.

From left to right: 1. A newly banded parrotbill just before release. 2. The new water catchment at the Waikamoi Camp. 3. Tents at the new campsite.

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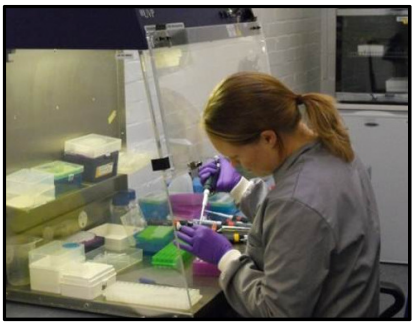
KIWIKIU CONSERVATION GENETICS UPDATE

MFBRP has been collecting blood samples from across the Kiwikiu range in order to quantify genetic diversity for the population.

As of this past December we have completed all laboratory work to analyze current and historical genetic diversity of the Kiwikiu. This included control-region mtDNA sequence data for 85 individuals and nuclear DNA microsatellite data for 120 contemporary individuals and 33 historical museum specimens.

In the next 6 months, MFBRP will be examining how the current genetic diversity is structured throughout the population.



Hanna Mounce at the Durrell Institue of Conservation and Ecology.

MAUI BREWING COMPANY BENEFIT NIGHTS

MFBRP will be having pint nights again this year at the Maui Brewing Company. Remember that half of the sales from the night's pints will go to bird research.

Thank you for all of your support last year and a special thank you to **MBC Brewer Kim Lutz** for creating the **Parrotbill Pub Ale!!**

The fundraisers will be held on Fridays, **June 29th, September 28th,** and **December 28th**. Pint sales are from **6pm to midnight**!

Kahana Gateway Center
4405 Honoapiilani Highway - Just north of Lahaina

Please join us and help support the recovery of Maui's native forest birds!!

HAWAIIAN AIRLINES CHARITY PROGRAM

Donate Hawaiian Airlines Miles to MFBRP!!

Donate your Hawaiian Miles to the Maui Forest Bird Recovery Project, a participating charity in Hawaiian Airlines "Give Wings to Great Causes". Just visit the following website and choose MFBRP down the list of charities. We will use donated miles for inter-island collaborations and to get our biologists to scientific conferences and meetings. At the end of the year, Hawaiian Airlines will match up to a half a million miles to each participating charity.

Visit http://www.hawaiianair.com/hawaiianmiles/donate-miles/ to donate your miles today! Mahalo!

HALE HO'OMANA LOMI LOMI STUDENTS RAISE $250 FOR THE BIRDS

Mahalo to Hale Ho'omana for the outreach clinic held to support MFBRP.

Visit www.lomimassage.com for more information or call 573-8256.

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Rare Plants Found in Waikamoi

Corner and below: Photos of the *Cyanea horrida* that was found in Waikamoi.

Known for their remarkable floral diversity and adaptation, the Hawaiian lobelioids (family Campanulaceae) are the largest radiation of plant species in the Hawaiian Islands. One of these plants, the *Cyanea horrida*, Hawaiian name *holokea*, is considered critically endangered by the International Union for Conservation of Nature (IUCN). With fewer than 50 known individuals existing in the wild, it is only found on the windward slopes of Haleakala Volcano, East Maui. The *holokea* is a small tree or shrub with fern-like leaves clustered at the end of the stems. The dark green leaves have protruding prickles on the undersides and its flowers are a purplish green that are attractive to many bird species. The combination of impacts from invasive ungulates, rats, and slugs has all threatened the persistence of this species. *Holokea* is also vulnerable to extreme weather and genetic constraint due to its small population. The plant is typically found in gulches where it is protected from ungulates and wind but not from flooding, erosion, or tree fall.

While MFBRP biologists are working in pristine rainforest, we keep our eyes open for rare plants like these. This past winter while creating trails for our new field site, a few adult *Cyanea horrida* plants were found by our ornithologists. Hank Oppenheimer and Keahi Bustamente from the Plant Extinction Prevention (PEP) Program came into The Nature Conservancy's Waikamoi Preserve to check out these plants. It was an outstanding surprise when they ended up finding five adults in one gulch and even more immature plants growing along the stream. This is especially exciting since the adults may be cross-pollinating rather than self-pollinating making them very genetically valuable. According to the botanists, this is a first for the amount of individuals found in one area, especially the regeneration that is occurring with the young plants. There is some concern, though, of a massive flood taking out these vulnerable individuals.

Other *Cyanea horrida* plants exist in the Waikamoi Preserve already. The PEP Program also does outplantings of this species in order to increase the total population. Plants for this operation are being grown by a rare plant recovery facility located in Olinda.

In addition to this new set of individuals, a hybrid of a *Cyanea horrida* and most likely *Cyanea macrostegia* was also found in a different location. This cross breeding rarely occurs and was a fascinating find.

For more information on the PEPP, go to http://pepphi.org/.

Donate to Maui Forest Birds

If you'd like to support our work, please send your tax-deductible donation at any time. Either visit our website to donate through credit card or mail a check made out to Tri-Isle RC&D to MFBRP, 2465 Olinda Road, Makawao, HI 96768. Donations help to fund gear purchases, outreach materials, and other research needs. Check out our website for other ways to help MFBRP. We accept donations of rain gear, dry bags, rubber boots, landscaping and office volunteer work, and more.

Photo by Robby Kohley.

A New Journey Begins

Kelly Iknayan, ornithological researcher and GIS technician for Maui Forest Bird Recovery Project since 2009, left the project last month to pursue other goals. She will be starting a PhD program at the Beissinger Lab at the University of California at Berkeley, Department of Environmental Science Policy and Management.

Kelly made many invaluable contributions to MFBRP during her time with us and her skills and enthusiasm will be missed from our project. We wish her luck and success with school and the future.

New Additions

Maui Forest Bird Recovery Project would like to welcome both our new field biologists and our new program assistant.

Five technicians, Jaan Kolts, Katherine Caldwell, Matt Boone, Jonathan Gunther, and Jennifer Milikowsky joined MFBRP this February and will stay on until June.

Jenn Atkinson began working with MFBRP in March 2012 as a program and data assistant. Jenn is from Boise, Idaho and earned her B.A. in Human Ecology from the College of the Atlantic. She has worked on conservation and rural community development projects in China, Mexico, Maine and Idaho.

Supplemental feeding Pilot Study for Kiwikiu

An example of a supplemental feeding station set up in Waikamoi.

This season, we are experimenting with supplemental feeding stations for the Kiwikiu (Maui Parrotbill). Demographic research has suggested that increasing reproductive output and survival may aid the stability of the Kiwikiu population. Providing supplementary food to birds is typically used to increase a population's productivity by improving the parent's ability to provide food for both the incubating and brooding females as well as for the young. Additionally, these sorts of hands-on management techniques are often used in conservation when reintroducing or translocating populations to new habitats.

Since the Waikamoi Preserve is a relatively newly ungulate free area where restoration is still occurring, the Kiwikiu may be suffering from a lack of available arthropod prey. Food stations may be able to supplement prey items for Kiwikiu, especially during periods of heavy rain when finding food may be especially challenging for this species. The stations consist of an upside down bucket where mealworms live and slowly disperse into the lower platform where they are then available to the birds. We aim to put stations nearby nesting Kiwikiu or in high activity areas of pairs' home ranges. The stations will then be monitored though remote cameras and observations to see if Kiwikiu or any other species are utilizing them.

If we are able to implement a design that the Kiwikiu prove to use, it could be a powerful management tool for both increasing the current population of Kiwikiu and supporting a reintroduced population on the leeward side of Haleakala.

Partners in this project include State of Hawaii Division of Forestry and Wildlife, The Nature Conservancy Maui, The American Bird Conservancy, and the Mohamad bin Zayed Species Conservation Fund.