



SEMI-ANNUAL REPORT – October 2010

Maui Parrotbill Receives Hawaiian Name

The Kiwikiu blessing and name dedication ceremony, a culmination of two years of collaboration from multiple agencies, took place in Waikamoi Preserve September 12th, 2010 at 10am. Arriving to a sunny morning on the mountain, a group of 85 people hiked into the forest for a ceremony to celebrate the critically endangered Maui Parrotbill or Kiwikiu. The group was comprised of biologists, conservation donors, and community members.

For reasons no one fully knows, this bird had no historically recorded Hawaiian name. Working with ornithologists to get an intimate understanding of this species, the Hawaiian Language Lexicon Committee decided on Kiwikiu as an appropriate Hawaiian name for the Parrotbill in May 2010.

With only about 500 birds still in existence today, the Kiwikiu, an endemic species to the island of Maui, is one of our most precious biodiversity jewels. The Kiwikiu is a classic example of adaptive radiation. As an insectivorous honeycreeper, the Kiwikiu uses its robust parrot-like bill to snap through twigs and pry insect larvae out of wood in the 'ōhi'a and koa forests of Maui.

There were many who contributed to the ceremony. One was Betsy Gagne, the executive secretary of the Natural Area Reserves System Commission of the State of Hawai'i Department of Land and Natural Resources, Division of Forestry and Wildlife. Betsy gave a brief overview of "Hana Mountain", starting in Kipahulu where Kiwikiu was rediscovered in 1967. She said that it's not a story of failure but one of long, hard-won successes.

Another contributor was Samuel M. 'Ohukani'ōhi'a Gon III, Senior Scientist and Cultural Advisor for The Nature Conservancy of Hawai'i. Sam has been trained in Hawaiian chant and protocol, and underwent traditional 'uniki rites to emerge as a kahuna kakalaleo, a practitioner of chant and protocol. Sam expressed his aloha for the Kiwikiu and the other forest birds in his composition of oli inoa (name chant). Cody Pueo Pata offered a mele inoa (name song) for the Kiwikiu as a mele hula along with two of his 'olapa, Ku'u lei Alcomindras-Palakiko and Kapua Nacua. Pueo is the kumu hula of the Maui halau, Ka Malama Mahilani and is trained in traditional aspects of haku mele (song composition).

Additionally, representatives from The Nature Conservancy, Haleakalā National Park, the Office of the Mayor, the Hawaiian Language Lexicon Committee and the Maui Forest Bird Recovery Project all contributed in the ceremony.

To view news coverage of this event, visit our MFBRP website and go to the Kiwikiu, under Maui Honeycreepers.

Sam Gon and Pueo Pata and two of his students in Waikamoi Preserve during the Kiwikiu naming ceremony.

Photo by Randy Bartlett



Field Season 2010

The Maui Forest Bird Recovery Project had another busy field season this year. To complement our permanent staff, we hired six additional technicians starting in February. Devon Anderson, Richard Aracil and Charissa Rujanavech made up the Po'ouli Camp team, and Jenny Hazelhurst, Ehren Banfield, and Adam Elzinga made up the Frisbee Meadows team. They worked alongside MFBRP staff until June, recording data on Maui Kiwikiu (Maui Parrotbill) and their productivity.

At Po'ouli Camp, the team put in about 200 person days of effort, which came out to 840 hours of bird research. At Frisbee Meadows, 247 person days were put into the season, totaling 1366 hours. Technicians spent their days resighting Maui 'Alauahio, 'Akohekohe and Kiwikiu. Of banded individuals, 59 Alauahio and 17 Kiwikiu were seen at Po'ouli Camp, and 5 'Akohekohe, 93 'Alauahio and 13 Kiwikiu were located at Frisbee Meadows.

In addition to searching for Maui Parrotbill, the teams conducted variable circular plot (VCP) point counts for all bird species and 500 meter transects counts for Kiwikiu, 'Alauahio and 'Akohekohe. Data from these methods are used to estimate relative abundance with and without rodent reduction efforts in place.

The teams met at the end of the season to determine productivity at their respective sites. Po'ouli Camp found nine Parrotbill pairs, of which five had fledglings. Frisbee Meadows had 18 Parrotbill pairs, of which six had fledglings. At the end of the season, one nest was still active at Frisbee with a hatchling being fed by the female.

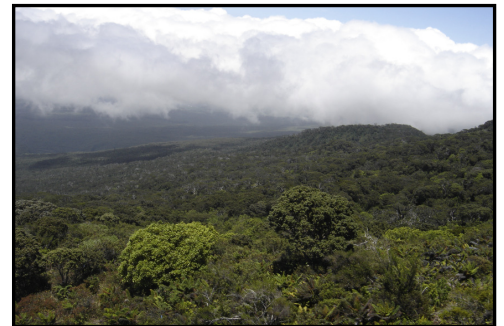
Starting in June, Tawny Neal joined MFBRP for a summer internship. Tawny, a Kaua'i raised molecular biology student at Humboldt State University, spent the summer sorting through fecal samples that MFBRP has collected over the past 4 years. Arthropod body parts found in the samples will later be identified by USGS/BRD to help further the understanding of Kiwikiu and 'Alauahio diets and prey preferences.



Staff member, Hanna Mounce teaches intern, Tawny Neal how to extract birds from nets.

In July, three volunteers also joined MFBRP: Elizabeth Burris, Jesse Agee, and Lidia D'Amico. Along with Tawny, these three assisted MFBRP staff in banding efforts at both Po'ouli Camp and Frisbee Meadows. At Po'ouli, we captured a Melodious Laughing Thrush, a rarity for Hanawi. With one banded individual, we hope to be able to monitor how many individuals may be present in the area.

While the Parrotbill eluded us during the first July banding trip, the team was able to catch a Maui Parrotbill at Frisbee Meadows during the second field trip. It was an unbanded male of one of the pairs that the team had been watching all season. Unfortunately, this pair did not have a fledgling this year, but we should be able to watch this pair more accurately next year now that the male is color banded.



Frisbee Meadows



Technicians and staff pictured with MFBRP sign. Bottom left to right: Ehren Banfield, Laura Berthold, Adam Elzinga, Rich Aracil, Devon Anderson. Top left to right: Charissa Rujanavech, Hanna Mounce.

In September, we repeated our Waikamoi Rare Bird Search with five volunteers: Brooks Rownd, Dawn Tanner, Sean Prockter, Howard Higley, and Julie Landreth. Brooks was a great asset as a returning participant from last year. The repeat of point counts and 500 meter transects will allow us to compare Maui Parrotbill numbers between the years and between this site and the Hanawi Natural Area Reserve. Although we are still analyzing data, the search revealed at least three fledgling Kiwikiu in the area. Three banded individuals were also resighted including a newly discovered pair. These two years of research in Waikamoi Preserve have yielded better techniques for surveying rare and endangered Hawaiian forest birds.

We'd like to thank our entire field team of the 2010 season: technicians, volunteers, and interns. It was a great year and the help that these people put in will allow MFBRP to continue working to recover Maui's native forest birds! Mahalo!



Photos from the Waikamoi Survey. Left: Volunteers, Sean Prockter and Howard Higley overlook the view from Waikamoi Preserve. Right: Part of the team, Brooks Rownd, Sean Prockter, Laura Berthold, and Kelly Ikanayan, set up camp.

Coming soon to www.mauiforestbirds.org - Maui Forest Bird Recovery Project 5-year Report

This report will highlight the work that the Maui Forest Bird Recovery Project has done from 2005 to 2010. The report will be available for viewing on the website soon.

MAUI BREWING COMPANY BENEFIT NIGHTS

Thanks to the Maui Brewing Company for supporting us with their pint night fundraisers this year and to all of those who have attended. The three benefit nights have been successful thus far.



Come out for our last one on **December 10th**, from 6pm to midnight. Remember half of the proceeds from the nights' pints will go to MFBRP.

Kahana Gateway Center
4405 Honoapiilani Highway
Past Lahaina as you head to Napili

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

RECENT MAUI FOREST BIRD RECOVERY PROJECT PUBLICATIONS:

Coming soon to *Elepaio* - “Abundance of Endangered Maui Parrotbill (*Pseudonestor xanthophrys*) in Waikamoi Preserve West of Ko'olau Gap”

Information about the endangered Maui Parrotbill and its distribution and abundance is required for its recovery. In the Hanawi Natural Area Reserve, the species core area, Parrotbill density has been estimated as 40 birds/km². Densities elsewhere have not been well quantified. To determine the species' abundance at the western most part of its range in The Nature Conservancy's Waikamoi Preserve, Maui Forest Bird Recovery Project conducted a two week rare bird search. Point counts and 500 meter transects provided estimates for the number of Parrotbill found between Waikamoi Stream and Ko'olau Gap. This paper reports some of the findings of this intensive study.

MFBRP at the Hawai'i Conservation Conference

The Maui Forest Bird Recovery Project staff presented three posters at the Hawai'i Conservation Conference in August. The following is a summary of these posters. PDFs of the posters can also be viewed on MFBRP's website.

“Effect of Rodent Reduction on Number of Forest Birds in a Hawaiian Rainforest”

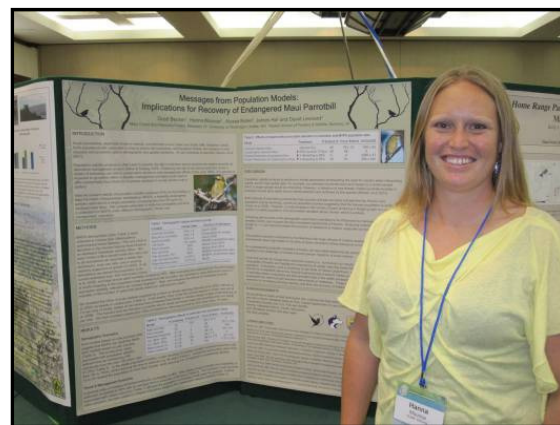
A rodent reduction program has been maintained within 26 hectares of Hanawi Natural Area Reserve for over ten years. While this program reduces rat numbers, it is unknown whether it benefits forest bird populations within Hanawi. To evaluate this, we used point counts and transects to estimate bird numbers within the rodent reduction area and within an untreated area. Transects indicated that Maui 'Alauahio (*Paroreomyza montana*) were more numerous in the rodent removal area and had larger group sizes. 'I'iwi (*Vestiaria coccinea*), Japanese White-eye (*Zosterops japonicas*) and Red-billed Leiothrix (*Leiothrix lutea*) had more numbers on the rodent reduction grid. These results show the complexity of avian communities' responses to rodent reduction. Continued control of predators and the monitoring of this is needed in a broader scale in order to help native forests and birds.

“Home Range Patterns of Maui 'Alauahio and Maui Parrotbill”

We compared home range sizes of Maui 'Alauahio (*Paroreomyza montana*) and Maui Parrotbill (*Pseudonestor xanthophrys*). We used the GPS locations of re-sighted color-banded birds to make area polygons in Arc View 9.3. Maui Alauahio home ranges varied from 0.15 to 3.3 hectares with 75% of ranges under 1.2 hectares. Maui Parrotbill home ranges varied from 0.4 to 12.4 hectares with 75% under 6 hectares. No statistically significant sex differences were found in home range size for either species. Parrotbill home ranges differed between sites as well, having larger home ranges on the non-rodent reduction site. These differences can be associated with food availability and habitat resources. 'Alauahio are a generalist species while Parrotbill are specialized and need more area to forage.

“Messages from Population Models: Implications for Recovery of Endangered Maui Parrotbill”

We explored the use of population viability analyses (PVA) to estimate time to extinction in Maui Parrotbill (*Pseudonestor xanthophrys*). We examined effects of variation in productivity, juvenile mortality, and reproductive life time of Parrotbill. We also modeled effects of rodent reduction on population viability and time to extinction with and without increases in avian malaria associated with climate change. For the malaria modeling we compared a steady 1% annual increase in mortality across all sex and age classes and a catastrophic but random mortality of 50% of the population every 10 years. Our most significant result was that rodent reduction mitigated for climate change in the model with gradual malaria influx but failed to sustain the population in the catastrophic scenario.



Aloha! Farewell Fellow Conservationists

By Dusti Becker, MFBRP Project Coordinator

Sandwiched between two wild worlds of coral lined ocean and high mountain wet forests, I have become schizophrenic in love of Maui.

It's been an honor to help care for Maui's unique native birds and their realm of dripping moss laden ōhi'a forests on Haleakalā volcano. Since April 2008, working as the MFBRP Project Coordinator, I shared many weeks slipping up and down muddy slopes, navigating the entangled gym-like tree roots while searching for the rare Maui Parrotbill or Kiwikiu, 'Ākohekohe, and other native birds with young field biologists. We discovered so much together! I thank them for youthful enthusiasm, hope, and dedication.



My advice to the team: Monitor results and keep doing science-driven adaptive conservation. Be kind to each other, grow the effort and yourselves. Understand avian malaria and climate change, understand each other.

Weekends away from native birds were spent snorkeling with my dear husband, Tony, exploring many of the reefs rimming Maui. We discovered that the two small marine reserves, Honolua and 'Ahihi-Kina'u, are keeping fish abundant and marine ecosystems healthy. Sadly, we found that most of Maui's reefs are nearly fishless, plundered by nets, lines and hooks, and are sick with algae and silt causing zooxanthellae to abandon "ship" - coral bleaching. More reefs protected from pollution and fishing is needed for recovery of healthy fish populations and coral, in much the same way that a lei of high forest is needed for healthy watersheds and Maui's native wildlife. From sea to mountain top, Lono, Kane, Pele, and other powers dwell in marine reserves and protected forests like Hanawi, Kīpahulu, Haleakalā, Kahikinui, Auwahi, and Waikamoi, the starter beads for Maui's forest lei, all giving hope for Hawaiian Renaissance.

Wild Maui is a place of wonder, of health, of good spirit, and many people are working hard to sustain it. It's been a pleasure to meet and work with dedicated conservationists from the watershed partnerships, TNC, the Maui Nui Marine Council, ALL DLNR divisions, USFWS endangered species team, artists, naturalists, birders, hikers, pono hunters and fishers, and private stewards of nature. Mahalo for your work to preserve, to protect, to restore, and to recover Maui's wild nature! And thanks to the helicopter companies and pilots who help us all do conservation work! Keep up your good work!

Some people stay and cultivate while others like to move to new places to do new things. I am of the latter camp, perhaps adult attention deficit, perhaps natural selection that spread our species to all corners like Polynesians on a Hōkūle`a bound wind. When I worked in Kenya, I was given the name Njeri (helpful wanderer).

I hope that in my role at MFBRP I have been of help to Maui's wild native birds and their conservation. My next adventure will be to develop nature tourism that supports local villages dedicated to sustaining natural areas on communal property. A bird-watching ecotour to West Papua is on the horizon for summer 2012 and volunteers are needed to help with avian monitoring twice per year in Ecuador.

Aloha nui loa!

Dusti leaves MFBRP mid-November. Stay in touch with her by checking the Life Net website at www.lifenetnature.org or by e-mail dbecker@lifenetnature.org.

MFBRP Goes International

Hanna Mounce, Avian Conservation Research Facilitator for Maui Forest Bird Recovery Project, is doing exciting MFBRP research at the University of Kent in England this October through December. She aims to compare genetic variation of the current Maui Parrotbill population with that of 100 year old museum specimens. Since 2005, MFBRP has been collecting feather and blood samples for these genetics analyses. Hanna is conducting this work under the supervision of Dr. Jim Groombridge, a previous MFBRP project coordinator. To examine Parrotbill across their range, the contemporary Parrotbill samples we have collected thus far are from Hanawi Natural Area Reserve, Waikamoi Preserve and Kīpahulu in Haleakalā National Park.



A suite of avian microsatellite markers that amplify successfully in Maui Parrotbill have already been developed and will be used along with mtDNA control region sequence data. Demographic and evolutionary genetic data provide guidance for the future management of Parrotbill. Knowledge of genetic diversity will inform management for captive populations and selection of birds for translocations to new areas of restored habitat on the leeward side of Maui where State-owned lands offer a potential site for the establishment of an important second population. Hanna's work is funded by a variety of agency, non-profits, and private partnerships.

We will have preliminary results from our contemporary samples in January 2011.

MFBRP RESEARCH TECHNICIAN POSITIONS:

RESEARCH ASSISTANTS needed beginning February 2010 for studies of Kiwīkiu. Position lasts for five months.



Primary field duties will be: (1) locating and re-sighting Kiwīkiu; (2) mapping pairs and individuals; (3) locating nests, collecting field data on nest sites and reproductive behavior, determining nest success or failure and experimenting with nest camera set-ups; (4) conducting transects and point counts; (5) assisting staff with other ongoing projects. Office duties include, but are not limited to office, vehicle and grounds maintenance, and data entry.

Preference will be given to applicants who have experience with passerine research, re-sighting color-banded forest birds and experience in wilderness settings. Assistants must be able to work and live in remote field camps under extremely physically and mentally demanding conditions, to work independently and responsibly, have a good work ethic and take personal initiative. To apply, complete the job application at www.mauiforestbirds.org by **OCTOBER 29TH**. If you have any further questions please email employment@mauiforestbirds.org.

SUPPORT MAUI BIRDS WITH A DONATION TO MFBRP



The Maui Forest Bird Recovery Project would like to thank all of the individuals who have aided our research efforts this year through monetary and equipment donations.

If you'd like to support avian conservation in Maui, please send your tax-deductible donation at any time with a check made out to Tri-Isle RC&D. Mail your check to MFBRP, 2465 Olinda Road, Makawao, HI 96768. We also gratefully accept equipment donations. Our wish list includes a scanner, a pressure washer, a laminator, new rubber boots and a van.

Photo © MFBRP/DOFAW by Adam Elzinga