



## QUARTERLY REPORT – OCTOBER 2009

### IT'S FOR THE BIRDS 2009

The Maui Forest Bird Recovery Project is pleased to announce its first annual gala event. It will be an evening celebration that will help to benefit future research and recovery efforts of Maui's native forest bird species.

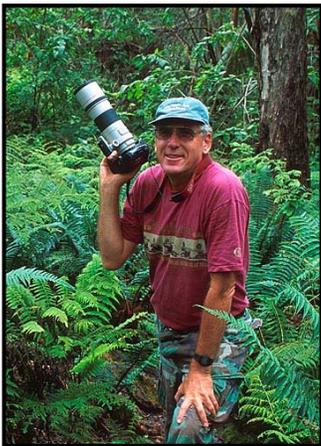
**It's for the Birds** will be held at the *Hui No'eau Visual Arts Center* in Makawao on **November 14th**.

The November 14<sup>th</sup> event will start at 4 pm. The entertainment will include music performed by **George Kahumoku, Jr.**, 3-time Grammy award winning slack-key guitar musician and local farmer and teacher. In addition to George, **Halemanu**, another local Maui musician will also entertain us with his ukulele and guitar styling.



Hawaii Amakihi by Jack Jeffrey

**Jack Jeffrey**, joining us from the Big Island, is one of Hawaii's talented photographers and dedicated conservationists. He will be giving a presentation titled "Hawaii's forest birds: On the brink of Extinction?". He brings to his images the knowledge from over 35 years of observation and study of Hawaii's endemic birds as a wildlife biologist. Jack also combines a naturalist's curiosity with a photographer's patience and technical skill to produce beautiful images of Hawaii's endemic avifauna. Jack is the recipient of the prestigious National Sierra Club Ansel Adams' Award for Conservation Photography, Hawaii Audubon Society Conservationist of the Year Award, the U.S. Fish and Wildlife Endangered Species Recovery Champion Award and The Nature Conservancy of Hawaii Kako'o Aina Award. Jack is co-author of two books, "Hawaii's Beautiful Birds", and "The Pocket Guide to Hawaii's Birds". His photography has been featured in numerous local, national, and international magazines, books and calendars.



In addition to the night's activities, one will be able to enjoy pupus and mingle with other local biologists. St. James Spirits of Southern California and Jim Busittill have kindly provided wine to be served throughout the evening. A silent auction featuring gift certificates to local Maui restaurants, island activities, jewelry and art will also continue throughout the evening.

The Hui No'eau has graciously donated their space to us and because of this we would like to thank them for supporting Maui's native forest birds and our work.

Tickets are \$100 per person and can be purchased by sending a check payable to Tri-Isle RC& D to 2465 Olinda Road, Makawao, HI 96768. For more information please call 808-573-0280 or e-mail [itsforthebirds2009@gmail.com](mailto:itsforthebirds2009@gmail.com).

We'd like to thank all those involved in the event: Hui No'eau Visual Arts Center, Island Rents, Jim Busittill and St. James Spirits, Ian Blakeslee, Jack Jeffrey, Halemanu, and George Kahumoku, and the many donors to our silent auction.

# PREDICTING THE EFFECTS OF CLIMATE CHANGE ON MAUI PARROTBILL (*Pseudonestor xanthophrys*)

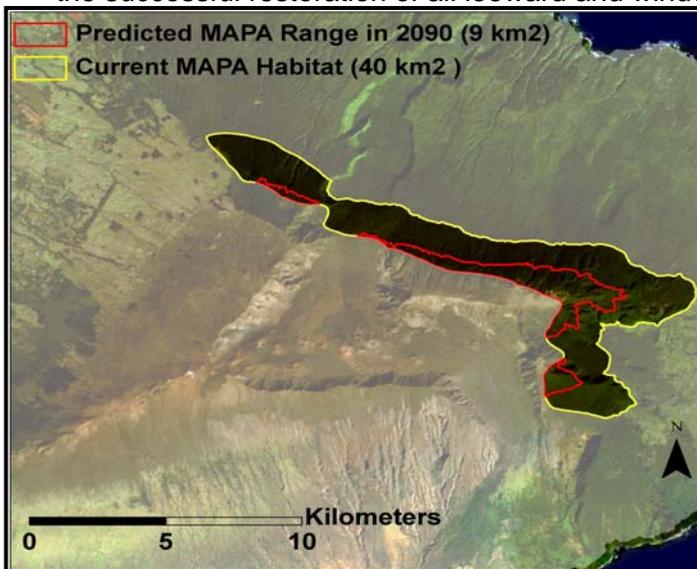
Summary from HCC 2009 poster presentation by Ruby Hammond, Dusti Becker,  
Wayne Li and David Leonard

The Maui Parrotbill, a critically endangered honeycreeper endemic to Maui, once existed throughout forested areas of Maui and Molokai. Habitat loss and degradation and alien diseases (e.g., avian malaria and avian pox) have dramatically reduced the species' range and population size. Currently about 500 individuals comprise the sole population which occupies approximately 50 km<sup>2</sup> of wet, ohia-dominant forest on the windward slope of Haleakala. Climate change will likely increase the range of disease vectors (i.e., mosquitoes), and thus further reduce the amount of available habitat suitable for parrotbill.

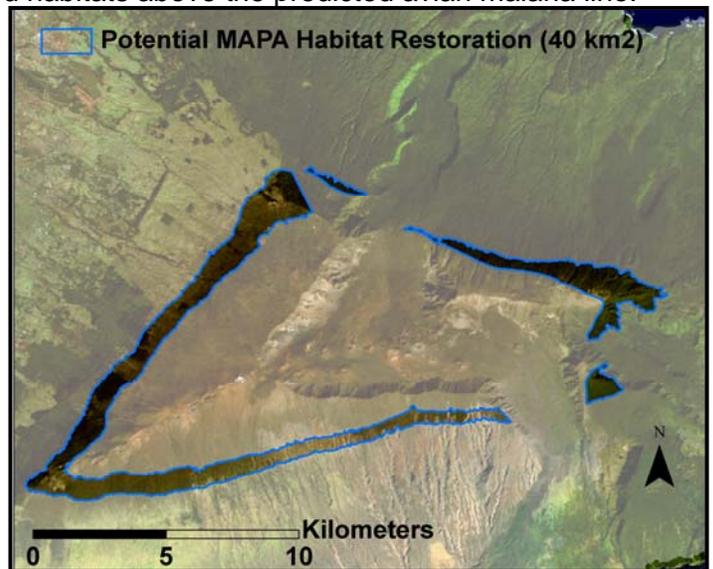
The prediction of potential vertical movement of avian malaria by the year 2090 is based on a 0.27°C/decade temperature increase and a lapse rate of 0.55°C/100m. Based on our home range data, the parrotbill range in 2090 will only be about 9 km<sup>2</sup> (Fig.1), and it would only support an upper limit of 100 pairs. Restoring leeward forests on east Maui would increase the amount of available habitat to 40 km<sup>2</sup> (Fig. 2), which could potentially support 500 pairs, based on home range estimates from Hanawi.

If current temperature trends continue, habitat with a low-risk of disease could be reduced by as much as 75% leading to a dramatic loss of birds (Fig. 1). Unfortunately, disease moving upslope is not the only threat to native birds posed by climate change. It is likely that changes in frequency of occurrence and elevation of the trade wind inversion could also affect forest bird habitat.

Efforts to reforest portions of the leeward slope of east Maui are being planned to establish a second Maui parrotbill population. Parrotbill survival into the next century may ultimately depend on the successful restoration of all leeward and windward habitats above the predicted avian malaria line.



**Figure 1.** Model of Maui Parrotbill habitat restricted by avian malaria both presently (yellow contour) and for the year 2090 (red contour)



**Figure 2.** Predicted Maui Parrotbill habitat for 2090 if all leeward, east Maui habitat is restored.

## LIFE IN HANAWI

*By Laura Berthold, 2009 HYCC Intern*

The first time I came to Hanawi Natural Area Reserve, I came by helicopter. My excitement was soaring as we flew over a sea of trees and waterfalls. I couldn't believe that I was going to get to work in one of the most pristine rainforests in Hawaii. The view from the helicopter though couldn't prepare me for my actual experience in the forest.



For about twelve days at a time, my coworkers and I live and work "in the field" as we call it. "The field" is the wilderness where we research native Maui forest birds. Here we have no shower or electricity although some of us choose to wash our faces or take "sponge" baths. We also capture energy from the sun through the use of solar panels, so sometimes we sneak in some music and dancing time. We live in a relatively warm cabin with sleeping bags and small mattresses and a stove and sink. Our impact on the environment is very minimal while we're out here since we don't use much electricity or water. Our water actually comes from the rain. And it rains a lot here- almost 2 inches a day in the winter with 6 inches being the highest for me so far.

While we are out here, we explore Hanawi in order to find Maui Parrotbill nests. Hanawi is a rainforest where one can see ohia trees blooming with their pinkish red flowers and kanawao berries looking a very delicious purple. These two plants are very important to the birds here. I've watched three apapane, a bright red, black, and white bird, forage in an ohia tree, drinking from the flowers, while several alauahio are heard chipping nearby in the same tree. While out here, these are things to look forward to seeing. Some days, all of our clothes are soaked through even while wearing rain jackets, pants, hats, and big rubber boots. Sometimes my hands are so frozen that I can't even use my binoculars to see the birds we are searching for.

But on those almost clear days when the sun can shine a little between the clouds I am reminded of my first feelings on the helicopter- the excitement to be here in Hanawi, in Hawaii. This excitement increases every time I find or hear a Parrotbill, an elegant yellowish green bird with a hooked bill, and every time an Alauahio comes over to say hello with a chip. On these days I look out to the ocean and hope that one day what we're doing here will influence the ecology of this place positively- that these birds will be appreciated and will increase in population. Right now there are about 500 Parrotbills left and 3800 Akohekohe, Maui's two most endangered forest birds. These native birds, though, have outlasted other birds that unfortunately became extinct because of exotic avian disease, decreased habitat size, changing climate, alien predators, as well as other hardships. Hopefully, through our research and through human's conscious decisions these birds and others will begin to thrive again.

Even though at times in Hanawi, I can become frustrated with the cold, rain, isolation, and lack of bird sights, I know that what we're doing out there can help an entire species as well as the island and the world it's located on. I am lucky to be able to spend my days watching these rare beautiful creatures. Our connection to nature is important and some forget it. Without these healthy ecosystems and wildlife populations, the world wouldn't be the same- humanity could likely not even survive. To me, it is our responsibility to take care of these precious ecosystems.

As I hike back to civilization these thoughts encircle my head. It will be nice to have a break from the countless ferns, cold, and wilderness. But I will be anxious to get back in the field and will be hoping that there are nests and hatchlings to find in Hanawi. Until then, I will dream about the birds and continue hearing them in my head throughout the day...or maybe I'll just enjoy another part of Hawaii: the beach.

### **MFBRP VOLUNTEER POSITION:**

RESEARCH VOLUNTEERS needed this January for banding efforts of Maui Parrotbill. Primary field duties would include aiding staff with mist-netting and banding of Maui Parrotbill, 'Alauahio and other forest birds. Field duties are extremely physically challenging, working at 5,000-7,000 ft elevation, in extremely wet (annual rainfall up to 400 inches), cold, muddy and steep rainforest conditions.

Desirable Qualifications: (1) Mist-netting and banding experience with passerines, primarily set-up and handling of mist nets and extracting birds and (2) hiking in steep backcountry terrain.

Work schedule will include training on January 7th and 8th and 2 field trips January 11-18 and January 25-February 1 with a break in between for your own free time to explore Maui. Volunteers will provide their own food during their stay as well as transport to and from Kahului, Maui. The Maui Forest Bird Recovery Project is asking for a \$500 donation to help off-set the costs of helicopter transport and field supplies. (Donation may be subject to waiver depending upon experience). To apply please send a cover letter outlining your ornithological experience and expertise with special attention to mist netting experience to Hanna Mounce - mounce@hawaii.edu



**Maui Forest Bird  
Recovery Project**  
*presents*  
**a Talk and Hike**



*Join MFBRP for a lecture on Hawaii's amazing avian biodiversity. Experience native Hawaiian honeycreepers through images, sounds, and video. Learn about current conservation efforts and threats to Hawaii's native species.*

**Tuesday, November 3, 2009**  
**7:30 - 8:30 pm**  
The Fairmont Kea Lani Ballroom  
4100 Wailea Alanui Drive, Maui  
And

*Join us on a hike through native cloud forest in The Nature Conservancy's Waikamoi Preserve to experience Maui's treasures in person*

**Saturday, November 7, 2009 9:00 am**  
call 573-0280 for hike reservations  
or email: [hike@mauiforestbirds.org](mailto:hike@mauiforestbirds.org)



*This event was made possible with support by:*



**HAWAII**  
TOURISM AUTHORITY

## **MFBRP 2010 Calendars**

*with photography by  
Mike Neal featuring  
Maui's native bird  
species*

**All proceeds go to the  
Maui Forest Bird  
Recovery Project!!!!**

**ORDER NOW @**

<http://www.cafepress.com/NealStudios.411742427>





## **PO'OULI CAMP IMPROVEMENTS**

A special thanks to Chris and Hurick for coming into the field with us and constructing a new boardwalk around Po'ouli Cabin. Using our less than stellar construction skills, we have been fixing the stairs from the landing zone up to the cabin for years now. Chris and Hurick, who also constructed the boardwalk in the Puu Kukui Watershed, came out, donated their time and built us some great steps!



## **MAPA and MACR RESIGHTS IN WAIKAMOI**



In our efforts to understand more about Maui Parrotbill and Alauahio populations on the edges of their range, and to collect genetic samples, MFBRP, in collaboration with The Nature Conservancy, has begun to band birds in Waikamoi Preserve. Some of these birds may be seen along trails used by Haleakala National Park and The Audubon Society in their monthly hikes along the boardwalk and the short bird loop. If you participate in these hikes, we need your kokua!. Please report any banded bird that you see! Each individual has a unique combination of bands including 3 colors and 1 metal USFWS band. Bands may be black, white, red, yellow, green or blue. Please keep track of the order of the colors on each leg and where you saw the bird and report them to MFBRP. MAHALO!!



## **RECENT CHANGES AT MFBRP**

Many thanks to Ruby Hammond for her service with MFBRP 2007-2009. Ruby contributed greatly to field research, crew leadership, and developed our GIS productivity (see article on mosquito line and global climate change). We wish her the best of luck as she pursues personal and academic goals. Kelly Iknayan was a natural fit for the vacancy of Ornithological Research Assistant/GIS Technician at MFBRP. She worked with us as a field biologist and has excellent office and science skills. She has a Bachelors in Biology from the University of Michigan and arrived with experience on other avian conservation projects. We are happy to have her on our team. Welcome Kelly!



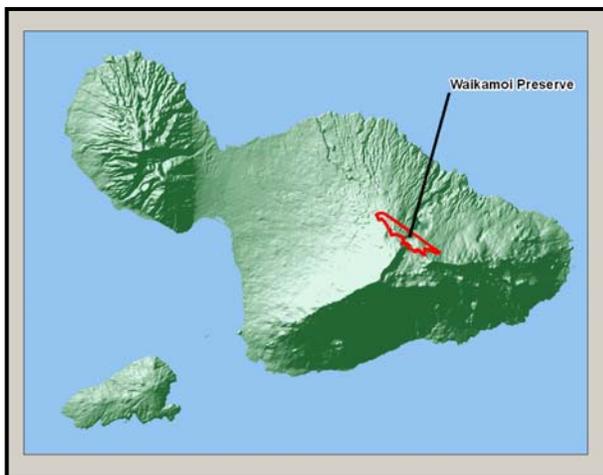


## **Volunteers Help with Rare Bird Search Dr. Dusti Becker, Project Coordinator**

For decades, Maui Parrotbill (MAPA) density has hovered around 40 birds/km<sup>2</sup> in the wet ohia forests of Hanawi NAR. Densities elsewhere are less known. For example, at The Nature Conservancy's Waikamoi Preserve, 30% of the current range of the endangered parrotbill, numbers are uncertain. MAPA reproduction in the preserve has not been verified. MFBRP put out a call for volunteers to help with a rare bird search at Waikamoi to fill these important knowledge gaps.

Patricia Fitzgerald flew to Maui from New York. She had been on teams searching for the super rare ivory billed woodpecker. Andrew Keaveney, a globe-trotting birder came from Canada, and then was off to China. Brooks Rownd, experienced with Hawaiian bird surveys joined us from the Big Island, and Thomas Juhasz took a break from endangered species work in California to give us a hand. Volunteers learned search techniques with MFBRP staff by shadowing them the first week and then searched more independently during the second week, working in pairs for safety. MFBRP staff, Kelly Iknayan and Dusti Becker, and AmeriCorps Volunteers, Laura Berthold and Wayne Li trained volunteers and led the effort.

At Hanawi NAR we had collected data on detection rates of MAPA and completed 200 point counts to relate to the known density there. We decided to repeat these methods at Waikamoi, west of the Koolau Gap, so as to estimate MAPA densities in the mixed koa-ohia mesic forest. Searches and counts along trails and transects of known distance were completed September 7-18, 2009. We logged 560 person hours in the field, with time spent in parrotbill habitat totaling 186 hours. Based on 70 point counts in Waikamoi, birds per station averaged 0.08, about half the mean at Hanawi (0.15), and the difference was significant at a 93% confidence level. This suggests density of MAPA at Waikamoi is around 20 birds/km<sup>2</sup>. Still, the highest single day encounter rate for MAPA at Waikamoi was 10 individuals/km<sup>2</sup>, but detections are heavily biased towards adult males as their "chewy, chewy, chewy" song echoes through the forest. We found one begging juvenile MAPA during the search and another different juvenile while we were setting transects in July, so we can say with confidence that Waikamoi hosts a breeding population.



At Hanawi, we have mapped color-banded individuals, and we know pair home ranges. By the end of the 2009 breeding season we had evidence that at least 46 breeding adults and 15 young were carrying out their lives in about 1 km<sup>2</sup>.

Our comparative approach provides new ballpark estimates for MAPA density at Waikamoi and are useful for predicting distribution and abundance of this rare species in mesic forest as they are restored and recovered. I am grateful to our staff and volunteers for their help to collect the data working long days navigating the steep slopes of Waikamoi in the mist and rain.