

2024

ANNUAL WORKPLAN

Maui Forest Bird Recovery Project





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Maui Forest Bird Recovery Project

MISSION

Our mission is to develop and implement techniques that recover Maui's endangered birds and to restore their habitats through research, development, and application of conservation techniques.

STRUCTURE

Maui Forest Bird Recovery Project (MFBRP) is a project of The Pacific Cooperative Studies Unit part of the Research Corporation of the University of Hawaii at Manoa in association with the Hawai'i Department of Land and Natural Resources (DLNR) Division of Forestry and Wildlife (DOFAW), U.S. Fish and Wildlife Service, US National Park Service, and Nā Koa Manu Conservation Inc.



MFBRRP TEAM



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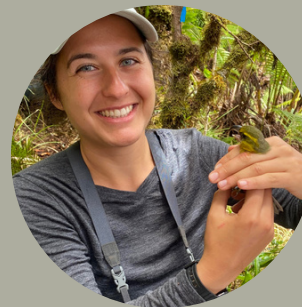
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HOKUAOKA'ALE
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Project Volunteer

PARTNERS

All of our work is done in partnership, under advisement, and in collaboration with a number of partner agencies and organizations.

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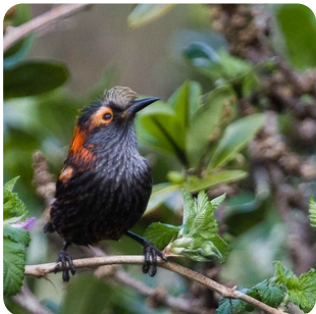
As a part of these collaborations, MFBRP participates in advisory working groups addressing various aspects of our work (e.g. Hui 'Alalā, Kiwikiu Working Group, etc.)



FOCAL PROJECTS



*We focus our efforts on the conservation of the most critically endangered of the surviving Maui honeycreepers, the Maui Parrotbill/kiwikiu (*Pseudonestor xanthophrys*) and 'ākohekohe/Crested honeycreeper (*Palmeria dolei*).*



*These species and other forest birds such as the Maui 'alauahio or Maui creeper (*Paroreomyza montana*) and 'i'iwi (*Drepanis coccinea*) are declining on Maui for many reasons including habitat loss and degradation, introduced predators, non-native ungulates, and introduced diseases.*



Today, introduced diseases, such as avian malaria and avian pox, restrict forest birds to high elevations where low temperatures slow the transmission of mosquito-borne diseases and often prevent the survival of the disease organisms. As temperatures increase with climate change native bird populations are moving to higher elevations.



POPULATION MONITORING AND HABITAT MANAGEMENT

We combine habitat management with ornithological research to understand reasons for declines and the ways in which we can help endangered forest bird species recover.



SPECIES RESTORATION

We are working with partners to establish a wild population of 'alalā within Maui Nui, fulfilling historical ecological functions that are currently missing within our native forests.



2024 PROJECTS

- Endangered Maui Forest Bird Population Research & Management - Pg. 8
- Assessing translocation of ‘ākohekohe to HI Island - Pg. 9
- Mosquito Research and Control - Pg. 10
- Application of BTI biolarvicide to reduce avian malaria in the Hanawi Natural Area Reserve - Pg. 11
- ‘Alalā research, recovery, and management - Pg. 12

ENDANGERED MAUI FOREST BIRD POPULATION RESEARCH & MANAGEMENT

GRANT OBJECTIVES

- Conduct invasive species control on non-native predators such as black rats, free-roaming cats, and Small Indian mongoose in native forest bird habitats.
 - Staff is maintaining and expanding a predator reduction grid in kiwikiu and 'ākohekohe range, covering ~70 ha.
- Engage 16 partner organizations through interagency working groups and assist partners with projects.
- Provide technical expertise for habitat management and species conservation of native Maui forest birds.
 - Staff will assist partner agencies such as Pulama Lāna'i, Maui Nui Seabird Recovery Project, The Nature Conservancy with documenting invasive weeds, feral ungulate activity, infrastructure needs, and bird surveys, predator control, population rapid assessments, weed removal, and/or fence repair projects.
- Conduct point count surveys to monitor forest bird populations on windward East Maui and in Nakula Natural Area Reserve.
- Conduct community education and outreach reaching >10,000 individuals through in-person or virtual events, website, social media engagement, newsletters, education materials, and news media. We will participate and conduct tour operator trainings through the MMCAT program.

These efforts are funded and supported by a State Wildlife Grant.



KIWIKIU CAPTURE & CARE: ESTABLISHMENT OF A CAPTIVE POPULATION TO ENSURE SPECIES PERSISTENCE

GRANT OBJECTIVES

- Capture and transfer individual kiwikiu to captive care. Sites will be selected across the kiwikiu range to maximize genetic diversity, age and sex ratio, and to minimize the impact on wild populations. The kiwikiu population is facing extinction. Creating a captive population will allow for the species to survive into the future and for eventual release once mosquito populations and disease have decreased across the landscape.

These efforts are funded and supported by the U.S. Fish and Wildlife Service Pacific Island Fish and Wildlife Office



ASSESSING TRANSLOCATION OF 'ĀKOHEKOHE TO HAWAI'I ISLAND

GRANT OBJECTIVES

- Hire a translocation coordinator to lead the planning and coordination efforts of Maui's endangered honeycreepers with an anticipated focus of planning for the translocation of the 'ākohekohe from Maui to Hawai'i Island.
- Assemble a translocation advisory hui with the goal of ensuring that all translocation activities are based on sound scientific and regulatory principles and incorporate indigenous perspectives.
- Develop a plan for translocation of 'ākohekohe from Maui to a site on Hawai'i Island.
- Coordinate completion of regulatory and permitting requirements for implementation of the translocation plan.



Supported and funded by USGS Pacific Island Ecosystems Research Center and HCSU.

MOSQUITO RESEARCH & CONTROL

GRANT OBJECTIVES

- Manage a field deployment team to support all aspects of IIT implementation on Maui.
- Coordinate all IIT field deployment team activities with NPS, DLNR, USFWS, and TNC.
- Regularly deploy Wolbachia IIT mosquitoes in Haleakalā NP, Hanawi Natural Area Reserve, and Waikamoi Preserve.
- Monitor and collect Wolbachia IIT mosquitoes and wild Culex mosquitoes in release areas.
- Manage a standardized database for all Wolbachia IIT and wild Culex mosquito data; this includes data entry and Quality Assurance/Quality Control (QA/QC) procedures.
- Analyze and interpret IIT field deployment and monitoring data.

These efforts are funded by the National Park Service.

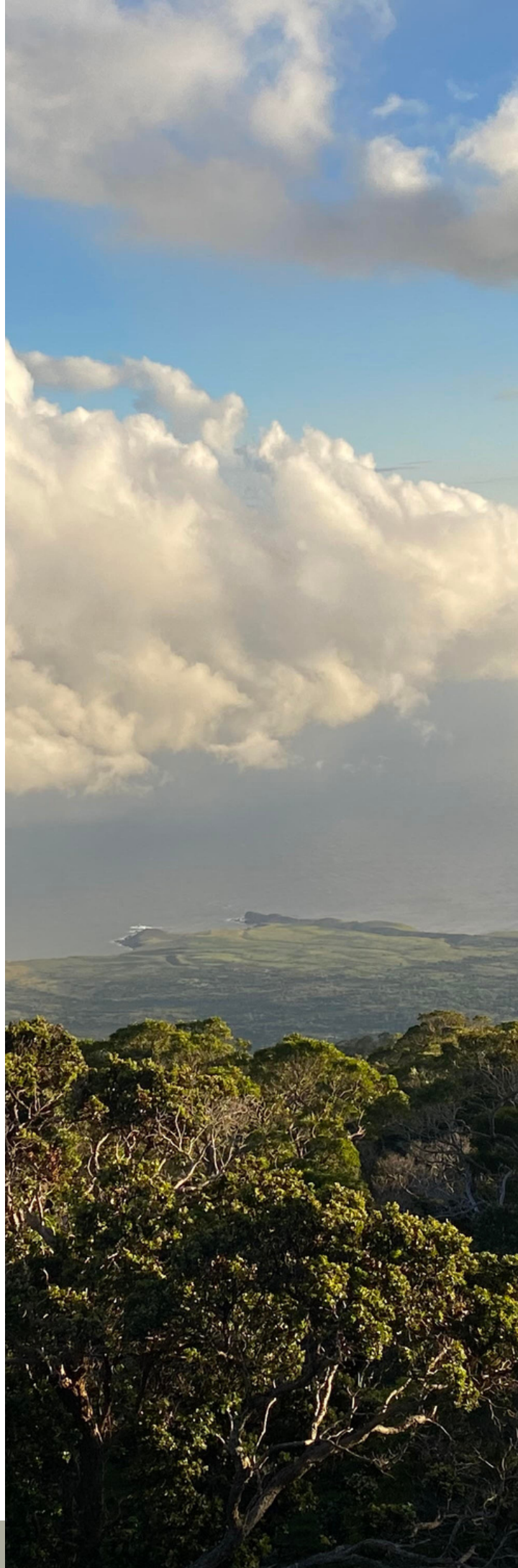


ADVANCING MOSQUITO SUPPRESSION TECHNIQUES:

Application of BTI biolarvicide to reduce avian malaria in Hanawi Natural Area Reserve

GRANT OBJECTIVES

- Conduct a pilot study over 360 acres to use aerial application of Bti to control mosquitoes in and near forest bird habitats on Maui.
- Monitor the efficacy of Bti to control mosquitoes on Maui.
- Expand the Bti treatment area to 1,000 acres within the Hanawi Natural Area Reserve to protect the core populations of kiwikiu and 'ākohekohe.
- Monitor the effectiveness of treatment: use mosquito traps to monitor the prevalence of mosquitoes before, during, and after treatment



'ALALĀ RESEARCH, RECOVERY, AND MANAGEMENT

GRANT OBJECTIVES

- Provide project coordination and administrative support in the planning of reintroduction efforts of 'alalā in Maui Nui.
- Conduct outreach and education to foster community understanding and support before reintroduction actions.
- Provide and maintain open and transparent communication about reintroduction efforts with stakeholders.
- Manage operations to monitor the survival and condition of one cohort of captive-bred 'alalā released into the wild.
- Directly manage four invasive species (free-ranging cats, mongoose, black rats, and Polynesian rats) within the Kipahulu Forest Reserve release area.
- Manage 'alalā released into the wild through supplemental food support, predator control, and monitoring their health and behavior.
- Provide technical expertise necessary for adaptive management within the selected reintroduction site.

These efforts are funded by a USFWS Section 6 grant obtained and supported by State DOFAW.



MFBRP is an active member of the following two projects/programs

BIRDS NOT MOSQUITOES

Birds, Not Mosquitoes is a multi-agency partnership, urgently working to save the native honeycreepers of Hawai'i from extinction. Our plan is to use common, naturally-occurring bacteria as a "mosquito birth control" to suppress mosquito populations in Hawai'i.



Mosquitoes carry serious diseases including avian malaria, which threatens to drive many native Hawaiian forest bird species to extinction in the next few years.

To combat this problem, scientists have developed a method to transfer a naturally-occurring "birth control" bacteria to local mosquitoes in a lab. Only male mosquitoes, which don't bite birds or people and therefore don't transmit diseases, would be released. These male mosquitoes would mate with wild female mosquitoes, but their eggs would not hatch.

This safe, targeted technique could drastically reduce mosquitoes in our forests and potentially save our birds from extinction.

www.birdsnotmosquitoes.org

MAUI MAUKA CONSERVATION AWARENESS TRAINING

MMCAT's goal is to create a mutually beneficial partnership between conservation professionals and tour guides that enhances the quantity and quality of environmental interpretation about Maui's unique species and environments.

In 2013, East Maui Watershed Partnership (EMWP), Maui Forest Bird Recovery Project (MFBRP), and Maui Invasive Species Committee (MISC) collaborated to develop Maui Mauka Conservation Awareness Training (MMCAT). These trainings focus on watersheds, native flora and fauna, and invasive species. Presentations are simple, educational, and fact-based. MMCAT is a train-the-trainer model of working with tourists.



www.mauimauka.org

MFBRP FUTURE NEEDS

MFBRP tries to stretch our funds as far as possible but there are always additional funding needs.

While public funds provide much of our annual operating costs, these funds are limited and the need for these funds is continually expanding to new challenges and new species.

The rest of our operating costs are fulfilled by small grants, corporate donations, and private donations of all sizes. MFBRP is financially sponsored by the not-for-profit Nā Koa Manu Conservation which allows us to accept financial support from these private sources.

www.nkmconservation.org



**NĀ KOA MANU
CONSERVATION**

MAJOR PROJECT NEEDS

OFFICE SOLAR PROJECT SETUP

With increasing needs and rising costs of electricity, MFBRP would like to become more sustainable.

Total cost of the system is \$140,000 including all of the electrical for Solar Off-Grid

Ask is for \$9,000 for up-front to finalize the engineering needed for this project.

MAJOR PROJECT NEEDS



GEAR & OTHER SUPPLIES

We put our gear to the test! Gear is necessary to help keep our crew safe and able to do the work needed to save our species. This year we need specific gear to help us complete or aid us in the work we do for our projects.

6 ft. trailer for transporting long distance sling loads and additional gear to Landing Zones. \$6000

20' storage container for BTI mosquito control supplies. \$8800

400-gallon water tank for preparation of BTI mosquito control. \$7300

MAHALO NUI LOA

*Mahalo to all of our partners,
sponsors, supporters, volunteers and
dedicated team members.*



WAYS TO FOLLOW/SUPPORT

