

HAKALAU FOREST

National Wildlife Refuge



PO Box 6065 Hilo, HI 96720

Issue #9, August 2011

Presidents' perch

*urgent request
from President
Dr Dick Wass*
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How goes the 'lo?

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Volunteering

How you can help
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Bird Trends
Some great news about...
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Service Trips

See how you can go!
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Wouldn't you like to be more active as a Friend of Hakalau?

How about being our web-master? or even updating the web site once it is reconstructed? Save the organization money by volunteering! See #5 next page

Hospitality your talent? Help us with planning a picnic or barbeque for the refuge staff and/or a volunteer appreciation event? See #10 next page

You could take our displays to events like Earth Day and be part of the fans who promote our Friends group. See #1 next page

Use your artistic talents and construct a display for these events - pictures, posters. Also part of #1 next page

Love to get up to the Refuge more? You could be part of a FOHF member-targeted service trips to the Refuge Scan the list for many more ways to help...

Find your place to help, your Board can't do it all.... WE NEED YOU!

SAVE THE DATE

OPEN HOUSE October 22, 2011

Beside showing off the beautiful plants, birds and the new water tank for the Greenhouse, the Friends will have new tee shirts, baseball hats, bird and plant guides, a key-chain flashlight, scarfs, and pens for you to purchase and take home to show your pride in the Hakalau Forest National Wildlife Refuge!

During the May board meeting, the Board approved an ambitious and specific set of GOALS for 2011 that I would like to share:

1. Retain current membership (146) and recruit new members for an overall increase of at least 10%. Conduct members-only field trips. Staff tables at HCC, UH Hilo's Earth Fair, etc. Purchase tri-fold display board and update current display. Produce 4 newsletters.
2. Complete construction of greenhouse water tank.
3. Visit the Maulua Unit with Refuge Manager to discuss potential FOHF projects: Possible projects include repairing the cabin, developing educational displays, and constructing an educational trail.
4. Award a third Jack Jeffrey Conservation Education Grant at January 2012 general membership meeting. Raise at least \$1,000 additional funds for the grant account.
5. Update and keep FOHF website current. Hire a computer-savvy technician (graduate student?) on an hourly basis to make minor changes/additions to the existing website and to update information on a monthly basis. Regularly post newsletters, e-news briefs, board minutes, names of board members, officers and committee chairs, reports, service trip opportunities, annual goals and other information of use to members and the general public. Consider adding a "PayPal button" for on-line payment of membership dues, donations, t-shirt purchases, etc.
6. Conduct fundraising activities driven by the projects undertaken. Look for a ninth Director with fundraising skills and potential funding contacts. Follow-up opportunities to obtain funding grants from agencies such as the Fish and Wildlife Service, National Wildlife Refuge Association, National Fish and Wildlife Foundation, etc. Place another t-shirt order prior to October 2011 Open House.
7. Conduct FOHF member-targeted service trips to the Refuge to provide assistance with plant propagation and outplanting, facilities and trail maintenance, weed control and other refuge management actions.
8. Assist with efforts to train additional primary birders to conduct forest bird surveys on the Refuge and elsewhere in Hawaii.
9. Invite refuge staff to an employee appreciation event such as a picnic or barbeque.
10. Conduct a volunteer appreciation event for all volunteers, perhaps in conjunction with the Refuge Open House.
11. Provide timely political support to the Refuge through meetings with government officials and writing letters that comment on proposed policy and budget allocation.
12. Encourage board members and officers to attend Friends conferences and training sessions through provision of a portion of the registration and travel expenses.

Assistance from all members will be required to accomplish these goals. Please let us know which of these are specific ways you would like to help.

Dick Wass, President

by Rick Camp

USFWS, USGS and Hawai'i Cooperative Studies Unit, University of Hawai'i at Hilo



Extensive surveys in the 1970s identified that native forests in Hamakua, on the slopes of Mauna Kea, were occupied by endangered forest birds (Scott et al., 1986, *Studies in Avian Biology* #9). Vegetation surveys conducted at the same time revealed that endangered birds' distributions coincided with tall stature, closed canopy intact native forests. These high elevation forest and the forest birds were threatened by feral ungulates and invasive alien plants, however. This information was used to justify establishing Hakalau Forest National Wildlife Refuge in 1985.

Management on the Refuge has included ungulate eradication and control, weed control, and monitoring bird abundance with a goal of restoring the forest and stabilizing or reversing population declines in native birds. Achieving these goals, however, requires a long-term investment of management resources before the birds can be expected to respond to improving habitats. More than two decades of management has resulted in the eradication of cattle and control of pigs in the upper management areas, about 2000 ha of weeds controlled in the pasture and upper forests, and the reforestation of pastures with native trees, predominantly koa.

Concurrent with efforts to control threats, forest bird surveys were conducted every spring between 1987 and 2007. Analysis of the annual bird surveys revealed that three species of native birds—Hawai'i 'āmaikihi, 'i'iwi, and 'apapane—and two species of alien birds—Japanese white-eye and house finch—had colonized the reforested pasture and were increasing (Camp et al., 2010, *Condor* 112:196-212). In addition, all three of the endangered forest birds—the 'ākiapōlā'au, Hawai'i creeper, and Hawai'i 'ākepa—have been observed using reforested pasture. Long-term trends for all eight native birds (including Hawai'i 'elepaio and 'ōma'o) were either stable or increasing in the forest. The four alien birds (including red-billed leiothrix and northern cardinal) were also generally stable or increasing.

A long-term trend, regardless of its direction of increasing, stable or decreasing, may be composed of short-term fluctuations or trajectories. Although these fluctuations may just be natural oscillations in population, the short-term trajectories may indicate the start of a shift in the long-term trends. Worryingly, during the most recent nine years, the trajectories of native birds have been mixed, with some species displaying inconclusive or decreasing patterns. These results may indicate emergent problems; however, the monitoring data does not identify causal factors. Continued monitoring will be needed to determine if the short-term trajectories signal the start of a new long-term trend.

Overall, **long-term population trends in the Refuge are stable or increasing. This pattern is not seen elsewhere on Hawaii Island** where most native bird populations are declining (Gorresen et al., 2009, *in Conservation Biology of Hawaiian Forest Birds*, Yale University Press). Habitat restoration has either been lacking at these other localities or has been implemented more recently than and not as intensively as at Hakalau. The Refuge is on the leading edge in understanding the relationships of forest bird recovery on managed lands. Thus, the results of forest restoration and bird monitoring at Hakalau will be watched closely as similar restoration projects of formerly grazed lands and degraded forests are initiated by conservation agencies in Hawai'i. Continued annual bird monitoring in the Refuge is needed to determine whether the bird population dynamics remain positive (i.e., stable or increasing). Research comparing habitat use and demographic response in forests under different management is also needed to yield information on the mechanisms driving bird trends. Integrating these efforts with the other restoration projects in an adaptive management framework will provide feedback to managers identifying best practices.

This summary of bird trends at Hakalau is a product of research and surveys conducted by USFWS, USGS and the University of Hawaii at Hilo. Jack Jeffrey, Marcos Gorresen, Thane Pratt and Bethany Woodworth were co-authors on a paper detailing the results, which can be found in Camp, R. J., T. K. Pratt, P. M. Gorresen, J. J. Jeffrey, and B. L. Woodworth. 2010. Population trends of forest birds at Hakalau Forest National Wildlife Refuge, Hawai'i. *Condor* 112:196-212.

Raptors

'Io

Buteo solitarius

Hawaiian Hawk
Recovery Plan -
USFWS 1984

Photo: Jack Jeffery



SPECIES STATUS:

Federally listed as Endangered
State listed as Endangered
State recognized as Endemic
NatureServe Heritage Rank G2 – Imperiled
IUCN Red List Ranking – Near Threatened

LOCATION AND CONDITION OF KEY HABITAT: 'Io occur in lowland non-native forests, urban areas, agricultural lands, pasturelands, and high elevation native forests with both intact and degraded understory. Although 'io nests have been located in a number of non-native trees, including eucalyptus (*Eucalyptus* spp.), ironwood (*Casuarina equisetifolia*), mango (*Mangifera indica*), coconut palm (*Cocos nucifera*), and macadamia (*Macadamia integrifolia*), of 51 nests, 86 percent occurred in native trees, with 80 percent being in 'ohi'a (*Metrosideros polymorpha*). During the winter, 'io have been reported in subalpine māmane-naio forest (*Sophora chrysophylla* - *Myoporum sandwicense*), suggesting some seasonal movements. Because of the species' use of a wide variety of habitats and a lack of historical population data, key habitat variables are difficult to determine.

THREATS: 'Io are likely susceptible to the same factors that threaten other native Hawaiian birds, including: loss and degradation of habitat, predation by introduced mammals, and disease. For 'io populations, the following are of particular concern:

Shooting, trapping and harassment. Harassment of nesting birds and shooting of adults may be the most significant threat to 'io, although the level of harassment and shooting is difficult to assess.

Contaminants or toxins. Although little recent evidence exists, the presence of organophosphates was noted in a bird recovered from a macadamia orchard. Although it is believed that secondary poisoning resulting from the consumption of rats poisoned with diphacinone poses little threat, however, further study is necessary.

Disease. Early naturalists observed 'io with pox-like lesions. Currently, disease does not appear to threaten the species and because their range includes low-elevation habitats, 'io may be immune to avian malaria (*Plasmodium relictum*) and avian pox (*Poxvirus avium*).

CONSERVATION ACTIONS: 'Io likely have benefited from management activities designed to conserve other endangered birds on the island of Hawai'i including fencing, ungulate and small mammal control, forest restoration, and habitat monitoring. In addition to these efforts, future actions specific to the protection of 'io populations may include the following:

Protection and management of foraging and nesting habitat, including native and non-native forests.

Enforcement of laws prohibiting the harassment, shooting, or trapping of the species.

MONITORING: Regular island-wide population surveys are necessary to determine population trends for this species. This information is needed to assess the efficacy of habitat management efforts.

To receive information regarding Weekend Volunteer Service trips with Hakalau Forest National Wildlife Service, contact FWS at:

Hakalau Forest National Wildlife Refuge
60 Nowelo Street, Suite 100
Hilo, HI 96720 808/433-2300

Email: Jim_Kraus@fws.gov

Occasionally **Friends of Hakalau Forest** will have volunteer service trips. These service trips are volunteer work trips that help fulfill the mission and goals of Hakalau Forest NWR. All FOHF service trips are organized by a member of Friends of Hakalau Forest and done under FWS employee supervision.

The FOHF service trips could be out-planting of native trees, working in the native plant greenhouse, or annual cleaning of the volunteer cabin, or possibly interior or exterior painting of cabins, or other work. If volunteering at Hakalau Forest NWR is of interest and you would like to participate with **Friends of Hakalau Forest**, click on *Newsletters* for announcements of upcoming FOHF members' service trips.

For volunteer opportunities with one of the **Friends of Hakalau Forest's** committees, contact the FOHF President for more information at friendsofhakalauforest@gmail.com List your area(s) of interest & previous experience in interested areas. There's always more work than hands to do it so contact us if you think you might want to get involved.

For opportunities to volunteer with Friends of Hakalau organization, contact the Friends at friendsofhakalauforest@gmail.com



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