

Panhandling by 'Amakihi: A Novel Feeding Behavior For A Hawaiian Honeycreeper

by H. Douglas Pratt¹

The Hawaiian honeycreepers (*Drepanidinae*) are a remarkable group of birds endemic to the Hawaiian Islands. They are often cited as the pre-eminent avian example of adaptive radiation. They are also justly famous as exemplars of other aspects of island biogeography and evolution. Sadly, one of those aspects is the vulnerability of island birds to extinction. Well over half of the named honeycreeper species are extinct (James and Olson 1991), and most of those that survive are endangered (Pratt et al. 1987; U. S. Fish and Wildlife Service 1996). These facts have been interpreted by some to indicate that island birds are less adaptable than continental ones, or that island birds are too specialized to compete with introduced species or withstand perturbations in their habitat. This report will show that at least one species of Hawaiian honeycreeper is highly adaptable and can respond in novel ways to environmental changes and opportunities.

For nearly two decades I have led birding tours in the Hawaiian Islands. One of the sites on virtually any birder's itinerary (Pratt 1995) is Hosmer Grove in Haleakala National Park on Maui. The grove is an experimental plantation of alien trees with a nature trail that leads to a ravine filled with native vegetation including 'Ohi'a (*Metrosideros polymorpha*) and Koa (*Acacia koa*). The grove is surrounded by a native subalpine dry shrubland (Wagner et al. 1990) domi-

nated by Mamane (*Sophora chrysophylla*), Pukiawe (*Syphelia tameiameae*), Pilo (*Coprosma montana*), 'Ohelo 'ai (*Vaccinium reticulatum*), and other shrubs (Pratt 1999). Four species of Hawaiian honeycreeper are common in the area: 'Apapane (*Himatione sanguinea*), 'I'iwi (*estiaria coccinea*), Maui 'Alauahio (*Paroreomyza montana*), and the Maui Nui subspecies of Common 'Amakihi (*Hemignathus virens wilsoni*).



Figure 1. Picnic and camping area at Hosmer Grove, Haleakala National Park,

[I purposely do not use the misleading English name Hawai'i 'Amakihi, adopted by the American Ornithologists' Union (1995) when the 'Amakihi of Kaua'i and O'ahu were elevated to species status, because it implies restriction to the Island of Hawai'i. The original name, Common 'Amakihi, remains appropriate for the core species on Moloka'i, Lana'i, Maui, and Hawai'i.] Adjacent to the grove is a picnic and camping area (Figure 1) with a paved parking lot. The open area and parking lot are surrounded on the side opposite the main grove by mamane and

a few large planted slash pines (*Pinus elliotti*). The pines provide convenient perches for both native and introduced birds, and I have observed both Maui 'Alauahio and Common 'Amakihi apparently foraging in them by picking at the bark of smaller branches. Picnic tables are served by garbage cans and a receptacle for recyclable aluminum cans. Originally this container was a wire mesh cylindrical structure completely open on

all sides. As early as 1990 (I did not note the exact date when I first observed the phenomenon), birders began to notice that several Common 'Amakihi were frequently drinking from the openings in soft drink cans, the sugary liquid therein apparently an acceptable substitute for nectar. By 1993, these birds had begun to forage for crumbs left on picnic tables and had become almost totally fearless of humans. They would approach closely, apparently seeking handouts, and even entered parked vehicles where

they explored the cracks and crevices for tidbits. These birds were not choosy and would even attempt to eat foods that were obviously inappropriate or impossible for them to consume including components of "trail mix" such as dried coconut (Figure 2), raisins, and peanuts. Potato chips seemed to be a favorite, and the birds had obviously learned to break them into bite-size chunks. Prior to my own observations, R. E. David (in litt.) observed an additional unusual feeding behavior: An adult male 'Amakihi fed on a small piece

continued on page 46

of roast chicken impaled on the barbed wire fence that borders the picnic area. The bird "repeatedly visited the offering and was seen to grasp the chicken with the proximal area of its bill and shear from left to right to remove a small portion of meat, which it flew off with."

I did not see any birds actually land on a human hand that year, but by the fall of 1994 at least two different individuals (an adult male and a juvenile aged by its pale wingbars) readily perched on the hand and fed on bread crumbs (Figure 3). Each year, at least one adult male and one adult female were involved in this behavior along with at least one younger bird each year. I noted begging by park-tame 'Amakihi on several subsequent visits, but because I was preoccupied with other tour duties I made no notes or significantly different observations. I experienced a hiatus in visits to Hosmer Grove from 1996 to 1998, but noted on a visit in March 1999 that at least 2 birds were continuing their close approach to humans and apparent begging. In an at-

tempt to discourage this behavior, as well as the human response to it, the National Park Service has recently fastened signs (Figure 4), warning that feeding wild animals in the park is illegal, to all of the picnic tables and replaced the open recycling container with one that is entirely enclosed. However, I know of no evidence that panhandling for scraps is detrimental to 'Amakihi, and the practitioners at Hosmer Grove seem to be thriving. Indeed, one might well argue that such adaptations are advantageous in a rapidly changing environment.

The number of 'Amakihi involved at any one time is not large, and none of the other honeycreepers in the area, nor any of the alien species present (e. g. House Finch (*Carpodacus mexicanus*), House Sparrow (*Passer domesticus*), have so far picked up the habits of this small group. Indeed, other 'Amakihi present in the surrounding scrub seem unaware of the bonanza in handouts and continue to feed in the surrounding trees and bushes. Although I cannot prove the hypothesis, I believe this novel behavior may have originated with a single pair of 'Amakihi

who have taught it to succeeding generations of offspring. Several of the individuals involved carry bands, but I have not attempted to read the numbers on them. The acquisition of new feeding behaviors by the Common 'Amakihi is not unprecedented, although this is the first published report of their begging from humans. Henshaw (1902:44) reported similar feeding in proximity to human activity coupled with a learned foraging technique:

...[The 'amakihi] has learned...that the imported nasturtium secretes a fine quality of honey and, however close to the house the flowers may grow, it pays them regular morning and evening visits. As the amakihi has a comparatively short bill it is quite unable to reach the nectar, deep down in the long spurred corolla, and, like the iiwi, it has learned to pierce the spur with its bill just over the nectaries, and in this way easily reaches the coveted sweets.

In an experiment, van Riper (1984) found that Common 'Amakihi in Mamane

continued on page 47

Hawaii Audubon Society

850 Richards Street, Suite 505
Honolulu, Hawaii 96813-4709
Telephone (808) 528-1432
FAX (808) 537-5294
Email: hiaudsoc@pixi.com

Board of Directors

President: Wendy Johnson,
261-5957 (H)

First Vice President: John T. Harrison,
595-8621 (H) 956-7361 (W),
956-3980 (FAX)

Second Vice President: Elizabeth Kumabe
Treasurer: Larry Kimmel, 848-0779 (H)
Recording Secretary: Sharon Reilly,
739-2438 (H)

Directors

Mary Gaber, 247-0104 (H)
Dan Sailer, 455-2311 (H)
Luisa Castro, 942-1094 (H)
Tonnie L. C. Casey, 934-5326 (VM) (HI)
Kris Matsumoto

Committees

Conservation: Dan Sailer (as above)
Education: Wendy Johnson (as above)
Field Activities: Mary Gaber (as above)
Grants & Scholarships:
Phil Bruner, 293-3820 (W)

Membership: Robert Pyle, 983-4646 (H)
Programs: Linda Paul, 262-6859 (H)
Publications: R. David, 329-9141 (HI)
Publicity: vacant

Island Representatives

Hawai'i: Reginald David (as above)
Maui: Renate Gassmann-Duvall
1-808-573-0094 (W)

Administrative Assistant

Linda Shapin

HAS Dues/'Elepaio Subscription Rates for 1999

All amounts are in U.S. dollars.

Regular Member Delivery to U.S.	
Via bulk mail	10.00
(Not forwardable)	
Via first class mail	16.00
(Hawaii residents: there is no significant time difference between bulk and first class mail to addresses within the state of Hawai'i.)	
Junior Member (18 and under)	5.00
Contributing Member	30.00
Sustaining Member	100.00

Life Member (one-time payment) 250.00
(or three annual payments of
100.00 100.00, 50.00)

Benefactor (one-time payment) 500.00

Patron (one-time payment) 1,000.00

Delivery to non-U.S. addresses:

Mexico (airmail only) **16.00**

Canada (airmail only) **17.00**

All other countries (surface mail) **18.00**

All other countries (airmail) **28.00**

Introductory dues for National and Hawai'i Societies: 20.00

(Includes delivery of 'Elepaio and Audubon Magazine as bulk or 2nd class mail to U.S. zip codes. Renewal, 30.00.)

'ELEPAIO

ISSN 0013-6069

Managing Editor: Linda Shapin
528-1432

Scientific Editor

Ronald Walker, 235-1681 (H)

Distribution: Robert Pyle and Susan Miller

Layout Editor: Mitchell Lee Groth

The 'Elepaio is printed on recycled paper and published nine times per year:

February, March, April, May, June/July, August/September, October, November, and December/January

Panhandling continued from page 46

forests on the Island of Hawai'i readily accepted artificial nectar feeders supplied with sugar water. All of these observations show that this species of honeycreeper readily adapts to novel food sources. The Common 'Amakihi has long been regarded as an ecological generalist (Berger 1981). Its adaptation to alien flower morphology shows it to be also an opportunist, and with the addition of soft drinks, potato chips, and trail mix to its diet, one might well call it a universalist!

¹*Museum of Natural Science, Louisiana State University, Baton Rouge, LA., 70809.*

Literature Cited

AMERICAN ORNITHOLOGISTS' UNION. 1995. Fortieth supplement to the American Ornithologists' Union Check-list of North American Birds. *Auk* 112:819-830.

BERGER, A. J. 1981. Hawaiian birdlife. 2nd. Edition University Hawai'i Press, Honolulu.

HENSHAW, H. W. 1902. Birds of the Hawaiian Islands being a complete list of the birds of the Hawaiian possessions with notes on their habits. Thos. G. Thrum, Honolulu.

JAMES, H. F., AND S. L. OLSON. 1991. Descriptions of thirty-two new species of birds from the Hawaiian Islands: Part II. Passeriformes. Ornithological Monographs No 46.

PRATT, H. D. 1995. Enjoying birds in Hawai'i: a birdfinding guide to the fiftieth state. Second Edition. Mutual Publishing, Honolulu.

PRATT, H. D. 1999. A pocket guide to Hawai'i's trees and shrubs. Mutual Publishing, Honolulu.

PRATT, H. D., P. L. BRUNER, AND D. G. BERRETT. 1987. A field guide to the birds of Hawai'i and the tropical Pacific. Princeton University Press, Princeton, N. J.

U. S. FISH AND WILDLIFE SERVICE. 1996.

Endangered and threatened wildlife and plants. 50CFR 17.11 and 17.12. United States Department of the Interior, Washington, D. C.

VAN RIPER, C., III. 1984. The influence of nectar resources on nesting success and movement patterns of the Com-

mon Amakihi (*Hemignathus virens*). *Auk* 101: 38-46.

WAGNER, W. L., D. R. HERBST, AND S. H. SOHMER. 1990. Manual of the flowering plants of Hawai'i. 2 vols. University Hawai'i Press and Bishop Museum Press, Honolulu.

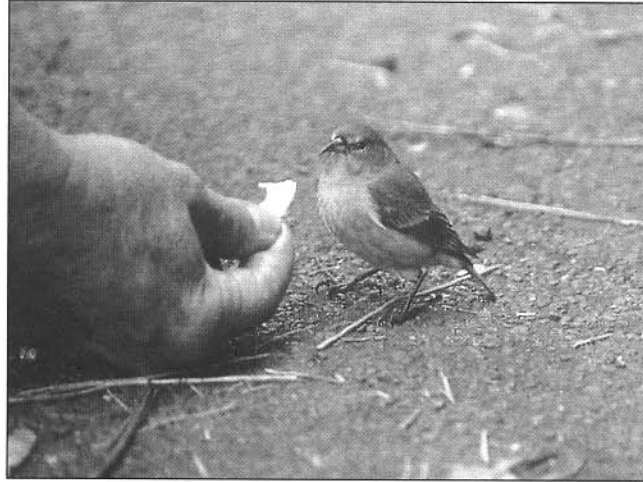


Figure 2. Juvenile (probably male) Common 'Amakihi attempting to eat a proffered piece of dried coconut, Hosmer Grove, Haleakala National Park, Maui, November 1993. Photo by the author.



Figure 3. Common 'Amakihi accepting handout of bread crumbs. Same locality as Figure 1, October 1994. Photo by the author.

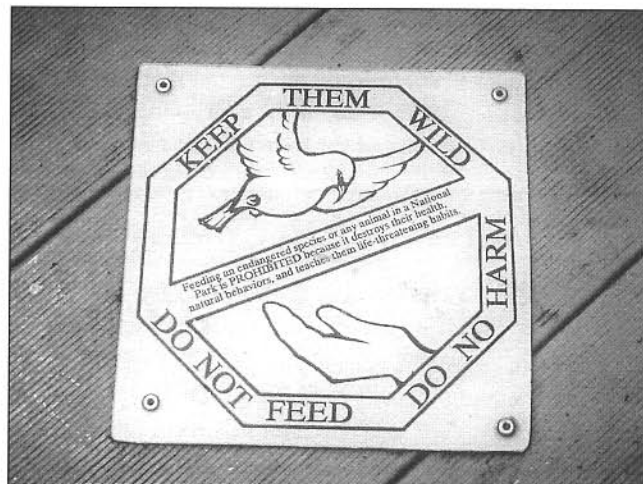


Figure 4. Cautionary sign on picnic table, Hosmer Grove Campground, Haleakala National Park, Maui, March 1999. Photo by the author.