

Aloha means goodbye

BY ANDREW J. BERGER

LONG before the first Polynesians colonized the Hawaiian Islands, a few stray birds had already landed there. Probably blown off course by fierce tropical storms, the tiny creatures adapted to their new environment and eventually evolved into nearly 70 species and subspecies found nowhere else. By the time the English explorer Capt. James Cook arrived on the scene, the Polynesians had established their own beachhead and the native bird population was still healthy and stable. In the next 150 years, though, many of those birds fared little better than Cook himself, who was killed in Hawaii, and by now more birds have become extinct there than on any large continent in the world.

In all, at least 21 Hawaiian birds are presumed extinct, while 28 others are considered endangered or threatened by the U.S. Fish and Wildlife Service. That's nearly half of all the U.S. birds so classified. The status of many of our 50th state's native birds is so precarious that, last year, eight federal recovery teams were established to help save them. For some species, however, the action may not have come soon enough.

Despite some excellent information published by British scientists at the turn of the century, we are still extremely ignorant about the biology and habits of Hawaii's forest birds. We don't know much about the exact circumstances that led to so many extinctions, either. One thing is certain, however: the rain forest destruction that began shortly after Cook's arrival was a major factor.

A second and related problem was the importation of livestock. In 1794, another British sea captain, George Vancouver, persuaded King Kamehameha to proclaim a ten-year taboo on the killing of cattle, goats and sheep. That was done to ensure a steady sup-

ply of meat for the British on their frequent visits to the archipelago. At first, cattle and sheep were allowed to roam freely on the island of Hawaii, and, eventually, they were transplanted to the other islands, too. The effects of subsequent overgrazing were devastating.

By the 1880s, the situation had become so serious that sugar planters and government officials initiated an intense tree-planting program. Unfortunately, with little known about endemic trees and no trained Hawaiians available to study them, hundreds of different kinds of trees and shrubs were imported from all over the world in an attempt to find anything that would grow on the overgrazed mountain slopes. As a result, more than 4,600 species of foreign flowering plants are found in the islands today. Most, ironically, are unsuitable as habitat for the native forest birds.

In addition to habitat loss, another problem that contributed to the birds' demise might be called feather loss. For centuries, Hawaiians snared forest birds to gather feathers for their chieftains' colorful capes and head-dresses. Kamehameha is reputed to have worn one cloak made up of over 80,000 feathers from a single species of honeyeater. It seems unlikely that this custom killed off any species on the larger islands. But when Asian, European and North American feather collectors began using shotguns in the late 1800s, the days of those birds most prized for their plumage were numbered. One such victim was the Hawaii Oo, a large honeyeater that was known as the "king of Hawaiian plumage-birds." None has been sighted since 1899.

Yet another factor affecting the native birds may be competition from the 160 foreign bird species that have been introduced in the islands. Of these, about 50 — including the

mockingbird, cardinal, western meadowlark and California quail — have become established. Though no studies have been conducted to determine how they actually compete with native birds, we do know that a number of bird parasites have come to Hawaii with these exotics.

The particular combination of troubles affecting Hawaii's birds depends largely on where they are located. The 1,600-mile-long archipelago includes over 100 tiny islets and atolls, but the six main inhabited islands make up about 99 percent of the total land area. Here's a quick rundown on how forest birds are faring on each of these main islands today.

Kauai: Called the "garden island," Kauai is the only island that is still home to all of the birds known to have ranged there in historic times. It is also the only major island on which the mongoose was not introduced. This small, deadly predator was brought to the islands by sugar planters in the late 1800s to combat rats and other pests that were damaging sugar cane fields. Unfortunately, the mongoose also preyed upon the native ducks and geese. Its absence on Kauai probably explains why the Koloa, or Hawaiian duck, has survived there while becoming extinct on all of the other islands.

Despite the destruction of most lowland and mid-elevation vegetation on Kauai by sugar planters, ranchers and animals, a major wilderness area has remained intact — primarily because of its rugged terrain and intense

In little more than a century, more native birds have become extinct in Hawaii than on any continent in the world. Today, 28 others are threatened or endangered, including the Molokai creeper. No recent sightings have been made of either the scarlet male or its brownish female counterpart.



H. Douglas Pratt
1976



With machinelike precision, the Akiapolaau pounds on dead wood with its lower mandible, then thrusts its curved upper bill in to snatch insects. Like all other surviving honeycreepers with specialized bills, the five-inch forest bird is endangered.



Only in the dense forests on the northeast slope of Haleakala Crater on Maui can the loud, shrill call of the crested honeycreeper still be heard today. There, a remnant population subsists largely on nectar from the red flowers of the ohia tree.



As is true of most other honeycreepers, very little is known about the breeding habits of the Ou. Neither its nest nor its eggs have ever been found in Kauai's remote Alakai Swamp, where biologists estimate a few hundred of the parrot-billed birds now live.



The last surviving species of a group of honeyeaters that once ranged throughout the islands, the Kauai Oo was long thought to be extinct until researchers located some of the birds on Kauai in 1960. Only about a dozen may exist there today.



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climate. This is the Alakai Swamp. More than 600 inches (50 feet!) of rain has been recorded in the area in a single year. A 10,000-acre state preserve is established here but its fate is in jeopardy because of encroachment by exotic vegetation.

Two native species of thrushes inhabit the Alakai and both are endangered: the large and the small Kauai thrushes. Since 1968, John Sincock, a U.S. Fish and Wildlife Service biologist who has explored the Alakai more extensively than anyone ever before, has been studying its forest birds. By his estimates, the large Kauai thrush — considered the most common of the island's forest birds in the 1890s — now numbers fewer than 200; small Kauai thrush less than 100.

Of all the state's birds, its own unique family, the Hawaiian honeycreepers, has been decimated the most heavily. At one time, 23 species and 24 subspecies of these small, colorful creatures existed. Currently, 7 species and 4 subspecies are considered extinct, and 22 others are endangered or threatened.

One of these, the Ou, once inhabited each of the main islands. Today, it is extinct on three — Oahu, Molokai and Lanai — rare on Hawaii and has not been sighted on Maui in this century. Only on Kauai is this parrot-billed, yellow-headed bird apparently holding its own. Sincock believes its present population is in the low hundreds.

Oahu: The site of such famed tourist haunts as Waikiki Beach, Honolulu and Diamond Head, Oahu has a rather dubious distinction: all of the more spectacular native forest birds that once ranged on the island are now extinct. Today, in fact, there are so few native birds remaining that it is futile to search for them in any systematic way. What's more, field work in one of the island's least disturbed regions, the Koolau Mountains, is extremely difficult and very little is known about the distribution of any of Oahu's forest species there.

Molokai: Characterized as a "biological disaster area," Molokai's forests have been devastated by cattle, goats and axis deer. Until recently, many

Perpetually in motion, the Akepa, or "spright one," is among the most active of all native birds. In the Hawaiian race, the male of the species is ruby-colored, compared to the yellowish coloring of the female.



Photograph by Robert J. Shallenberger

foresters considered the island's rain forests "unproductive" and proceeded to replace them with trees from abroad. As with the island of Hawaii, Molokai also suffers from the "absentee landlord" malaise — large ranches on the island are owned by mainlanders who have prohibited all hunting on their lands. As a result, the axis deer populations have far exceeded the carrying capacity of the range, and have moved into the island's remnant forests.

Lanai: Only the two most common surviving honeycreepers, the Apapane and the Amakihi, still eke out an existence on the "pineapple island." As elsewhere, most of the native forestlands were destroyed long ago by feral animals and exotic tree species.

Maui: On the northeast slope of the Haleakala Crater, Maui still has a relatively undisturbed wilderness region. There, protected by a state reserve and by Haleakala National Park, a number of native birds still range. Three years ago, the first systematic study of the area was conducted by a group of University of Hawaii students, who also discovered a previously unknown species, the black-faced honeycreeper. Currently, ten species of honeycreepers are known to have inhabited the rain forests of Maui, though virtually nothing is known about their breeding biology.

Hawaii: Covering more than 4,000 square miles, Hawaii is larger than all of the other islands combined. Nevertheless, nearly half of all land birds

Art as science

"The only way I can be sure my paintings are accurate is to get out and see the birds in their habitat," points out artist-biologist H. Douglas Pratt. Since he began studying Hawaii's forest birds two years ago, Pratt, 32, has explored most of the islands' remote rain forests, photographing, sketching and making recordings of the rarely-seen species.

A year ago, the state of Hawaii asked Pratt to paint a series of ten portraits of endangered forest birds. Six of these appear for the first time on the preceding pages. For each, Pratt made detailed studies of not only the birds, but the native vegetation as well.

Currently, the former Charlotte, North Carolina native is concluding research on the Hawaiian honeycreepers for a PhD in zoology at Louisiana State University. "By combining art and science," he adds, "I hope to make a unique contribution to the knowledge and appreciation of all birdlife."

found there during the last century are now extinct, and 7 of the remaining 13 forest birds — including the Hawaiian hawk and Hawaiian crow — are either endangered or threatened. As elsewhere on the islands, the destruction of the forests have played a major role in creating this situation.

"It's sheer desolation," says Earl Baysinger, assistant chief of the U.S. Office of Endangered Species, of the overgrazed and denuded slopes of Mauna Kea. This 13,796-foot peak sits above another endangered habitat, the mamane-naio forest on Hawaii. A member of the bean family, mamane has inch-long flowers that produce much of the food for the endangered Palila, a finch-billed honeycreeper that resides in this shrinking forest.

More than 15 years ago, biologist Richard E. Warner pointed out that the mamane-naio forest was dying because feral sheep prevent the regeneration of the mamane by eating the seedlings. Only recently, however, with the establishment of a Palila recovery team, have any attempts been made to save the region. Like most efforts to save Hawaii's graceful forest birds and their habitat, however, the action is about a century too late. ■

Formerly chairman of the Department of Zoology at the University of Hawaii at Manoa, Andrew Berger is now a member of two U.S. Interior Department endangered species recovery teams. His most recent book is Hawaiian Birdlife.