



## Occurrence of the Japanese Bush-Warbler on Maui

John H. Carothers and Robert B. Hansen

A number of bird species released on the island of Oahu have dispersed to neighboring islands (e.g., Japanese White-eye, *Zosterops japonicus*; Mockingbird, *Mimus polyglottos*; Skylark, *Alauda arvensis*; House Sparrow, *Passer domesticus*; Berger 1981). The Japanese Bush-Warbler, *Cettia diphone*, introduced to Oahu by the Territory of Hawaii Board of Agriculture in 1929 with later introductions by the Hui Manu (a society that introduced exotic birds) and others (Caum 1933), is one such species. A notable increase in the Oahu population began in the late 1960's. In 1979 it was reported to have spread to Molokai (Pyle 1979), reaching Lanai in 1980 (Conant 1980).

On 6 July 1980 we were on the north slope of Haleakala volcano in the Koolau Forest Reserve on Maui, using the variable circular plot method (Reynolds et al. 1980) to census birds on a transect line in Keanae Valley. We conducted these counts as members of the U.S. Fish and Wildlife Service's Hawaii Forest Bird Survey. At 0853 hours we began an eight minute census count at 1335 m elev. under partly cloudy skies. The habitat was 'Ohia (*Metrosideros collina*) forest with a moderately dense understory. The steep slopes of Keanae Valley rose on both sides of us. A light mist hung in the calm forest air as we noted the calls and songs of Red-billed Leothrix (*Leothrix lutea*), Japanese White-eye (*Zosterops japonicus*), Maui Creeper (*Loxops maculatus newtoni*), Apapane (*Himatione sanguinea*), and 'I'iwi (*vestiaria coccinea*).

During that count period we heard a bird vocalization quite unlike any we had heard during our previous two



Japanese Bush-Warbler.

Photo by W.M. Ord.

months of census experience in the Maui rainforests. The following description comes from field notes written at the time the call was heard: "A loud, clear call. A relatively long (1 sec.) introductory note which was followed by two notes whipped together, sounding like 'oh wah-oh'." A description of the call was given to U.S. Fish and Wildlife personnel, Cameron Kepler and Jack Jeffries, who have extensive bird census experience in Hawaii. They thought that we had heard a Japanese Bush-Warbler.

Two weeks later we conducted censuses on the western edge of Olokui plateau overlooking Pelekunu Valley on Molokai, an area where singing Japanese Bush-Warblers were fairly common (U.S. Fish and Wildlife Service unpubl. data, and pers. obs.). We often heard these bush-warblers give a call identical to the one we first hear in Maui's Keanae Valley, confirming the opinions of Kepler and Jeffries. The steep pali habitat where we heard the Japanese Bush Warblers on Molokai matched the physiognomy of the area in which the Maui bird was heard.

The remote location of the Maui site will make future assessment of the bird's establishment a difficult task, though should this species spread to the West Maui mountains where an apparently favorable habitat (steep palis) predominates, the incidence of sightings is certain to

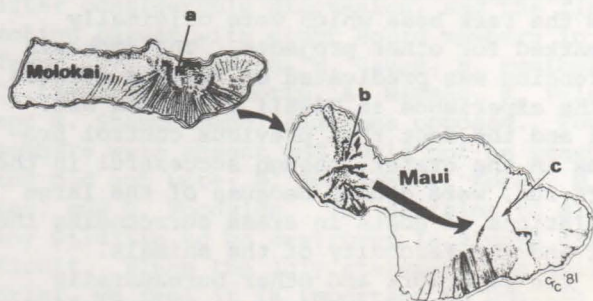


Fig. 1. Suggested dispersal route of the Japanese Bush-Warbler from Molokai to Maui. Because West Maui (b) contains suitable habitat and lies in a straight line between Molokai (a) and Keanae Valley (c), the West Maui mountains probably acted as a halfway point in dispersal to the eastern Maui rainforest.



increase. Because of the probability of Maui individuals being derived from the neighboring Molokai population, it is possible that an undetected population may already exist in the West Maui mountains, as this area lies between Molokai and the Keanae Valley occurrence (see Fig. 1). Though such a population was not revealed by the intensive U.S. Fish and Wildlife Service census work in the area, further work may clarify the matter.

#### ACKNOWLEDGEMENTS

We sincerely thank the Kepler family and the U.S. Fish and Wildlife Hawaii Forest Bird Survey team for support, Cameron Kepler, J. Michael Scott, Shelia Conant, and Peter Paton for thoughtful review of the manuscript. Christopher Carothers kindly prepared the figure.

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U.S. Fish and Wildlife Service  
Maui Field Station  
248 Kaweo Place  
Kula, HI 96790

Present Addresses:  
Museum of Vertebrate Zoology  
University of California  
Berkeley, CA 96790

Creighton Ranch Reserve  
3450 Avenue 144  
Corcoran, CA 93212

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## THE HALEAKALA GOAT PROBLEM

Once again the optimism that the Haleakala National Park goat management and fencing program would be funded has been thwarted, this time by Assistant Secretary for the Interior Arnett. His political decision overruled the professional judgment of the National Park Service (NPS) which had ranked the Haleakala goat problem as the national number one priority resource management project. Arnett's decision has effectively blocked any hope of construction, other than bootlegged operations, through fiscal year 1984. The decision was based on Secretary Watt's dictum that only construction projects dealing with human health and safety issues were to be considered. Many of these projects are designed to upgrade water, sewage, etc. facilities to standards required in residential areas.

Haleakala National Park has always considered the goat problem as their most difficult resource management problem. Haleakala Nat. Park Superintendent Hugo Huntzinger began to attack the problem when he sponsored a biological resource inventory research project by the Cooperative National Parks Resources Studies Unit (CPSU/UH) at the Botany Dept., University of Hawaii at Manoa in 1975, using funds from the Park base. The following year the project was picked up by Western Region NPS and expanded considerably. Almost every report has identified the feral goat as the most serious threat to the integrity of the native ecosystem and ecological processes in the crater. In 1976, some experimental boundary fencing was constructed with the cooperation of local Sierra Club chapters. Further cooperative fencing efforts and experimentation continue to this day because there are some formidable practical problems to be dealt with. With the exception of this year, the operation has been conducted using funds from the Park base which were originally earmarked for other projects. The emphasis on fencing was predicated on the the success of the experience in Hawaii Volcanoes Nat. Park and the fact that previous control programs in the crater, though successful in the short run, were doomed because of the large populations of goats in areas surrounding the Park and the fecundity of the animals.

The paperwork and other bureaucratic machinations necessary to get the attention of regional and national NPS administrators has been enormous. Many local residents have been exasperated at the apparent snail's pace of Haleakala's progress. However, when you think about the national audience and the



amount of attention given to Grand Canyon's burro and rough water problems you soon realize that the Park has been doing a very thorough, though quiet, job in educating their superiors about their problems. National ranking as the number one resource management problem is testimony to their success.

Assistant Secretary Arnett's decision has removed this issue from the professional arena to the political one. NPS has done as much as it can. The local conservation societies have made one major step toward supporting this program when they passed a resolution supporting Haleakala's proposed plans in 1981. That pressure was insufficient. We now need to exert individual and concerted pressure on the political system to move on this issue. It is recommended that you write (1) the congressional delegation, (2) the Department of the Interior, (3) the national offices of the conservation societies and organizations, as well as any politically influential individuals expressing your concern and ask for their support. WE NEED TO ACT NOW!

*Hawaii Audubon Board of  
Directors*

## MORE ON BIG ISLAND CATTLE EGRETS

In the July 1982 issue of 'Elepaio, an HAS Board statement was published supporting the USFWS plan to solve the cattle egret problem at the Hilo airport. This plan includes the elimination of the cattle egret roost at Lokoaka Pond. The statement was based primarily on our concern for the serious and rapidly growing threat posed by the egrets to planes and human safety. We could see no feasible alternatives. It was made after considerable discussion, and the final motion passed with eight Board members in favor, (P. Donaldson, W. Gagné, N. Henthorne, C. Lamoureux, M. Morin, A. Newman, R. Pyle, and M. Stemmermann) and none opposed. Four members were absent and could not be reached and did not vote: B. Johnsen, P. Kores, B. Lee, and D. Woodside. The decision to allow any wildlife to be destroyed is always difficult. Since the July statement was quite brief, we feel it is important to publish a history of the cattle egret problem at the Hilo airport, so HAS members could understand why this action was necessary.

Approximately 400 egrets roost on a small islet in Lokoaka Pond in Keaukaha, Hilo. Hilo's airport, General Lyman Field (GLF), is



Cattle egret, *Bubulcus ibis*.

*HAS photo file*

less than a mile away and lies directly between the roost and the egrets' preferred feeding areas in the pastures of Waiakeauka. A major hazard is created every morning and evening when the majority of the egrets from the roost fly over the airport. Additionally, GLF has become a popular feeding area, and the egrets congregate there on an unpredictable schedule. As a result, several near collisions and aborted plane landings have occurred in recent months. According to Dr. David Fellows, USFWS Biologist in charge of studying the egret/airport problem, "the potential for loss of life is real".

In May 1981, a meeting was held in Hilo to discuss the increasing hazard to aircraft posed by the egrets. (See 'Elepaio 42(2)). Airline pilots, airport administrators, biologists, state and federal government officials, and HAS representatives all agreed that the egrets should be controlled, but effective methods were not known. In January 1982, the FAA contracted with the U.S. Fish and Wildlife Service at the Hilo field station to identify factors contributing to egret congregation at airports and to develop a solution to the GLF problem. Team members were Larry Pank (Station leader), Peter Paton (on contract to USFWS), and Dr. Quentin Tomich (Hawaii Dept. of Health cooperator). Pank later transferred and was replaced by D. Fellows.

The one year study was started under the assumption that nonlethal scare tactics and shotgun patrols would control the existing problem until alternatives were developed from research results. However, control efforts at GLF were costly and ineffective. During the first four months of the study, the number of birds congregating at the airport increased and their regular "overflight" path between the roost and their feeding



grounds was unaffected. They also documented at least 70 nests at the roost. Given that egrets reproduce very well in this state (the statewide population has exploded from approximately 100 introduced birds around 1960 to an estimated 30,000 birds in 1981, mostly on Oahu and Kauai), the nests meant the airport's problem could worsen rapidly.

Based on these findings, the Hawaii Dept. of Transportation and the FAA requested immediate control. The research team agreed, in the interest of public safety. Two possible solutions were considered: 1) relocate the roost, or 2) eliminate the birds. Relocating the roost was considered too risky, because existing data suggested the egrets would disperse to roosts where they would still fly over the airport but would not be accessible to control efforts. In contrast, the existing roost is a single accessible tree, where the birds can be controlled. In most cases, elimination is futile because vacant areas are recolonized quickly by neighboring roosts. However, the small population on Hawaii (approximately 500) made elimination the most practical long-term solution. Fellows concluded that this was the wisest action and assisted State Department of Transportation efforts to get the necessary State and Federal permits. To avoid public misunderstandings, he also contacted HAS and the Wildlife Society (an association of professional wildlife managers) to explain the situation, answer their questions and request their support. He emphasized his plans to catch and dispatch the egrets humanely and without the use of chemicals or risk to indigenous waterfowl at Lokoaka. Moreover, stomach contents, age and reproductive status of each egret taken would be recorded to help managers learn more about this species. Both groups concurred with the proposed control program.

Complete eradication may not be possible. Fellows also pointed out that the Lokoaka roost may be repopulated by egrets from small roosts at Punaluu and Kapoho. Therefore, it is important that the egret populations at the airport be continually monitored and controlled to avoid another population build-up and recurrence of this unsafe situation.

The purpose of HAS is "the protection and preservation of Hawaii's native wildlife and the ecosystems which support it". Since cattle egrets are not native to Hawaii, the Board felt HAS could support the control efforts without compromising the Society's mission. Throughout our discussions and correspondence with Fellows, the Board emphasized that the cattle egret problem at GLF

was a unique situation. HAS does not generally support the elimination of birds to resolve airstrike hazards when alternate means are available. For instance, the conflict between albatross and aircraft at Midway Island is one case where HAS believes alternative control methods, such as habitat manipulation and flight rescheduling, can be more effective than elimination. In addition, the Board stressed that any action taken at GLF or Lokoaka Pond must comply with all appropriate State and Federal environmental laws, rules and regulations.

Hawaii Audubon Board of  
Directors

## AIEA RIDGE FIELD TRIP MARCH 1981

Tom Shields, Bob and Leilani Pyle, and I were the only people to turn out for this hike. Cloudy skies and light rain-showers over the Koolaus may have discouraged others--we had the trail to ourselves.

On the Aiea Loop Trail, we heard several vocal but elusive Japanese Bush-Warblers. Finally one Bush-Warbler showed itself. This bird apparently responded to my whistled imitation of its call and came out in the open to sing its repetitive "Teacher Teacher" song at the top of a bush. Near the junction of the Loop and Ridge Trails we heard the whistle of an 'Elepaio. On several occasions I have heard an 'Elepaio at this same spot but have never seen the bird.

We turned onto the Aiea Ridge Trail and found it choked with *Clidemia*--four feet high and soaking wet. Fortunately, not all the trailside plants were so obnoxious. There are many fine Koa and Ohia-lehua trees along the ridge and we had good views of 'Apapane and 'Amakihi in these native trees. One of the Ohia trees had yellow blossoms. Other native plants along the trail were Maile, Sandalwood, and a lobeliad which Leilani Pyle identified as *Cyanea angustifolia*.

About a mile up the Ridge Trail, the rest of the group turned back while I went on for another mile. I was rewarded with an exceptionally clear look at another Bush-Warbler. This bird also came out in the open and sang its "Teacher Teacher" song in response to a whistled imitation of its call.

Peter V. Donaldson



## ALOHA TO NEW MEMBERS

The Society welcomes the following new members and hopes that they will join in our activities to further the protection of Hawaii's native wildlife:

Joint with National: Linda C. Almen-Chock, Honolulu; Anne Anderson, Pearl Harbor; Robbi Overvold Asid, Wailuku; Edward F. Austin, Kamuela; William J. Banasky, Honolulu; William B. Barnett, Waimanalo; Tina P. Blundy, Honolulu; Kenneth M. Chang, Honolulu; Walter W.Y. Chang MD, Honolulu; Mary S. Dotts, Honolulu; Jayne E. Duerr, Aiea; Ann Fulton, Haiku; E. C. Hoag and Family, Mililani; Stephen A. Holmes, Pahoa; Yvonne Izu, Honolulu; Mrs. Kay Johnson, Honolulu; Major B. Johnson, Honolulu; Dave Keim, Mililani; J. H. Mann, Lahaina; CMDR R. Robin Marshall, Makakilo; L. Minamishin, Honolulu; Anthony Nahacky, Kamuela; Cherrie Y. Paddock, Lahaina; Winifred E. Peery, Haleiwa; Timothy D. Royko, Honolulu; Amy Russel and Family, Kaneohe; Major and Mrs. E. L. Sakas, Honolulu; Robin M. Schreffler, Kailua; M. Schweitzer, Honolulu; Francine Tabar, Honolulu; G. Taylor, Wailuku; G. G. Veatch, Kula; Shoyei Yamauchi MD, Honolulu.

*Kammy Wong*

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Are you moving and is your address changing? Are you receiving duplicate '*Elepaio* issues? Has your '*Elepaio* stopped coming altogether, even though you paid your dues? Please notify the Hawaii Audubon Society at P.O. Box 22832, Honolulu, Hawaii, 96822. The sooner the Society is notified about the situation, the more time, money, and effort are saved.

## 'ELEPAIO VIA AIRMAIL

Members and subscribers wishing to have the '*Elepaio* sent by airmail to addresses outside Hawaii may now obtain this service by remitting the additional amount needed to cover airmail postage costs. These amounts, for 12 monthly issues, are:

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## SEPTEMBER PROGRAM: NORTHWESTERN HAWAIIAN ISLANDS

Jacki Kilbride will be the guest speaker for the 20 September general meeting with a program entitled *The Northwestern Hawaiian Islands*. The meeting is at McCully-Moiliili Library on S. King St. at 7:30 p.m.

Ms. Kilbride is a freelance photographer who recently returned from a trip to the Northwestern Hawaiian Islands National Wildlife Refuge. Her program will emphasize slides taken on Lisianski, where the National Marine Fisheries Service is involved in a project on the endangered Hawaiian Monk Seal.

Everyone is invited to attend this program featuring a fascinating and seldom seen island.

## PUBLICATIONS OF THE SOCIETY

**HAWAII'S BIRDS** by the Society (1981). This is the best field guide to our birds, and includes colored illustrations of all native and well-established exotic species. \$3.95 plus postage: 70¢ (surface mail) or \$1.03 (air). Hawaii residents only: add 16¢ for tax.

**FIELD CHECKLIST OF BIRDS OF HAWAII** by R. L. Pyle (1976). A pocket-size field card listing 125 species found in Hawaii with space for notes of field trips.  
(Postpaid).....\$ .25  
(ten or more, 10¢ per copy)

**GUIDE TO HAWAIIAN BIRDING** by members of the Society and edited by C. J. Ralph (1977) Where to go and some idea of what you are likely to see. For the islands of Kauai, Oahu, Lanai, Molokai, Maui and Hawaii  
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**ENDANGERED WATERBIRDS OF THE HAWAIIAN ISLANDS** by R. J. Shallenberger (1978). Hawaiian Stilt, Coot, Gallinule and Duck, each described in 2 pages of photos and text. Covers description, ecology, status, and distribution.  
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## SEPTEMBER FIELD TRIP: KANEHOA-HAPAPA TRAIL

The Sunday, 12 September field trip will be to the Kanehoa-Hapapa Trail in the central Waianae Range. The leader for this trip will be Mark Merlin, who is well-known locally for his field guides to native plants.

As usual, meet at 7:30 a.m. on Punchbowl Street, Honolulu, next to the Hawaii State Library. Bring water, raingear, binoculars, a lunch, and interested friends. Call the Leader at 948-8241 for more information.

## SEE YOUR NAME IN PRINT

**HELP WITH PASTE-UP:** Volunteers will be needed to help with the October 'Elepaio issue. Paste-up will be held on Saturday, 18 September, beginning at 9:00 a.m. Call Marie at 533-7530 beforehand, or show up at 1415 Victoria St. #1515 and dial the entry phone number for Simasko. No experience necessary! We will train!

**TYPISTS NEEDED:** The 'Elepaio desperately needs volunteers who can type and are willing to spend an hour or two every other month typing the 'Elepaio articles. Call Peter Galloway at 847-3511.

**CONSERVATION WRITERS:** Volunteers are needed to follow and write up special conservation items for the 'Elepaio. Call the Co-editors for more information.

**COORDINATORS NEEDED:** Periodically the Society receives offers of discounts on special books of interest to Audubon members. An interested person is needed to periodically announce the discounts at meetings, collect money, order books, and get the discounted books to the purchasers.

## MEMBERS WELCOME AT BOARD MEETINGS

The Board encourages members to attend and participate in the monthly Board meetings. It is a good way to get more involved in conservation issues and in the workings of the Society.



## NOTE TO CONTRIBUTORS TO THE 'ELEPAIO

All contributions concerning natural history and conservation are welcomed, especially those pertaining to the Pacific area. The Editorial Committee wishes to encourage especially material from the various Pacific Islands, such as the Trust Territories, Guam, Samoa, and other areas. Articles on all natural history subjects are solicited.

It would facilitate the processing and review of your contribution if it could be submitted typewritten and double-spaced, although this is not a requirement. All articles of a scientific nature are sent out for comments to at least two reviewers familiar with the subject.

To insure proper handling and rapid publication of your contribution, it should be mailed to the co-editors, and sent to Marie Morin, 1415 Victoria St., #1515, Honolulu, HI 96822.

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### CALENDAR OF EVENTS

- Sept. 13 (Monday). Board meeting at the home of Charlie Lamoureux, 3426 Oahu Ave., Honolulu, at 7 p.m. (988-2255).
- Sept. 12 (Sunday). Field trip to Kanehoa-Hapapa Trail in the Waianae. Meet at the State Library on Punchbowl St., 7:30 a.m. Call the leader, Mark Merlin, at 948-8241 for more details.
- Sept. 20 (Monday). Regular meeting, featuring *The Northwestern Hawaiian Islands*. McCully-Moiliili Library at 2211 S. King St., Honolulu, at 7:30 p.m.

HAWAII AUDUBON SOCIETY

P. O. Box 22832

HONOLULU, HAWAII 96822

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