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Hawaii Audubon Society



For the Better Protection
of Wildlife in Hawaii

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RESTRICTIONS ON THE IMPORTATION OF BIRDS

By Wm. C. Look*

INTRODUCTION

Prior to the establishment of governmental restrictions on importations, numerous foreign birds were introduced and liberated without restraint in Hawaii. E.L. Caum in "The Exotic Birds of Hawaii" (1933), reported that from 1853 to 1867, enthusiasm for bird introduction was great. However, the early records were extremely fragmentary and scattered. There were no official records of the number and kind or species of birds imported or liberated. According to newspaper accounts of that early period, some of the birds imported were as follows:

Asia

Carrion crows
2 species of goldfinches
Indian sparrows
Japanese finches
Chinese quail
Silver pheasants
Mongolian pheasants
Golden pheasants
Linnets
Mynahs
Ricebirds

Australia

1 ostrich
1 pr. black swans

Germany

33 goldfinches & chaffinches
2 green linnets
1 thrush

Several of the above species are detrimental to agriculture, but apparently no regulation was adopted against such introductions until almost half a century later. The Lacey Act was passed by Congress on May 25, 1900 to control the introduction of wild birds. After the establishment of the Hawaii Board of Agriculture & Forestry, a regulation prohibiting the importation of any bird that might be liable to become injurious to the forest, trees, plants or other vegetation of value, was promulgated on October 19, 1904.

PRESENT RESTRICTIONS

Today, Plant Quarantine Regulation 2 prohibits the introduction of all animals including birds into Hawaii except under permit from the Department of Agriculture. Section 26-2 Revised Laws of Hawaii, 1955 also prohibits the importation of any animal that might cause damage or become injurious or detrimental to the agricultural or horticultural industries or to the forests of the State. Certain importations are restricted by Federal regulations and are discussed on page 53.

Plant Quarantine Regulation 2 provides set procedures for the introduction of all live animals. The person or persons desiring to make the introduction shall

*Chief Plant Inspector, State Department of Agriculture and
Deputy Game Warden, U.S. Fish and Wildlife Service.

apply in writing to the Chief Plant Inspector, Department of Agriculture, P.O. Box 2520, Honolulu, Hawaii, for the permit. The following information is required by the regulation:

1. Name and address of the shipper.
2. Name and address of the importer.
3. Approximate number and kind (scientific name).
4. Object of introduction.
5. Method of transportation.
6. Approximate date of arrival.

ADVISORY COMMITTEE

The Board of Agriculture has an Advisory Committee on Land Vertebrates which studies all applications for animals not approved by the Board. This committee of specialists or zoologists includes the following:

Mr. Edwin H. Bryan, Jr., Curator of Collections, Bishop Museum
 Mr. Lowell S. Dillingham, P.O. Box 3468, Honolulu, Hawaii
 Dr. Robert W. Hiatt, Vice President of Academic Affairs, University of Hawaii
 Mr. W. Michael Ord, P.O. Box 2900, Honolulu, Hawaii
 Mr. Jack L. Throp, Director, Honolulu Zoo, Kapiolani Park
 Dr. Ernest H. Willers, State Veterinarian, State Department of Agriculture
 Mr. David H. Woodside, Chief, Wildlife Branch, Department of Land and Natural Resources

The present policy is that the applicant submit all data including the scientific names, food habits, etc. of each animal proposed for introduction. The Chief Plant Inspector, who is the ex-officio Chairman of the Committee, examines each request. If necessary, additional information will be taken from various publications and submitted to the Committee for study. Questionable introductions generally are discussed at a meeting of the Committee. Its recommendations are then submitted to the Board for consideration at the regular monthly meeting.

LIST OF BIRDS

A list of approved and prohibited birds is available to the public at the Department of Agriculture's Plant Quarantine Station. This list is reviewed from time to time. The last revision was on July 8, 1965. The Committee decided then that no major changes be made until the ornithologist, as authorized by the Legislature, can review the question of bird introduction.

The list consisting of about 300 birds is placed in the following categories:

1. Male and female birds approved for caged purposes
2. Male birds approved for caged purposes (Birds must be mature males and not moulting upon arrival, or be refused entry)
3. Birds for liberation
4. Birds prohibited

BIRDS FOR LIBERATION

Persons interested in liberating birds, other than game birds, must meet the following requirements:

1. No proposals for introductions shall be considered until after study of the possible effects of the proposed introduction has been completed.
2. Before the issuance of a permit for any introduction, the following information shall be made available concerning the proposed species to be introduced.
 - a. A complete and adequate survey of the ecology of the species.
 - b. A highly reliable prediction of its food, habits and areas where it may become established.
3. Upon issuance of a permit and the arrival of the shipment of birds, examination of the stock of birds imported shall be made to be sure that they are not carriers of diseases or parasites.
4. As required by Federal policy, all importations of non-game birds for liberation purposes shall be made by the Board after consultation with and approval by the Director, Fish & Wildlife Service, Washington, D.C.

FEDERAL RESTRICTIONS

Each importation of birds into Hawaii must also comply with several Federal restrictions. The Chief Plant Inspector of the State Department of Agriculture, who is also Deputy Game Warden for the U.S. Fish & Wildlife Service, cooperates in enforcing the Federal regulations. The Federal restrictions on birds are summarized below:

1. Title 50, Chapter 1, Subchapter B, Part 13. Importation of Wildlife or eggs thereof.

Section 13.6: Prohibits importation of any live specimen or eggs of "pink starling" (Sturnus roseus) and eggs of non-game birds except under special permit.

Prohibits liberation of game birds and wild non-game birds except under written permission from the Director of the Bureau of Sport Fisheries & Wildlife, Department of Interior, Washington, D.C.

2. The Migratory Bird Treaty Act prohibits the purchase or possession of migratory birds except as permitted by regulations adopted by the Secretary of the Interior.
3. U.S. Public Health Regulations prohibits the introduction of all psittacine birds, such as parrots and parakeets from foreign countries except with the approval of the U.S. Public Health Service.
4. Animal Health Division Regulations, USDA prohibits the introduction of all foreign poultry such as doves, pheasants, quails, etc. except under permit and quarantine.

INTRODUCTION OF EXOTICS

By J.d'Arcy Northwood*

...I am glad to give you my ideas briefly about the introduction of exotics into Hawaii, as you suggest.

The danger to native birds by this introduction is long past, most of the native birds succumbed around the turn of the century to various causes such as the introduction of predators (dogs, cats, mongoose, rats, etc.) and the destruction or interference with their habitat. The chief cause was probably the introduction of diseases to which the native birds had no immunity. As you know, the native Hawaiians suffered greatly from the exposure to such simple diseases as measles.

Now the native birds that have survived have developed some immunity and the introduction of more exotics will not affect them, unless the newcomers compete with them for food or nesting sites. This is not likely, since the natives live in the mountain forests and the exotics prefer the lowlands.

The Hui Manu has done a great deal to improve the bird life of the Islands by the introduction of beautiful birds. The Department of Agriculture wisely restricts the importation of birds that may prove injurious to agriculture but there are many others which would be no threat, such as hummingbirds. They would be a marvellous addition to the beautiful gardens of Hawaii. Of course, North American hummingbirds are not allowed to be trapped, but Mexican birds could be obtained through the Californian dealers. This might be taken up by the Hui Manu and the Society, it is good to see that a close cooperation exists between them....

*First president of Hawaii Audubon Society and recently appointed curator emeritus, Mill Grove, Audubon, Pa.

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What is your opinion on introducing birds as cagebirds or as new additions to the Hawaiian flora and fauna? Tell us about the escapees around you and send in your ideas on this vital subject to Kojima, 725-A 8th Ave., Honolulu, Hawaii 96816.

LETTER from J. d'Arcy Northwood, Cape May Point, New Jersey, Oct. 20, 1966:
...As I remember forecasting in FAMILIAR HAWAIIAN BIRDS, new birds will be appearing

from time to time as fresh introductions and escapes become established. In the October issue there is a note from Mary C. Evans about two strange finches that appeared at her feeder. They were identified by Walter Donaghho as a Fire finch and a Cordon Bleu or Crimson-eared Waxbill. There is an excellent little book in which both these birds are illustrated in color and described called CAGE BIRDS IN COLOR by Mandahl-Barth & Anthon, published by M. Barrows & Company, Inc., New York, 1959. It is not expensive and some of your readers may be glad to know about it.

With best wishes to you and my old friends.

A REPORT ON THE ISLAND OF POPOIA

By Alphonse Labrecque

On the morning of September 29 I swam to Popoia, also known as Flat Island, some 500 yards off-shore from the Lanikai marker.

Upon arrival I was greeted by half a dozen Golden Plover with their call of "kolea." I saw about 25 Plover on my walk around the island plus three or four Sanderling and Wandering Tattler. No Turnstone. Poking around a few burrows yielded only one young Shearwater, half-grown.

The room-size, Pickle-weed-carpeted space on the makai side of the island, where Shearwaters gather at dusk upon their return from their fishing expeditions, was well-worn, indicating continued use. Also, the worn Pickle-weed at the entrance to many of the burrows indicates that the Shearwater population is holding up well.

The vegetation on the island is thriving. The Milo is spreading gradually from the mauka side to the center of the island and is increasing in size, some having reached a trunk diameter of three or four inches and a height of ten or twelve feet. The Caparis is blooming; the Lambs-quarter is doing very well, as are the Naupaka and the Pickle-weed.

A clump of Mangrove is growing in one of the sea-level depressions. Someone has thrown two coconuts in this depression. I hope they will grow, as a cluster of coco palms would greatly improve the appearance of the island.

One sad note: There is the usual campers' litter on the mauka side of the island. Some Milo have been hacked for firewood. But, all-in-all, the island looks better than it ever has during the 20 years I have been visiting it.

Note to beautification-minded organizations on the Windward Side: If someone will furnish a boat and a dozen Coconuts (preferably sprouted) I shall be glad to plant them. (With the approval of the government agency concerned, of course) My telephone: 962-037.

FIELD NOTES: From Andrew J. Berger, September 25, 1966: Golden Plover on Oahu and Hawaii in August

I saw my first Golden Plover (a single bird) of the post-breeding season on the University of Hawaii campus in Manoa Valley on August 26, 1966.

Guy Dority, Roger Baldwin, Victor Lewin, and I spent August 27 and 28, 1966, on an exploratory field trip in the "saddle" area between Mauna Loa and Hualalai on the Kona Coast of Hawaii. We worked mostly at elevations between approximately 4800 and 5200 feet, travelling from Puu Lehua, through "Devil's Country," to Umi's temple (also called a heiau), located not far from the old Judd Trail. Puu Lehua was one of the collecting sites for the three species of finch-billed honeycreepers during the 1890's. These birds are presumed to be extinct, and we did not see any during our two days in this habitat.

We did see several flocks of Golden Plover in this high plateau country: one flock of 5 birds; one of 17 or 18 birds; and another of between 20 and 30 birds (in flight so that an accurate count could not be made).

There is a need for careful studies of the winter behavior of the Golden Plover in Hawaii. The birds are found from sea level to considerable elevations. I have seen them at an elevation of 7000 feet on Mauna Loa (Hawaii) and at least that high

on Haleakala (Maui).

Judging from my casual observations during a single winter season (1965-66), it appears that the birds usually are seen singly or in small groups of two or three birds. Some evidence suggests that some birds, at least, defend a winter territory. If this is true, do the birds typically reach Hawaii in flocks? If they do, when do the flocks break up? If there is territory defense, how large an area is defended against other plovers? Every observer also should be alert to the possibility of seeing a banded bird, and should notify Mike Ord, Eugene Kridler, or myself immediately.--Andrew J. Berger

FIELD TRIP to Study Shore Birds, October 10, 1966:

A small party left the library shortly after 8 A.M. for a reconnaissance of Oahu's shorebirds of the leeward side. At Sand Island, the first stop, we noted all four shorebirds and a dozen Stilt on the exposed mudflat jutting makai of squatter's island. Eight Shovellers were flying across the lagoon offshore as we drove up to the beach. They landed on the mudflat. At sea were 3 Brown boobies and 3 other birds, which I feel were Pomarine jaegers. The gray light of threatening rain to the south made it difficult to make a certain identification.

At one point, I scanned the Keehi Lagoon for the gull seen last month by the Audubon field trippers, and picked it up flying Ewa across the lagoon. It was white, with black wing tips, but not yet in full adult plumage. There are three gulls it could be!

A small flock of Black-headed mannikins were feeding on the lawn as we pulled in to the Oahu Plantation manager's home in Waipahu. Here were seen at least 6 Red-vented bulbuls, Pycnonotus cafer, new escapees that had been reported by the manager's wife, Mrs. John Humme, two months ago. At first they were in the large monkey pod tree on the grounds, then they flew over to the Java plums at the edge of the lawn to feed on the fruits, and here everyone got a good look.

The party was divided at the highway. Mike went to the County dump area, and we to the old settlement basins on the east side of the Waipio peninsula. Here, as we approached the east basin along the road, large flocks of stilts and shorebirds flew up, scared by something. I noticed a strange bird that looked like a cormorant flying near a flock of stilts. I started to say cormorant as I put the binoculars on it, but noticed a long, downward curved bill. "An ibis!" I yelled. It circled near the basin several times, then soared down to a landing in Middle Loch.

Mike and his party saw a pair of Black-bellied plover, and one Pectoral sandpiper in or near the new settlement basins at the County dump. A Little blue heron flew over.

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Oct. 14: I went out to the settlement basin on the Waipio peninsula to see if I could get a good look at the White-faced glossy ibis, Plegadis chihi. It was feeding by the pond in the southeast corner as I mounted the dyke and walked makai. It flew up when three Shovellers flew up, and circled the basin, coming in for a landing at the far side. I walked down out of sight makai, then mounted the dyke again at the southeast corner, where I got a good look at its brown head and neck and glossy, black wings with a greenish sheen.

The last ibis recorded in Hawaii was in 1873 (Wilder, Maui)! -- Walt Donaghho

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WHITE-FACED IBIS, Plegadis chihi
(White-faced glossy ibis)

After hearing about the report of an ibis in the vicinity of West Loch, Oahu, seen on the Society's last field trip, I decided to take a trip down into this area on Saturday, October 15.

The bird life had been completely disrupted at the filter bed before my arrival

by an airplane that was spraying the sugar cane fields. Large flocks of shorebirds were seen flying around but no sign of an Ibis.

After half-an-hour of looking, the airplane flew off and before long some of the plovers and turnstones began to return, quickly followed by several stilts. Then from the direction of West Loch I noticed a large bird flying towards me. Using my field glasses it was easy to see the bird's long, decurved bill and dark plumage. The ibis flew overhead and was finally attracted to the small pond within the filter bed where the stilts were feeding. Closer observation with the telescope enabled the writer to see the bird extremely well at a distance of about thirty yards.

The bird was in winter plumage, inasmuch as it lacked the white feathering around the base of the bill. The general coloration was black in the body which changed to a glossy purplish sheen as the light hit it. The head and neck were lighter in color with a certain amount of white flecking in the head color. Legs and bill were dark. It was very much larger than the stilts with which it was feeding.

The last recorded sighting of a White-faced Ibis was in 1873. -- W. M. Ord

COMMON SNIPE AT WAIPIO PENINSULA

On Saturday morning, October 22, 1966, I visited the filter beds on Waipio Peninsula in the hope of again observing the White-faced Ibis that has been seen in this area on several occasions. Although I had timed my visit to coincide with the morning's high tide, there was little or no shorebird life, other than several Golden Plovers and a few Turnstones.

While the mudflats were almost deserted, the small pond boasted a small flock of ducks - some of which were feeding, others just resting with their heads tucked under the wings. It was while I was stalking this flock of ducks for a closer look that I flushed the Common Snipe from about ten feet in front of me. The flight was typical zigzag. The bird emitted several rasping call notes as it flew off. The rump was dark compared to that of the Dowitcher which also occurs infrequently in this same area. Reviewing my notes I find that I have seen the Common Snipe on this same peninsula at least once each winter for the past five winters.

The duck count was fairly significant for Oahu, I thought, in view of the fact that most suitable waterfowl habitat has been drained. There were 21 Pintail, 17 Shoveler, 5 Green-winged Teal, 2 American Widgeon. The ibis was not seen on this day by the writer. -- W. M. Ord

FIELD NOTES:

Sunday, November 6, 1966, at Waipio Peninsula: 4 Common Snipe, 1 Yellowlegs, 100+ Stilts, 100+ ducks (3 Baldpate, the remainder approximately 50% Pintail 50% Shoveler).

Tuesday, November 8, 1966, at C&C dump (Waipio Peninsula): 5 Sharp-tailed Sandpipers, 230+ Stilts, 1 Black-bellied Plover and 2 Bar-tailed Godwits. (The Bar-tailed Godwits were clearly identified by the writer and Eugene Kridler of the U.S. Fish and Wildlife Service.)

Friday, November 11, 1966, at Kahuku: 275 Pintail, 40 Shoveler, and 1 Mallard (duck).

There are more ducks on Oahu now than there has been in the last six years that I know of. Anyone interested in seeing them should visit any of the known water areas that the Audubon Society covers on our field trips. You'll find it well worth the effort. -- W. M. Ord

WAIKIKI MYNAH

By Ruth R. Rockafellow

This article is reminiscent of the one on the Waikiki Parrot regarding which I wrote some ten years ago, and which Bob Krauss often mentioned in his column "In One Ear" which was a daily item in the Honolulu Advertiser at that time.

My daily swim takes me down Lewers Street past the activities incident to the building of the new First National Bank Building on Lewers and Kalakaua. Some 25 years ago Miss Grenville Hatch taught me Hawaiian bird identification by sound and flight, hence my ears are attuned to bird calls. It annoyed me no end that signals used by the construction crew on the above mentioned project used a "chirp" resembling a mynah to indicate the raising and lowering of hoists. I had never heard this.

It is not, of course, a true call, but was confusing and annoying to me, and I would be keenly aware of it as I walked to Kalia Road and then down the Public Right of Way to the Beach. One day the "chirp" seemed to be sounding differently as I passed Roy Kelley's Edgewater Hotel complex - I dismissed it, but the next day I again noted the difference and decided - this I must trace down - the call is too clear and strong and birdlike. I seated myself on Kalia Road in front of the Halekulani Hotel and waited. There! again I heard the call; waiting, listening and watching and in time I noted movements in a coconut tree on the Edgewater Hotel grounds and then a bell-like call erupted as a beautiful Hill Mynah came into view. He answered my whistle and flew about the many trees in the area, but did not come near me. I went for my swim. Thereafter, I saw him each day in the same area and we chatted and each went our own way. He never approached me.

On September 27 about 8:00 a.m. I heard a new call adjacent to my apartment on Kuhio and Royal Hawaiian Avenues. Hurridly I went out of doors and there in front of my apartment was the Hill Mynah. I whistled and he answered and included a repertoire of many calls, but no talking. Hoping to bring him closer I scattered bread crumbs to welcome the visitor - he wanted none. Was he canvassing the neighborhood?

He was very noisy, using a variety of calls, all pretty and clear and flitted from tree to tree much to the annoyance of our common mynahs. They gathered in flocks, sitting on palm fronds, scolded, nodded their various heads and made a terrific noise. I had three neighborhood calls about "that loud bird."

Soon the bird flew ewa on Kuhio and his notes melded with the whistle of the construction crew, which he perhaps preferred. He evidently likes the beach and the competition of the construction crew.

We are still friends, greeting each other each morning and further than that it is pau.

FOR JUNIOR MEMBERS:

GOLDEN EAGLE

By Ruth R. Rockafellow

Recently I became very disturbed while reading a letter from a visitor which appeared in the "Letters to the Editor" section of the Honolulu Advertiser.

The party writing the letter protested the apparent neglectful manner in which our local Zoo was providing for the Golden Eagle.

Mrs. Mary Riggs and I made a trip to the Zoo to evaluate the complaint. We found a wonderful specimen, very much at ease in a majestic manner on a sturdy perch. The bird was in beautiful plumage and remnants of food were to be seen on the ground.

Reference to the size of the cage had also been made in the complaining letter.

I sent the clipping to Mr. Throp at the Zoo, and he has given permission to quote his answer as follows:

"I did see the letter to the editor concerning the eagle, and though this is a statement that should receive an answer of discredit, it is not the sort of publicity that reflects well on the Zoo even if the statement was completely repudiated. So, no comment has been made.

"People frequently put human values and emotions to animals, i.e., "unhappy eagle," "accustomed to soar and dive in lofty heights," "suitable to his lofty instincts," etc.

"Eagles in captivity or in nature only become active when there is a need of food. In a huge zoo exhibit, they seek a perch to their liking and spend their entire lives there, descending only to eat and drink. In Europe, on a block with the legs tied with jess, they behave exactly the same. In a cage of any dimension

there is no difference in attitude. This particular eagle has spent several years in an enclosure much smaller than has been provided for him here in Honolulu. For the first two weeks or so that the bird was here, he was extremely nervous because the cage provided for him was so large. He felt a lack of security. Each time a group of pigeons flew too close, the bird would panic. He is becoming established in his environment now and I'm sure does not feel "happy" or "unhappy" about anything; just at ease in this world.

"I regret that I may never have the opportunity to convey this information to the person that expressed the concern, but I hope that it may settle your own doubts...."

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Letter from Candy Carter, September 1, 1966: Sparrows

I found two sparrows on Kahili Street in Kailua, Oahu, where nests are found all the time. When I got home, I mixed warm milk and the yolk of hard cooked egg. They liked it very much, and it seemed to be good for them, so I continued to feed them this mixture. I kept them in a bottom part of the milk carton. The top was cut off and thrown away. I made sure not to handle them more than necessary. After they started to fly, I transferred them to a rather large cage.

I haven't noticed any peculiar habits. I received a lot of pleasure from them, because they sing a lot and come out of the aviary on to my hand all the time.

Candy is a ninth grader at Kailua Intermediate. If you have similar experiences, please share them with other members by writing to Kojima, 725-A 8th Ave, Hon, 96816.

1966 CHRISTMAS BIRD COUNT

The Christmas bird count will be held on Monday, December 26. The count area will cover the same areas as have been counted in the past years. The breakdown of areas and leaders for the respective areas is as follows:

Group A: Koko Head side of Diamond Head to Paiko Lagoon and Kuapa Pond, including the residential area. -- Robert L. Pyle, 265-379

Group B: Ewa side of Diamond Head to Manoa Valley and downtown Honolulu, including the Zoo and Manoa Falls Trail. -- Jack Throp, 935-819

Group C: Punchbowl and Tantalus. -- Ronald L. Walker, 512-859

Group D: Aiea Trail. -- Unoyo Kojima, 749-985

Group E: Kaelepulu Pond, Kawainui Swamp, Kailua residential area, and the Marine Base. -- Eugene Kridler, 268-977

Group F: Keehi Lagoon, Salt Lake and Nuuanu Valley. -- Mike Ord, 968-771

Those members wishing to participate, please call the leader of the area of your choice and make your own arrangements as to meeting place etc. So that you may be given recognition for participating, please give 50¢ to your leader with your full name and address. The money will be forwarded to the National Audubon Society along with our consolidated count figures for recording in the Audubon Field Notes.

If there are any questions please call Mike Ord, 968-771.

DECEMBER ACTIVITIES:

December 12 - PLEASE NOTE DATE. Annual meeting at the Honolulu Aquarium Auditorium at 7:30 p.m. Program for the night: (1) Elect officers
(2) Work out details of the Christmas bird count (3) Eugene Kridler will show WINGS OVER THE BLITZEN, filmed at Malheur Refuge, Oregon.

December 26 - Christmas bird count.

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 Noah K. Pekelo, Jr. - Kaunakakai, Molokai
 Gerald E. Swedberg - Lihue, Kauai
 P. Quentin Tomich - Honokaa, Hawaii

Regular - Out of State

Dr. Dean Amadon - New York, N.Y.
 Dr. Alfred M. Bailey - Denver, Colo.
 Edward C. Bennett - Palmer, Mass.
 Dr. Robert H. Cooper - Muncie, Ind.
 Kenneth L. Cuthbert - Oakland, Calif.
 Elizabeth Dyer - Newark, Delaware
 Dr. William H. Elder - Columbia, Mo.
 Dr. & Mrs. Charles A. Ely - Hays, Kans.
 Chester M. Fennell - Rocky River, Ohio
 Dr. & Mrs. Hubert Frings - Norman, Okla.
 Earle R. Greene - Oxnard, Calif.
 Dr. Irene E. Greenhut - Hawthorne, Cal.
 Mrs. Joseph A. Jordan - Scarsdale, N.Y.
 David L. Kaltvedt - Estherville, Iowa
 Karl W. Kenyon - Seattle, Washington
 Joseph E. King - Washington, D.C.
 Mrs. M. L. King - Alephi, Md.
 Warren B. King - Washington, D.C.
 Mrs. Walter Klabunde - Lewiston, N.Y.
 H. R. McKenzie - Auckland, N.Z.

Eben McMillan - Cholame, Calif.
 Mr. & Mrs. Joseph E. McNett - Webster, N.Y.
 Dr. Alfred J. Marston - New York, N.Y.
 Mrs. David J. Martin - B.C., Canada
 Mrs. Ethel Matheson - Washington, D.C.
 Dr. Frank P. Mathews - Kingston, Wash.
 Mr. & Mrs. C. Turner Nearing - Decatur, Ill.
 Dr. Roger T. Peterson - Old Lyme, Conn.
 Mrs. H. Paul Porter - Alexandria, Va.
 Hannah T. Richards - Edina, Minn.
 Dr. Frank Richardson - Seattle, Wash.
 Carroll A. Rieck - Olympia, Wash.
 Mrs. Martha Rosenquist - San Francisco, Cal.
 Mrs. Donald P. Russell - Milford, N.H.
 Paul Schaefer - Rocky Hill, Conn.
 Euphie G.M. Shields - Lafayette, Calif.
 Dr. Miklos D.F. Udvardy - Sacramento, Calif.
 G. Bernard Van Cleve - Pittsburgh, Pa.
 Richard E. Warner - Berkeley, Calif.
 Mrs. Ann Elizabeth Wissler - Mentone, Calif.

Institutions

Amer Mus of Natural Hist - New York, N.Y.
 Atlantic Naturalist - Washington, D.C.
 Bishop Museum - Honolulu, Hawaii
 Cornell University - Ithaca, N.Y.
 Dominion Musum - Wellington, N.Z.
 Div. of Fish & Game - Honolulu, Hawaii
 Harvard University - Cambridge, Mass.
 Hawaii County Library - Hilo, Hawaii
 Hawaii Natural Hist Assn - Hawaii
 Hickam Base Library - Hickam AFB, Oahu
 Honolulu Advertiser - Honolulu, Hawaii
 HSPA Experiment Station - Honolulu, Haw.
 Honolulu Zoo - Honolulu, Hawaii
 Kamehameha Schools - Honolulu, Hawaii
 Kauai Public Library Assn, Ltd - Lihue, Kauai
 Kauai Public Library, Hanapepe Branch
 Kapaa Branch
 Waimea Branch
 Library of Hawaii - Honolulu, Hawaii
 Library of Hawaii, Kaimuki Branch
 Kapahulu Branch

Mass. Audubon Society - Boston, Mass.
 Maui County Free Library, Wailuku, Maui
 Kahului Branch
 Lahaina Branch
 National Audubon Society - New York, N.Y.
 Pacific Vegetation Project - Washington, D.C.
 Palama Settlement - Honolulu, Hawaii
 Patuxent Wildlife Research Center - Laurel, Md.
 Peabody Museum - New Haven, Conn.
 Pennsylvania State Univ. - Univ. Park, Pa.
 Plant Industry Adm. - Honolulu, Hawaii
 Smithsonian Institution - Washington, D.C.
 University of California - Berkeley, Calif.
 " " - Los Angeles, Cal.
 University of Hawaii - Honolulu, Hawaii
 University of Kansas - Lawrence, Kansas
 University of Michigan - Ann Arbor, Mich.
 Waikiki Beach Press - Honolulu, Hawaii