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SOOTY SHEARWATER IN HAWAII
By David H. Woodside and Ronald L. Walker

On April 3, 1964, a Sooty Shearwater (Puffinus griseus Gmelin) was found on a used car lot in the Ala Moana area of Honolulu. It was compared with the two existing skins at the Bishop Museum and confirmed as this species by Mr. E. H. Bryan. The bird was in extremely good condition and resisted captivity vigorously. The bird was kept alive at the museum for examination for ectoparasites, and then made into a study skin.

There are very few records of this species in Hawaii as it is only transient in these waters. In September of 1956, Woodside collected a specimen four miles off Pepeekeo Point on the island of Hawaii. The third specimen in the museum was obtained by Paul Bompke on Laysan in 1906 according to Mr. E. H. Bryan (in correspondence).

There are apparently two seasonal migrations of this species along the Hawaiian chain. A fall flight has been noted along the east coast of the islands in a south-east direction. In the spring a return flight is made to the Northwest. According to fishermen, the fall flight runs from mid-October until late November; and the spring flight from March to May, although these are only approximations. In 1952 the senior author observed a large flight travelling southeast during mid-October over 50 miles east of Cape Kumakahi, Hawaii, which, assuming this is the same flight, indicates that the flyway is at least 50 miles wide. Also in October of 1947 on a trip from Manila to San Francisco a flight of shearwaters, undoubtedly this species, was observed 500 miles northeast of Midway Island flying southeast. They were observed for two days as the ship crossed the flyway.

It is difficult to estimate their numbers, but judging from the density of birds seen, width of the flyway, and duration of the migration it is certain that these flights probably consist of over one million individuals and perhaps as many as two million. The birds fly low over the water in a distinctive manner and never in tight groups but rather in scattered singles. They have never been noted to feed as they travel southeast in the fall and most likely do little feeding on the reverse flight. Their singlemindedness has caused aku fishermen to term them "Bakadori" or crazy bird. They are always in a hurry and never seem to associate with other sea birds.

WHAT TO DO WITH DEAD BRDS

Every now and then one finds a recently dead bird. It may not be good enough to skin, but it isn't too far gone. Does any one want such a specimen?

Yes! At Bishop Museum an energetic entomologist, Dr. Nixon Wilson, is making a study of the ectoparasites of birds. He goes through their plumage literally with a

fine tooth comb. He examines their nostrils for nasal mites. It makes him happy to be given a bird, either dead or alive. Here are a few recent examples:

Two barred doves have been brought in by members of the staff of Bishop Museum, both apparently the victims of contact with windows or other hard surfaces. On both Dr. Wilson found nasal mites and Mallophaga.

Sea Life Park presented him two Laysan Island Albatross and a Black-footed Albatross, which did not survive transfer from Midway Islands to Oahu. After they have been examined for ectoparasites, the wings will be sent to Staten Island Community College, New York, where James L.G. Fitzpatrick is making a study of the relationship of bird wings to aviation.

The latest bird specimen to be received was a juvenile gull, found at Mokuleia Beach, Oahu, on March 27, 1964, by Mrs. A. Yashiki, who gave it to Paul Breese, who turned it over to Dr. Wilson. When found by the roadside, near the beach, both wings were broken, and although still alive, maggots were attacking the body. Mr. Breese stated that he and his family had seen a young gull flying over that vicinity just three days before. By comparison with specimens in Bishop Museum and descriptions in Alexander's BIRDS OF THE OCEAN, it was decided that this was probably a juvenile Herring Gull, Larus argentatus vegae Stejneger. Its feet and head have been preserved to vouch for its identity. Dr. Wilson obtained numerous specimens of three species of Mallophaga from its plumage.

Paul Breese pointed out that every specimen of gull collected along the Hawaiian chain and recorded (at least all those in Bishop Museum) has been a juvenile. These are very difficult to determine because they have not yet attained their adult patterns. Each example carefully observed or collected adds to our knowledge of gull distribution. And if the specimens reach an ectoparasite expert, that much more knowledge is added.

E. H. Bryan, Jr.

GULLS ON PACIFIC ISLANDS

The foregoing raises the question as to why no gulls live on oceanic Pacific Islands. There are plenty of records of gulls straying into the Pacific, following ships, and being seen as chance arrivals on islands of the Hawaiian chain and other islands well out in the Pacific, but none seem to breed or to take up residence for long on oceanic Pacific islands.

In the manuscript check list of the birds of the Pacific, being compiled in Bishop Museum, a dozen species of gulls are listed, as follows:

- Larus delawarensis Ord, the Ring-billed Gull. Chance arrivals on Maui and Molokai.
- Larus argentatus smithsonianus Coues, a Herring Gull. "Chance arrival" Laysan.
- Larus argentatus vegae Stejneger or Palmen (?), a Herring Gull. Agrihan I. (Marianas), Marcus, Midway.
- Larus californicus Lawrence, California Gull. Chance arrival in Hawaii.
- Larus glaucescens Naumann, Glaucous-winged Gull. "Occasional straggler" Hilo, Oahu, Laysan.
- Larus hyperboreus Gunnerus, Point Barrow Gull. Chance arrival Kauai, Lanai, Laysan.
- Larus pipixcan Wagler, Franklin's Gull. Chance arrival Maui, Oahu.
- Larus novae-hollandiae forsteri Mathews, Silver Gull. New Caledonia.
- Larus novae-hollandiae novae-hollandiae Stephens, Silver Gull. Australia to New Caledonia, Loyalty Islands, and perhaps to Fiji and Society Islands.
- Larus novae-hollandiae scopulinus J.P. Forster, Red-billed Gull. New Zealand.
- Larus bulleri Hutton, Black-billed Gull (Tarapunga). New Zealand.
- Larus philadelphia Ord, Bonaparte's Gull. Chance arrival, Kauai.

Numerous people ask why gulls are not part of the Hawaiian bird fauna. Several years ago, we asked two distinguished authorities on birds, Robert Cushman Murphy and Alexander Wetmore, to comment on this subject. Both wrote back that gulls were birds associated with continents and did not live long on small islands far out in the Pacific. We still wonder why this is so.

E. H. Bryan, Jr.

PACIFIC OCEAN BIOLOGICAL SURVEY PROGRAM

The Division of Birds of the Smithsonian Institution is carrying out a survey to satisfy a need for information on migration, distribution, and ecology of birds and terrestrial vertebrates, and their ectoparasites, in the Central Pacific Ocean area.

The present area of primary interest includes the Hawaiian chain, the Line and Phoenix island groups, from 150° W. to the Date Line (180°) and from 30° North to 10° South. Surveys will be made of each island within this area and also sea surveys from vessels.

The goal is to determine: (1) the species identity of birds and terrestrial vertebrates, their numbers, reproductive phenology, pattern of distribution, and periods of occurrence on islands and at sea in the area; (2) the arrival and departure dates of all species of birds which breed outside the area of interest, their area of origin and probable destination; and (3) the species identity, numbers, and host association of all ectoparasites and symbionts associated with birds and mammals.

These objectives will be achieved by compiling a complete bibliography for birds and mammals, and their ectoparasites, occurring in the Central Pacific Ocean area, analyzing this information together with data obtained from bird specimens and bird banding records, and carrying out a series of at-sea observations and ecological field studies of selected islands within the area.

To date, the various scientific parties have been coordinated from the U.S. National Museum, where Dr. Philip S. Humphrey is Curator, Division of Birds. Now an office is being established in Honolulu, with Dr. Charles Ely, biologist in charge.

E. H. Bryan, Jr.

MISS RACHEL CARSON

"After learning of her death, Secretary of the Interior Stewart L. Udall heaped praise on Miss Rachel Carson in a statement. He said she was the kind of woman who makes men proud, a scientist of rare courage and ability and a world-renowned author whose eye was trained to the destiny of generations she would never see.... She devoted the last years of her life to saving mankind from the subtle dangers of man's misuse of his own environment."

This devoted woman will be missed greatly but her fight will go on and as Audubon members we should help to carry on this fight against the indiscriminate use of chemicals.

Meredith Ord

NENE FUND FOR 1964

The Division of Fish and Game, State of Hawaii, has asked the Hawaii Audubon Society to start a fund to raise money in order to bring another flock of Nene from England to supplement the Nene that are now free in Haleakala Crater, Maui.

The Society will be using the Honolulu newspapers to help in this appeal for money, but it is hoped that the members of our Society will take this opportunity to work as a unified group in this worthwhile cause by spreading the word to our friends and neighbors.

Donations should be sent to the Hawaii Audubon Society
P.O. Box 5032
Honolulu, Hawaii, 96814
and marked Nene Fund.

Your kokua is needed. Mahalo.

W. M. Ord

MINUTES OF THE HAWAII AUDUBON SOCIETY
GENERAL MEETING, March 16, 1964

The meeting was called to order by Mr. Ord.

The minutes of the last general meeting were read and approved.

Mr. Bill Carney gave a report on the field trip to Ulupau Head on March 8th.

Mr. Ord introduced our speaker for the evening, Dr. Andrew Berger, who spoke on "The Life History of Kirtland's Warbler."

Dr. Berger began his talk by telling us that the Kirtland's Warbler nests only in Michigan in an area which is 60 miles wide by 100 miles long. The Federal Government set aside a portion of this land as a management area for the Kirtland's Warbler, which is the first time that land was set aside for a songbird.

The Kirtland's Warbler nests on the ground in the Jack Pine plains, which is barren, sandy soil. The Jack Pines are used for pulp, and then the area is burned to bring about reseeding. The heat of the fire causes the pine cones to open, so the seeds fall out--thus a new Jack Pine plantation is reseeded. The Kirtland's Warbler will also nest in Red Pine plantations.

Food for the first brood which hatches around June 7th through 10th consists mostly of caterpillars and moths, while that of the second brood which hatches in July consists of blueberries, larvae and small flying insects.

Predators of the Kirtland's Warbler are: Blue Jays, Squirrels and Cowbirds. The brown-headed Cowbirds are the most serious threat, because they lay their eggs in the Kirtland's Warbler's nest, and at the time of hatching the Cowbird chick is four times the size of the Kirtland's Warbler chick. Also the Cowbird's eggs hatch earlier (10-10½ days) than that of the Kirtland's Warbler's eggs (12½-13 days). The Cowbird is known to parasitize 200 species of birds in North America.

In closing Dr. Berger told us that the Kirtland's Warbler's feeding habits have not become too specialized, and the percentage of infertility is very low (3-5%), but pointed out that destruction of the breeding area can wipe out the bird completely.

Mr. Paul Breese, Director of the Honolulu Zoo, introduced Mr. Dunn, one of our charter members, who gave a short address.

The meeting was adjourned by Mr. Ord.

Respectfully submitted,
Meredith A. Ord
Secretary

MAY ACTIVITIES:

MAY 10 - Field trip. Weather permitting, we will make an attempt to visit Rabbit Island to study sea birds in the breeding colonies.

Trip will be limited to Society members.

Meet at the Library of Hawaii at 8:00 a.m.

Leader: Mike Ord

Telephone 587-328 for reservations

MAY 11 - Board meeting at the Auditorium of the Honolulu Aquarium at 7:30 p.m. Members are always welcome.

MAY 18 - General meeting at the Auditorium of the Honolulu Aquarium at 7:30 p.m.

Program for the night: Illustrated talk by Dr. Charles Ely of the Smithsonian Institution.

(SUBJECT TO CHANGE)

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