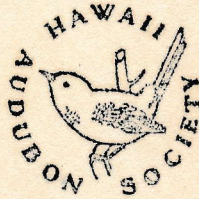


THE ELEPAIO

Journal of the
HAWAII AUDUBON SOCIETY



For the Better Protection
of Wildlife in Hawaii

Volume 8 Number 11

May 1948

HAWAII AUDUBON SOCIETY EXTENDS ALOHA TO ROBERT CUSHMAN MURPHYS.

The Hawaii Audubon Society was honored, on March 31, to entertain Dr. and Mrs. Robert Cushman Murphy at a small dinner party at Lau Yee Chai. Dr. Murphy, distinguished ornithologist, author, honorary president of the National Audubon Society, and member of the staff of the American Museum of Natural History, was en route to his home in New York after an extended visit in New Zealand.

Miss Hatch and Mrs. Pedley contacted as many members of the Society as possible in the short time after the Murphys arrived unannounced, and made all arrangements for the dinner, the cost of which was borne by those present. Carnation leis (their first in Hawaii, Mrs. Murphy said) were presented to Dr. and Mrs. Murphy.

Dr. Murphy spoke about his experiences in New Zealand, and Mrs. Murphy, inspiration for the Doctor's book Logbook for Grace, spoke entertainingly of her trip to the Antarctic Snarcs, south of New Zealand. Both talks were cut short by the impending floor show, and the members look forward to meeting the Murphys again.

H. Paul Porter.

-----00000-----

"ALBATROSSES FLY HAWAII TO JAPAN", is the title of an article in the Honolulu Advertiser of April 20, datelined Tokyo. The brief article follows: "There is a regular movement of blackfooted albatrosses between Hawaii and Japan, according to the wildlife branch of the fisheries division of the allied headquarters natural resources section.

"The second case on record of an albatross banded in the Hawaiian Islands and picked up on this side of the Pacific was reported here by a fishing boat captain. He snared the bird when it swallowed a baited fish hook, according to Dr. Oliver Mistin, Jr., head of the wild-life branch in Tokyo."

-----00000-----

AUDUBON NATURE CAMP OF CALIFORNIA 1948 SUMMER SESSIONS IN THE HIGH SIERRA.

The prospectus for this camp has reached us, and offers one of the most fascinating summer programs yet. Nestled among spectacular peaks of the Sierra Nevada is beautiful Sugar Bowl valley, site of the Audubon Nature Camp of California for its summer sessions of 1948. Seven thousand feet above sea level, the valley is within the Hudsonian Zone, just at the fringe of the Canadian, with timberline in easy reach. The Camp will be a Sugar Bowl Lodge, one mile off the highway from Sacramento to Reno, and 24 miles from Lake Tahoe. For more information one may get in touch with Grenville Hatch, or write to Mrs. Ethel E. Richardson, 887 Indian Rock Avenue, Berkeley 7, California.

SUMMARY OF DATA TAKEN FROM GAME BIRD SURVEY OF HAWAII
By C. W. and E. R. Schwartz

Generic Name:	California Quail	Pheasants	Lace Neck Dove	Barred Dove
Lophortyx californica californica (Hawaii only)	Phasianus torquatus torquatus (Ring neck)	Streptopelia chinensis chinensis	Geopelia striata	
Lophortyx californica brunescens (Molokai only)	Phasianus versicolor versicolor (Japanese or green)			
Estimated Populations:				
Hawaii	62,550	35,190	31,570	7,800
Kauai	810	11,540	10,470	52,090
Lanai	100	1,450	3,470	10,380
Mauai	2,600	12,590	16,730	44,610
Molokai	11,590	2,410	13,990	51,900
Oahu	---	7,160	12,450	69,900
Earliest Recorded Introduction:	Prior to 1855	Ring Neck prior 1865 Green prior 1900	Prior to 1879	Introduced 1922
Preferred Habitat:	Leeward side of islands	Pasture lands and open cultivated fields	All except very wet forests and above 6000'	All except very wet forests and above 4000'
Principal Food:	Plants (S, B & L) 90-100% Insects trace 10%	Plants (S, B, F & L) 65-97% Insects 3-35%	Plants (S, B, F & L) 99% Insects trace	Plants (S, B, F & L) 96.5% Insects 3.5%
More Common Foods:	Japanese tea (S & B) Common Thistle (S) Gosmore (B & L) Pepper plant (S & L) Black medic clover (B & L) Kiawe (S) White clover (L) Joie (S) Cutworm (larva) Koa Haoie (S)	Pineapple (F) Brown Grass (S & L) Common Thistle (S & B) Ukiuki (F & S) Java plum (F) Sweet potato (T) Lantana (F) Sensitive plant (S & L) Guava (F) Popolo (F) Kiawe (S) White clover (L)	Popolo (F) Akia (S & F) Pigeon pea (S) Pigweed (S) Balsam apple (S) Ukiuki (F & S) Ilima (S)	Amaranth (S) Brisley foxtail (S) Vasey grass (S) Pigweed (S) Hialoa or Uhaloa (S)

Note:
S - Seeds
B - Blossom
F - Fruit
L - Leaves

Wild Game Bird Survey (Cont'd)

	California Quail	Pheasants	Lace Neck Dove	Barred Dove
Timing:	Casual 8 A.M. - 3 P.M. Accelerated 3 P.M. - 5 P.M. Rapid 5 P.M. to dusk	Casual 7 A.M. - 10 A.M. Accelerated 12 Noon to 4 P.M. Rapid 4 P.M. to dusk	Casual 7 A.M. - Noon Accelerated Noon to 3 P.M.	Casual 7 A.M. - Noon Accelerated Noon to 3 P.M.
History:	Pairing - Feb. & March Laying - March & April Incubation - April & May Hatching - May & June Large coveys - September to January	Courtship - Feb., March, April Laying - March, April, May Incubation - April, May, June Hatching - May, June, July	Breeding evidenced from February thru October Could produce as many as four broods per year but average two to three	Breeding thru out the year - most active in March and August May produce five broods per year with 3 to 4 an average
History:	Nest - on ground under weeds No. eggs - 6 to 13 Length of incubation 22 to 23 days Incubation by hen Sex ratio 113 males to 100 females Chicks fly - 3 wks.	Nest - on ground in natural depression No. eggs 6 to 11 Length of incubation 23 days Incubation by hen Sex ratio 1 male to 1 female Chicks attended by hen - few weeks	Nest - 6' to 35' above ground No. eggs - 2	Nest - 4' to 20' above ground No. eggs - 2 Young leave nest - 14 to 16 days of age
External sites:	Few - not serious None observed	Many - light infestations Many	Few - light infestations Few	Few - light infestations None noted
Internal sites:	Mongoose Rats Cats	Rats Mongoose Pigs Cats	Mynahs Rats Cats Mongoose	Mynahs Rats Cats Mongoose
Feeding Factors:	Water - either as fluid or in berries Interspersed of cover with feeding range (Seldom feed further than 50' - 100' from cover)	Food - herbacious material Water - either as fluid or berries		

At the regular meeting of the Hawaii Audubon Society, Monday, March 15, Mr. Vernon E. Brock, of the Board of Agriculture and Forestry, reviewed the work of Mr. C. W. Schwartz on game birds of Hawaii, the results of which are presently in type-script, but which the Board hopes to publish in condensed form.

Funds were made available through the Federal program for game birds which, under the Pittman-Robertson Act, allows \$10,000 a year to the Territory if matched locally with one-fourth of that sum. The money must be allotted in proportion to its source, i.e., money from fishing licenses goes to fishing conservation, so that the only part of the money to be used for this survey was that based on the hunting licenses, and only half of those are sold to hunters interested in game birds in the Territory. The funds are obtained through the Fish and Wildlife Service from the tax on ammunition, but must be used for restoration of wild life in which hunters are interested. Hunters may be benefited by increasing the population of game birds and the creation of sanctuaries, which are also of general value.

In initiating the program, then, it was desirable to inventory the game bird resources of the Territory--what species were to be found, their distribution and probable numbers, and what factors served to control distribution. The first and most difficult step was to find a suitable person to make the survey. When Mr. Schwartz accepted the task, he divided it into two phases, (1) life history of the game birds, and (2) a census of species. A study of the life history would show the food habits of the birds and their reproductive cycles. The census could be made by (a) a strip count, mapping a given area and dividing that area into strips which approximated the average terrain of the area, walk these, preferably with a dog, flushing all birds and counting as you go, then multiplying to arrive at an estimated total; or (b) with pheasants, making a count of grown males and on the basis of a fixed ration, calculate the total population. Age proportions are also studied.

Detailed results of the survey will not be presented here, but it was determined that the greatest population coincided with the best environmental conditions. For example, the Parker Ranch area was the best pheasant area--70,000 birds were counted in 76 square miles in this area, both ring-necked and blue or hybridized pheasants--this in spite of the fact that it is also the area of heaviest hunting. Rainfall and practices of land use in the area are responsible. You find more wild birds there than on all the rest of the island together. You may also conclude that if birds are in danger of being exterminated by hunters in any given area, other factors are also out of line and the population is already declining. Pheasants are hunted by sex, only males being shot, and even illegal shooting tends to select males since their feathers are more prized. Nevertheless the male-female ratio was not out of line. While a 50-50 ratio might be expected, it has been shown that a ratio of 4 to 5 hens to one cock is the best for reproduction purposes.

Along the Hamakua coast there are almost no game birds. Conditions of food and cover are not right, or some other factor is lacking; it is not hunters.

A similar pattern was followed for quail and other game birds. Quail are in the greatest numbers on the Hale Pohaku plateau of Hawaii and on the coast of Molokai. The race of quail found on Hawaii is the dry land valley quail of California; that on Molokai the quail of the wetter California coastal area, though they have survived in the dry area of Molokai.

The life history study of the game birds showed that the closed season now in effect coincided fairly well with the nesting and egg laying periods. Also the cock-hen ratio in most places was one to one.

Going on to plans for the future, within the limits set by the use of Federal funds, money now can be spent on improving environmental conditions and game management. Mr. Schwartz showed certain conditions that correlated with the presence or absence of birds. One area lacked water, another proper cover, etc. A reasonable expenditure of funds in a given area might startlingly affect the bird population, if other factors were favorable and only one or two things were needed. For example, South Point on the Big Island has such dense stands of lantana that although lantana is a pheasant food, only the fringes served as cover to the pheasants. A plan has been developed for thinning these areas and multiplying the amount of edges, breaking up the surface soil. This will allow the growth of other food plants used by pheasants as well as increase the area of usable cover. Quail too will be benefited. For such dry areas as Pohaku there are watering devices -- one, a rain collector with slow release at a drinking place. Another device syphons water out of filled drums. Springs on the slopes of Maunakea have been piped and tapped at intervals.

In one of the areas where the means described have already been applied, there are now 400 quail to the square mile. This is not markedly better than when the survey was made, at which time there were over 300, but the improvements have not been effected long enough to determine their results.

The life history study showed the closed seasons coinciding with the nesting and laying habits, but the relation is not perfect, and the seasons can be shifted a little bit. However, the extremes of the seasons are set by the legislature; the board can reduce but not extend. It may be to our advantage to open and close later.

A great many birds have been introduced into the Territory. For the most part these have disappeared. For hunting purposes, only three species are valued; pheasant, quail and some dove. It has been suggested that we introduce new species. If any move is made in this direction, it will be scrutinized very carefully. In the past little was known about the birds, and they were often introduced into improper environments when liberated, reducing their chances of survival. For example, there are many sub-species of Bob White quail, but of those introduced here almost none have survived. We might introduce one of these into an area where there is no other species now. Any such introduction must not endanger any of the present population. It would be possible to set up a situation where the least desirable bird wins out because the more desirable is hunted while the other is left free to multiply. Some think that was the case with the doves. Mr. Schwartz, however, found that that apparently is not true.

All of the game birds that may be hunted in the Territory are introduced birds. None of the native or migratory birds may be hunted legally, not even the ducks. The only reason for fostering the game birds is that they are of interest to certain groups and they pay for the services that also benefit other groups. The situation is admittedly artificial. We hope, though, that our work can be done without injury to any of the native birds. The ranges of the two do not coincide, since the native birds are forest birds and the game birds prefer open country. There is probably not any real competition between the two. The money is spent on a rather specialized function and from a limited point of view--the production of more material for hunters to shoot at. But the results can be of interest to people interested in other birds. It should be emphasized that the factors the general public sees are usually not the factors which actually control the bird population.

(The meeting was then open to questions from the audience, in response to which Mr. Brock stated)

The local game farm stopped functioning at the end of the war. The cost of liberating a bird was too high, and the cost per bird that survived must have been much higher. If it is desired to liberate new stock, they can be purchased cheaper than raised locally.

Planting is being done in the management areas. If the natural growth in an area where ground has been broken is insufficient, other species of growth may be introduced which will provide food. Some soil fertilization is also done.

Warden on Lanai is paid by Hawaiian Pine, so they are evidently not too concerned about the damage done by birds to the pineapples and believe in law enforcement.

What opportunity to protect water fowl? There is a good opportunity under the Federal law, the nene, for example. However, when the population of any species gets too low, it lowers the reproduction potential, and the species will probably die out regardless of protection. As to the stilt, it would be doubtful if protective funds could be obtained under the Pittman-Robertson Act, since it could scarcely be construed as a game species.

Do you have to have a license to hunt pig? No, not on your own land. It is not a wild animal. But you have to have a license to bear arms on the property of others or public property.

Goats definitely destroy forage-- examples of such destruction on Hawaii are clearly illustrated. The disappearance of native birds is largely correlated with the disappearance of forest land. The distribution of grazing animals is at the same level as 25 years ago; in spite of efforts to eliminate them, the population remains the same. The Board of Agriculture and Forestry has done everything to encourage more hunting. Drives do not solve the problem, since they are profitable only at intervals and in the intervening years the population has recovered. Hawaiian forests have proven unable to stand heavy grazing. The release of grazing animals resulted in irreparable damage. Only solution today would seem to be the introduction of some Bengal tigers!

-----00000-----

FISHER, HARVEY I. Interbreeding of Laysan and Black-footed Albrosses. Pacific Science, 2:132 April 1948. Dr. Fisher has observed on Eastern Island and on Sand Island, Midway, several hybrids of *Diomedea nigripes* and *Diomedea immutabilis*. He saw several mixed pairs at nests, on and near eggs, and feeding young. He believes that interbreeding of these two species is actually more frequent than has usually been thought. This he finds not surprising in view of the similarity in size, structure and habits, and the overlap of nesting colonies on crowded islands.

-----00000-----

WALKER, LEWIS W. Citizen mongoose. Audubon Magazine 50:2 March-April 1948. Mr. Walker has written an interesting article on the mongoose in Hawaii, in which he defends the mongoose, saying that he is responsible for bringing in check the Norway rat; that on the islands where the mongoose has been introduced the Norway rat is rare, on the two where the mongoose is absent the Norway rat is most destructive and common.

FIELD NOTES:

Kipapa at last! After having been rained out on two previously scheduled trips, eighteen of us spent a delightful day, April 11th, on this beautiful trail. The weather man was very grudging about it all, however, and it was not until after we had held a powwow at the beginning of the trail that, in spite of the cloudy sky, we took a chance. The drivers took their cars back beyond the bad part of the road before following--just in case!

As we walked along the trail the call of the Japanese hill robin could be heard from all sides, but as is usual with this little fellow, all were especially careful to remain well hidden in the underbrush and only a small flock were spotted flying below.

Bush warbler was also frequently heard. Tantalizingly so, for several times we were teased by one or two calling from near by. But not once did we so much as catch a glimpse.

Amakihi were also heard, and a few were briefly sighted as they flew from tree to tree. The friendly elepaio was very much in evidence all along the trail and the white-eye, too, was frequently sighted.

The big thrill of the day for four of us was the exciting experience of having four iwi pose for us on the dead branches of a nearby tree. For several minutes we stood spell-bound scarcely daring to breathe lest we frighten them away. What a picture those little feathered creatures made with their scarlet bodies against the light grey color of the branches!

The frequent showers of the day made little difference to us thereafter!

Blanche A. Pedley

00000

MAY ACTIVITIES:

BIRD WALK: May 9th, to Tantalus. Meet at the Library of Hawaii at 8:30 a.m.
Saturday, May 22. Meet at Library of Hawaii at 8:00 a.m.

MEETING: May 17th, at 7:30 p.m. at the auditorium of the Library of Hawaii.
Dr. Max de Laubenfels, professor of Zoology at the University of Hawaii
this year, and a keen birder, will talk.

00000

HAWAII AUDUBON SOCIETY:

President - Mr. H. Paul Porter, 446 D. Niu Street

Vice -Presidents - Mr. E. B. Hamilton, 528 17th Street, CHA-3

Miss Grenville Hatch. 1548 Wilhelmina Rise

Secretary-Treasurer - Mrs. Blanche A. Pedley, 3770 Sierra Drive

Editor, The Elepaio - Miss Charlotta Hoskins, 3212 Loulu Street, Honolulu, Hawaii

DUES: Regular \$2.00 Junior (18 years and under) - \$1.00 Life - \$50.00
per annum per annum