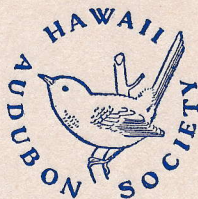


THE ELEPAIO

*Journal of the
Hawaii Audubon Society*



*For the Better Protection
of Wildlife in Hawaii*

Volume 12, Number 3

September 1951

LAYSAN ISLAND BIRD CENSUS By Vernon E. Brock

During a nine-day period through the end of June and the first part of July, the George Vanderbilt Pacific Equatorial Expedition, 1951, visited Laysan Island. I was privileged to accompany the expedition on this leg, thereby having the opportunity to attempt, among other things, a census of the birds of Laysan. The primary object of the expedition was to obtain a collection of fish as nearly complete as possible from this area. Under some obligation to aid in other activities as well, my time for the general bird census was limited to but a single day.

In order to census the birds in the short time available, the following method was employed: some four or five members of the ship's crew were instructed regarding the commoner and more abundant species of birds occurring on the island, then each man was given a pencil and paper and instructed to walk across the island counting all birds ahead of him on the ground in a belt about twenty feet wide. A separate count was made for each species, of course.

In general, the Laysan albatross was distributed over the entire island, being absent only from the windward beaches where the black-footed albatross was abundant. Noddy and Hawaiian terns nested just back of the beaches, largely in the first line of growth, while large colonies of sooty terns occurred well behind the beach crest and on the grassy slopes toward the central lagoon. Frigate birds were found nesting in small colonies usually just back of the beach crest in the higher growth.

The number of birds counted would bear a varying relationship to those actually using the island. For example, very few adult albatross were in evidence, and therefore, for each young bird counted, there should be two adults feeding at sea. In the case of the terns, one adult would usually be present at the nesting site which was marked either by an egg or very young birds. So, in order to translate the counts made into terms of total population, they must be multiplied by a factor of 2 for the terns and 3 for the albatross. The figures given here are in terms of the total number of birds on the island at the time the count was made without any adjustment for feeding adults at sea. For purposes of comparison, Professor Dill's counts, made during his visit in May, 1911, are included. The figures given by Professor Dill include an adjustment for feeding adults, off at sea, and are therefore artificially higher than the counts made in 1951.

As to the figures here given, a recomputation of areas covered may change them somewhat, but only in the nature of minor adjustments.

Of the Laysan rail, Laysan honeyeater, and the Laysan miller birds not a sign was found. It is to be doubted that these species yet occur on Laysan Island; the fearless behavior of these birds as noted by Fisher in 1902 would make it rather unlikely that any small number of them yet remain to be observed.

	<u>1951 Counts</u>	<u>1911 Counts</u>
Laysan albatross	103,900	180,000
Black-footed albatross	18,240	85,000
Shearwater (largely wedge-tailed) ..	6,290	175,000
Sooty tern	115,800	333,900
Noddy and Hawaiian tern	9,521	8,500
White tern	150	75
Booby (3 species)	2,940	180
Frigate bird	9,011	12,500
Tropic bird (red-tailed)	200	300
Bristle-thighed curlew	50	250
Laysan duck	39	6
Laysan finch	5,059	2,700

Prepared by Vernon E. Brock, Director
 Division of Fish and Game
 Board of Agriculture and Forestry
 Territory of Hawaii

LETTER, from James L. Bishop, Secretary of the Midway Square and Compass Club No. 955,
 to Grenville Hatch - excerpts:

Band No. 52700001 was used to band an albino gooney bird on Eastern Island, Midway, June 5, 1951; the bird about 4 months old. Numbers 52700002 through 52700100 placed on Laysan (white) gooney birds about 5 months old on June 17, 1951, at Eastern Island. Nos. 52700101-52700200 placed on black-footed gooney birds at Eastern Island, June 17, 1951.

Several interesting observations of the birds have been reported, as:

the parents for some reason attack their young, biting them about the head and neck, perhaps because the young are continually begging for food;

one set of parents will feed several young, this being unusual (strange?) as each family has only one young;

evidence of deliberate killing has been observed, several birds found tied to trees with wire, the wire round their feet, the bird hanging upside down. This is an act of sadism by some individuals. It has been suggested that perhaps more signs erected for the protection of wild life should be obtained and placed about the island; only 2 or 3 of these signs can be found in evidence at this time. (If not effective, I trust something more vigorous can be done by the commanding officer to combat the harm done by men with sick minds - Editor);

another unexplainable death of the birds is that they have been seen to be perfectly normal in all respects and for some unknown reason have been seen to drop over and die in a few minutes;

also quite prevalent among the small birds about the time they start to fly is a small growth or group of knots which appears on their beaks or at the base of the beak where the feathers start. The knots grow to an extent that the bird goes blind and one case was observed where the eyeball was pushed out of the socket; the horny beak seems to be inflamed and swollen;

lastly, some of the young birds which were born late and are not yet fully feathered venture into water in quest of food, become waterlogged and drown.

CONDITIONS AFFECTING BIRDS

By George C. Munro

Exceptionally heavy rains occur in cycles. In 1889 Mr. Frederick Hayselden reported six solid days of rain on Lanai. Mr. Henry Gibson used to tell of Hawaiians divine for their sweet poraroos in Palawai Basin on Lanai, probably after the same rainfall. In December 1890, I saw a reed-fringed lagoon with a pair of wild ducks swimming on its surface in the crater of Tantalus, Oahu. In 1901, there was a fall of rain on Molokai such as had not occurred for fifty years on that island, according to old residents. I saw coots swimming on a lagoon at Papohaku on the west end coast of that island about a year later. About 1903, a director of the Molokai Ranch visited Molokai and told of shooting ducks the night before in a lagoon in the crater of Diamond Head. In 1916, there were three days of exceptionally heavy rain on Lanai. After the water subsided I measured the highest point it had reached by the mark it left on cactus in Palawai Basin - four feet deep.

These lagoons have long been dry, but last year there was the heaviest rainfall recorded on Molokai Ranch since I installed a rain gauge there for the Hawaiian Weather Bureau, in 1899. There have been heavy falls, but I think local ones, in 1942 and 1948. On Lanai in February of this year there was again a lagoon in Palawai Basin deeper than the one in 1916 and which stayed longer. On Oahu in February, 1951, there were heavy falls and the lagoon, covering about five acres, appeared again in the crater of Diamond Head and is still there, probably diminished in size, at this writing. I do not know if the lagoons are again at Papohaku and Tantalus but I think they probably are. I understand the Hawaiian Weather Bureau recently forecast a succession of more stormy weather than we have had for some years.

It seems that this will be a favorable time for our shore birds and we would do well to keep a vigilant eye on the creation of sanctuaries and sustained protection of birds some sportsmen would like to see back on the sporting list. Diamond Head should be declared an inviolable bird sanctuary. If the lagoon remains, migratory ducks will frequent it. The feeding range of the birds of Honolulu is continually being restricted and the slopes of this mountain provide a great variety of bird food. There is also evidence of a number of species of Honolulu's birds nesting there. Mongooses and native rats abound in the region. Though I have never seen the rats there, evidences of their presence are the runways in the grass, small burrows, and remains of kiawe bean consumption in the dry season. Unlike the Norway rat, they make small burrows, too small for the mongoose to enter; as they are night foragers when the mongoose is asleep, the latter never seems to get them. Four newly hatched, naked young white-eyes recently disappeared from their nest on one of the slopes. They were evidently taken by rats, as, though the nest was near the ground, the mongoose could hardly have climbed the straight, smooth stem of the small tree in which this exceedingly cleverly-built nest was hanging. The nest was left in perfect condition but the chicks were gone. Examination of the droppings of mongooses on the trail reveal no evidences of their killing birds. Their food, with the exception of one bird, probably an old one, is almost entirely insects, principally a small, black cockroach. The exceptional bird feeds on the fruit of Passiflora foetida, var. gossypifolia, which abounds in shrublike form on the rocky open slopes and furnishes a plentiful supply of bird food. The red-berried P. foetida and small fruited P. subrosa are present but not common. Both supply bird food. I saw the red-berried species growing plentifully in the planted forest on St. Louis Heights a short time ago. It will seem a pity if this fine forest is destroyed and the ground occupied by buildings. It is a good bird resort at present.

Boys with BB guns and slingshots sometimes frequent the trail on the western slopes of Diamond Head. Declaration of the mountain as a bird sanctuary would perhaps deter them to some extent from molesting birds. They may not do much harm as the terrain is too steep for much comfort in hunting. They use open ridges as background for practice at shooting a target, which is a good thing if they can be restrained from using birds

for this purpose. I think they can be educated to this. In my opinion it is better to train the public to respect birds rather than to kapu places such as sanctuaries and some of the outlying islands. It would pay better to make friends for the birds of picnickers and fishermen rather than make enemies of them by kapus and fines. Some islands, such as the outer part of Moku Manu, off the Oahu coast, and Nihoa Island, 140 miles northwest of Niihau, should certainly be kept in their natural state and only privileged persons be allowed to land on them. People landing on islands without restrictions are very apt to plant vegetation foreign to the area or remove some of the natural vegetation and so spoil it as a natural living museum. The problem is an intricate one and should have careful study.

In the Elepaio (vol. 11, No. 6, December, 1950), I told of the return of the golden plover to Kapiolani Park, from August 18 to September 8, and told of three pairs having separate feeding grounds. I may have spoken before of the plover in the park flying round one in a half and even complete circle, when disturbed. They do this to keep over their own beat and avoid encroaching on the territory of other pairs of birds. For a while there seemed to be a strip of neutral ground between the area of each pair, on which plover were almost never seen. One pair, slightly different in size, which, for brevity, I call Moki and Mele (Hawaiian names for Moses and Mary), kept well to their own territory most of the time. In January of this year there was some difference in the action of the three pairs. There seemed to be only one at each station and they did not keep so well to their own beat and were either spreading out more or their places were taken by others while they went on to where the army worm was developing. On March 19, after the heavy rains - and there was a large lagoon in the polo field - I saw a group whose actions indicated they were travellers, perhaps starting in their migration along the Hawaiian Chain. They were in the water and could not take short runs so took short flights instead, but they did not seem to be feeding. On April 6, there were a few in the polo field which flew straight away instead of in a half circle, evidently transients, and one - apparently Moki - was at his old beat. On the fifteenth I saw a pair which might have been Moki and Mele but they were not together and did not act quite as usual. My only notes after April were "no plover", though when the dew was heavy I did not walk in the park but on the road alongside it. The action of Moki and Mele first noted in September 1949 (see Elepaio, vol. 10, No. 7, p. 42, Jan. 1950) indicates that the same plover return to their old beats. Next August I shall watch carefully for this pair. One is only slightly smaller and neater in body lines than the other, which necessitates seeing them together before I can be sure they are my favorite pair.

I have never seen an owl near the park but I am sure that in the polo field one devoured a rat which it carried from the south end of the park. At this end there were fully six nests of black rats in the tops of the kiawe trees, only one to a tree. They probably kept to the tops and fed on the beans till the heavy rains spoiled the beans and brought on a luxuriant growth of portulaca at the foot of the trees. There was nothing but the stomach and entrails of the rat and the feces of a bird alongside it. The stomach contained a green pulp such as was in the stomachs of rats I dissected on Howland Island where they fed almost entirely on the perennial portulaca. I recently read in a New Zealand publication how the New Zealand owl, or morepork (Ninox novaeseelandia), deals with a rat: it cuts the skin round the neck, places the head through the fork of a branch and pulls the skin neatly off the rat's body. I cannot vouch for the truth of this but the story took me back to my early boyhood when I used to see skins of rats lying on the ground, neatly turned inside out. At the time I thought it was done by cats but since then I have noted that cats do not leave rat skins in that condition, so I am sure it was done by the morepork, which was common then where I lived. It gave me a thrill to hear its "morepork" call again when I was in New Zealand in 1947. As to the rats' nests in the kiawe trees in the park, I understand that the park employees have destroyed the rats and the nests.

The colony of bees that occupied a hollow ironwood tree in the park either left or was destroyed, which I regret as they were an exceptionally gentle lot. Many times I stood at the foot of the tree, close to the park entrance, and never did a bee protest my presence. There was evidence that they were molested from time to time, but were so well protected by the thickness of the wood that the nest could not be injured without chopping into the tree.

REVIEW:

BIRDS OF MONTEZUMA AND TUZIGOOT NATIONAL MONUMENTS* by Henry H. Collins, Jr.
Illustrations by Roger Tory Peterson

This is a delightful booklet of clear, simple speech and plan, designed for the person who knows little about birds, and copiously illustrated. Some of the illustrations are in color. After a brief foreword, description starts in with "Birds you are apt to see at any season", followed by "Birds you are apt to see in spring and summer", "Birds you are apt to see in winter", "Thumbnail sketches of other birds you may see", a "Bird quiz" and "Suggestions to visitors."

Not all of us will have a chance to use this booklet, but most of us long for just as clear a Hawaiian booklet for bird enthusiasts. We have Mr. George Munro's excellent book, "Birds of Hawaii". But if we had also a brief booklet, for visitors, for school children to own, it might increase the knowledge and appreciation of birds - native and introduced - in Hawaii.

The author says, "This is the first of a series I plan for various national parks and monuments." (But Hawaii may have to produce her own, for the mainland will doubtless call more insistently for such attention.) "The booklet is directed toward the average park visitor who has a potential rather than a developed interest in nature..." "Even if (the visitor) learns only six (birds) he will acquire a new interest in nature which should lead him to understand better the need for conservation and nature preservation."

Interest in our natural surroundings is increasing, the schools evidently intend to "go Hawaiian" in nature study. Any such aids would be most valuable. They are expensive too! But the hope is that our own Hawaii National Park may be able to issue a brief booklet about a few of the most well-known birds. The second recent Hawaii Nature Notes is out: "Volcanoes of Hawaii National Park" by Macdonald and Hubbard, a beautifully illustrated booklet about the last great 1950 flow and historical notes of preceding flows. What will the third Hawaii Nature Notes talk about?

* midway between the Grand Canyon and Phoenix

JOURNAL OF ORNITHOLOGICAL WORK
during the summer of 1937
By Walter R. Donaghoo
(continued)

August 12 (continued):

I was climbing a long slope which extended down to the east, going diagonally across it toward the sea. Reaching the top, I gazed with supreme awe at the greatest number of goats I had ever seen. There, all over the wide expanse of pahoehoe waste, were herds and herds of goats, literally hundreds. They were everywhere in front of me, the air filled with their bleating. On the far skyline was an immense herd of well over two hundred. As I proceeded across the lava herd after herd ran off to a safer distance.

There were many large billies, with beautiful horns. I came to the grassy prominence - a wide pasture - and started across. Skylarks flew up from the grass, as well as several turtle doves. I lay low and stalked a number of goats that were grazing; they saw me finally and scampered off. Another large herd was grazing at the foot of the slope, below me. A solitary grey billy stood on a rock just across from me on the opposite bank of a small ravine, looking at me. I moved toward him and he gave a grunt. Finally he jumped off the rock and disappeared in the gully, dashing down towards the grazing herd below. He soon came into sight again and approached three goats grazing off to one side. He came up to one, which faced him. I could plainly visualize the conversation; the addressed glanced up in my direction and made off with the sentinel; the other two glanced up, then followed. Approaching the main herd, they spread the alarm and, as a body, the herd moved away, left the pasture.

Upon reaching the top of the incline I was not greeted by a sight of the ocean - as I had expected - but another sloping flat at the foot of a two hundred foot cliff upon which I was standing. The sea cliff was the edge of this pasture. It sloped gradually up to Puu Kapukapu, about a mile and a half distant. A barren pahoehoe waste, it was covered with short grass which was host to herds of hundreds of goats. The air was filled with their bleatings as they grazed or moved about. Two of them were fighting each other on the slopes of a gully just below me. They sized up each other and then charged and rammed their horns at each other's heads. At times they leaped high into the air, their horns clashing, their fore hoofs kicking each other. Several came around the corner of the cliff, not 15 feet below me, not aware of my presence until I rolled stones on them. Then how they descended that bank in great 15 foot leaps!

Descending myself, I crossed the flat and came to the brink of the cliff to get a most beautiful view of the indigo-blue ocean, the shore, fronted by high cliffs, stretching out in both directions for miles. White-tailed bosun birds flew about here and there along the cliff and out over the ocean. Several, upon sighting me, came up and flew close over my head. I could hear their squeaky cries as they glided about among the air currents.

I walked along the brink of the cliff to Puu Kapukapu, and climbed it. Goats became scarce, but there was a large herd on the flats below the hill. On the other side, the cliff dropped for a thousand feet to the barren pahoehoe plains which extended to the sea at Keauhou. Returning, I came across a mongoose eating carrion - a dead goat. Reaching the grass pastures beneath the inner cliff, I scared up several golden plover, probably some of the first arrivals. The coastal cliff meets the inner cliff farther on, and I followed down a ravine, going down to the coastal plain at Kaaha, where the C.C.C. had their camp. A flock of valley quail were flushed from the grass near the head of the ravine. Descending, I walked across the barren pahoehoe plains to the shore which was a line of cliffs reaching 50 feet and more in height. Several of the boys were spear fishing, others skinning a goat. Soon Craddock appeared behind a small herd at the brink of the high bluff. We rushed to meet the oncoming herd. Two boys joined me and we chased two goats over the plain towards Kalapana, but they got away. I turned to see a kid coming my way. We drove it to the brink of the cliff and it leaped into the sea to perish. But a large billy, chased to the edge, refused to jump and was caught.

Later, Harold Craddock and I set out for the inland cliffs and reached the top. Craddock looked up once and excitedly called my attention to an opeapea, or Hawaiian bat fluttering about just overhead.

We circled a large herd over toward the pastures and raced toward them, shouting. We succeeded in getting them over the brink, but I lost track of them as the daylight was failing. Slowly descending, we returned to the camp.

August 13: Awoke to view large numbers of goats walking along the tops of the inland bluffs, their number impressive. Spent a little time at a small waterhole, brackish, in which were several species of shrimps and prawns. Harold and I then

started out along the coastal cliffs to the south. A strong wind blew, the spray from dashing waves blown far. In tidal pools were aholehole, oopu, manini and other fish, cowries, sea urchins and other animals on the algae covered rocks.

Hawaiian noddy tern (or noio) were seen now and then, flying along the cliffs, becoming more numerous as we proceeded. Once I looked over the edge of the cliff to see one sitting on a ledge. Guano indicated nests, descent looked easy and I started down. I came upon one tern sitting on a ledge, not 5 feet below me. Later I looked into the mouth of a small cave, out of which several terns flew. As the cave was just below the brink of the cliff, I dropped to the shelf in front of it and crawled in. It went in about 12 feet. At the far end I spotted and collected an egg.

Craddock had started back, and I followed an hour later after I had reached a small hill about 200 feet high. Striking out on a straight line for the camp took me inland through desolate country, hardly a living thing on it. I passed a large hole, the entrance to an immense cavern, the largest I ever laid eyes on. It seemed large enough for trolley cars, with their trolleys, to pass each other comfortably. A large number of turtle doves flew out - perhaps a hundred doves. The cave must have been their home, but I found no traces of nests.

Upon arriving at the corral that the C.C.C. boys have constructed for next fall's gigantic goat drive, we had lunch then went back on horseback. Several plover and turnstones flew up as our horses started out.

August 15: Noticed that the iiwi has disappeared lately around camp. Several amakihi have been heard. They, with a few apapane, are the birds remaining.

August 19: Went to Bird Park to start a recheck of the birds. Upon arriving, I noticed the intense quietness of the forest, compared with the clamor of birds that came to my ears on the last trips. The apapane had completely disappeared. An iiwi called as I entered the park and an elepaio called from its depths. Hill robins sang and the weak "tsee" of the amakihi, drowned in earlier days by the apapane, now came through with bell-like clearness. Iiwi seemed to be quite common still, especially in the forest at the west end of the loop. Its notes and songs were unusually beautiful and serene, coming through the quietude of the silent forest like chimes on a belfry. Quite a number of hill robins sang here and there, making a pleasing din.

(To be continued)

ACKNOWLEDGMENT:

The Hawaii Audubon Society is grateful to one of its members, Janet Bell, Hawaiian Librarian, University of Hawaii, for the superb index she has just made for Elepaio, Volumes 6 to 10 as well as for the index to Volume 11.

FIELD TRIP, July 14, 1951:

Seventeen members, and guests, went to Popoia, the small, flat coral islet close to Kailua, described so well by Priscilla Harpham (Elepaio, vol. 10:29-31). This trip is always planned for the middle or latter part of the summer when the wedge-tailed shearwaters nest in the hollows of the coral rock, a few nesting under the shrubs on the landward side, laying their single egg upon the surface of the ground. By July, the nesting season is in full swing.

The boatman took us over the short space of sea, perhaps half a mile, shortly before sundown. The first comers set out, each with a paper bag, to gather seeds for Mr. Munro's Leahi garden, and let it be said that all seventeen were fine gatherers, much to Mr. Munro's pleasure. The maia pilo (Capparis sandwichiana) was in full flower, spectacularly beautiful, with its white blossoms and long stamens opening as the day ended. We noted that the akulikuli (Sesuvium portulacastrum L.) was much thicker and greener than

last year, probably due to the frequent showers of the last few months. Gathering of seeds and examination of burrows, many of which contained adult shearwaters, continued until almost dark.

The shearwaters began to arrive in numbers before dusk, swinging in with graceful flight, circling, landing, some to disappear into holes, others remaining upon the surface of the ground. One spot of about fifty feet in circumference bore evidence of being their favorite area, the akulikuli being flattened, almost trampled out by the birds. After supper we settled ourselves to face this circle. We could see the shearwaters dimly in the moonlight, often dodging one which threatened to fly directly into us, but we had not realized how many were in the roosting area until Helen Peterson took a flashlight picture, at which at least seventy-five birds took wing. We await with interest these pictures, some taken of the burrows as well as the birds on the surface.

So the evening was spent, walking about a bit, listening with delight to the moaning, all too faint, and seeking the Bulwer's petrel. Three were heard, but they remained in the depths of the burrows. At ten o'clock the boatman came for us, and we left with envy in our hearts for the apparently carefree fishermen who could stay all night with the birds, while we went back to our various duties.

Grenville Hatch

NOTE: Years ago the Editor went to Popoia with a few friends, under the leadership of Tom Maguire. But we arrived before dawn on a moonlight night, and the moaning in the burrows was by no means faint! It was loud, doleful, prolonged, and, between them all, it was constant. We understood exactly why the Hawaiians had named the shearwater uwa'u. The adult birds collected and rested on the windswept, grassy flat on the eastern side, all facing in the same direction - to the wind, their dark bodies and white "fronts" giving a polka-dot effect. A movie camera was ready for them when light should come. But by small groups and single birds they rose and flew out to sea while we anguished with our camera. By sun-up not a bird was left except for the moaning young in their burrows.

MT

SEPTEMBER ACTIVITIES:

FIELD TRIP: Sunday, September 9, 1951, to Popoia. Meet at the Library of Hawaii at 8:00 a.m. Bring lunch, water, and car (if possible). We will gather seed for the Leahi Garden. Bring \$1.00 for boat fare.

MEETING: Monday, September 17, 1951, Auditorium, Library of Hawaii, at 7:30 p.m. Lt. Comdr. W. Stephen Thomas, attached to CincPac Fleet Headquarters, formerly Director of Rochester Museum of Arts and Sciences, will show a kodachrome motion picture entitled, "East of the Andes; the Story of an Expedition to Peru." Following this program a short business meeting will be held.

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