



Chloridops kona.

In the last issue this same picture was erronecusly labeled Rhodacanthis palmeri. See page 31.

BIRDS OF HAWAII and Adventures in Bird Study The Dark-rumped Petrel By George C. Munro

The Dark-rumped Petrel, Uau, Uuau or Uwau (<u>Pterodroma Phaeopygia</u> <u>sandwichensis</u>) is about $15\frac{1}{2}$ inches in length. It is brownish slate on the back and pure white underneath. The white reaches up over its cheeks and across its forehead at the base of its beak and at a distance when seen on the wing the head appears wholly white. It ranges over the surrounding seas but probably does not go far from Hawaii. It originally occurred in large numbers but it is feared there are now comparatively few left.

There are records of its nesting on Hawaii, Maui, Molokai, Kauai and Lanai. I know of no record from Oahu. It was probably early exterminated there. It nested in burrows and holes among the roots of trees generally at a high elevation in the mountains. In these moist regions tree roots and mosses grow so as to form small caverns and tunnels which these birds use in nesting.

In the eighteen eighties Mr. Valdemar Knudsen sent a collection of Hawaiian bird specimens to the Smithsonian Institution, where they created much interest. With them was one or more of these birds. In 1891 Mr. W. E. H. Deverill told me of a petrel named Uuau which nested in the mountains of Kauai. Mr. Francis Gay gave the time of laying ofthe uau as April and May. At that time in 1891 there were specimens of this bird in the Gay and Robinson collection at Kekapua, Makaweli, Kauai. Wilson (quoting Ibis 1880) told of Dr. Finsch making an unsuccess ful trip to Northern Haleakala to find "a very curious bird" called "Uau" which he was informed nested there. In September 1887 at Kilauea natives brought Wilson a downy chick likely of this species, and told of numbers breeding on the slopes of Maunaloa. Henshaw mentions old nesting places between Maunaloa and Maunakea butdeserted when he was on Hawaii. On November 16, 1891 at Honaunau on the side of Maunaloa at about 4500 feet elevation when the Rothschild expedition was changing camp "we passed the skin of a petrel lying on the trail. Our native guide said it was an uau". So this bird must have been well spread and numerous around Maunaloa before the mongoose killed it out.

When the writer lived at Kekapua, Kauai, these birds could be seen in the dusk of evening flying up over the ridges towards the mountain. I watched several evenings and succeeded in shooting one on July 2, 1895. It was a male, very fat, but its stomach was quite empty. I took three specimens of a short thick parasitic worm from under its eyelids which I had never seen in any bird, nor have I seen it since. I did not know till many years afterwards that my fine specimen was one of only four or five in collections at that time.

Alanson Bryan collected specimens of this bird for the Bishop Museum on June 14, 1907 on Olokui, Molokai between the Wailau and Pelekunu gulches at an elevation of between 3500 and 4000 feet. Here the nests were scattered and dogs were used to find the holes. The natives told Bryan that the laying time was July and the most favorable time to take the young was October 10. They were probably wrong about the laying time as chicks from the eggs laid in July would not be sufficiently grown by October 10. That is judging by the time taken to hatch the eggs and raise the young to this stage by the wedge-tailed shearwate The laying time is most likely April and May as stated by Mr. Gay. Bryan secured 18 specimens on this hazardous trip. It is fortunate that he did so as not one could likely be obtained there now. According to Bryan there were extremely few in collections at that time. The immense numbers that used to fly in to the Molokai mountain in the past have bee: completely wiped out by the mongoose.

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Henry Gibson of Lanai, grandson of Walter Murray Gibson who headed a Mormon settlement there and was afterwards Premier in King Kalakaua's Government, told me that when he was a boy the uau nested on Lanai. He said it frequented ridges on the north end of the mountain and also in the dry forest on the northwest end of the island. Reference is made to this bird's existence on Lanai in Walter Murray Gibson's story of Puupehe, retold by Kenneth Emory in "The Island of Lanai" 1924. The love in a song to his sweetheart about the delicacies he would obtain for her says: "Shall I bring you the Uwau bird". Furthet evidence that the uau frequented Lanai in later years is that on September 11, 1896 I found the remains of five pairs of wings evidently of adult birds of this species. There were scattered pairs of wings along an unused trail in the bottom of Kaiholena valley. The birds had been killed by a cat at different times as evidenced by some of them being more or less decayed and others so fresh that the petrel smell was still on the feathers. The wings had been neatly clipped from the body so that it could be more easily carried through the brush. The marks of the cat's teeth were plainly visible on the bones. A cat had evidently found out how to get the birds and make the bodies easier to carry by removing the wings. Specimens of the wings and bones were preserved and are now in the Bishop Museum.

The young were esteemed a dainty food by the Hawaiians but were reserved for the chiefs and kapu to the common people. This probably preserved the birds till the kapus were removed. Then they would be taken at all seasons when ashore and so with the help of the mongoose, cats and pigs these birds have been almost or completely killed out on most islands. It is hoped they are still holding out on Kauai but of this we have no recent evidence.

A story has been told of the natives netting these birds as they

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flew over ridges on their way to the mountains. Places suitable for this were probably few as the birds generally fly so high it is difficult to get them with a gun let alone a net, A system of taking the young in former times has also been told. When the position of the young bird in the hole was determined another hole was sunk vertically over the bird which was then easily removed. Then to deceive the old bir when it came next year to lay, a section of tree fern stem was fitted into the vertical hole. Next year the bird gatherers had simply to go round their marked holes, pull out the plug and remove the chicks. The adults are long lived so this could be carried on for successive years. But when the old birds were taken this system would be ineffective. Bryan was told of another way to secure the chick. A stick was split at one end which when twisted into the down would take a good hold and the bird could thus be easily drawn from the hole. Last year I found on Popoia a piece of fence wire with a hooked end which had evidently been used to bring out the birds from the holes in the coral rock.

Wilson and Henshaw both mentioned a bird that flies over Hilo and Kilauea on rainy nights that was thought to be this bird. In December 1939, Mr. Peter Arioli saw these birds with a good light and from Mrs. Helen Shiras Baldwin's description it would appear to be the uau. But it might possibly be either the wedge-tailed or Newell's shearwater or the Bonin Island Petrel. The first is larger and the other two are small than the uau.

These casual stories serve to give an added insight into a very little known species.

July 1, 1941

28 Checklist of Hawaiian birds - E. H. Bryan Jr - 12 Spotted Hawaiian rail. (Known 76. Pennula sandwichensis (Gmelin) (Rallus sandwichensis Gmelin 1789) from a single specimen in the Leyden Museum, without definite (Pennula wilsoni Finsch, 1898) locality; extinct.) Genus Gallinula Brisson (1760) Gallinules. Alae ula, Hawaiian gallinule. 77. Gallinula chloropus sandvicensis Probably still persisting on Streets (Gallinula sandvicensis Streets, 1877) all the main Hawaiian islands, except Niihau and Lanai. Endemic. Genus Porphyrio Brisson (1760) Indian blue gallinule. Intro-78. Porphyrio poliocephalus (Latham) duced through San Francisco in (Gallinula poliocephala Latham, 1928; not known to be estab-1801)lished. Native of southern Asia Alae awi, mud hen. Introduced 79. Porphyrio poliocephalus melanotus to Oahu many years ago; estab-Temminck. lished, but nowhere abundant; (Porphyrio melanotus Temminck, probably not found on islands 1820)other than Oahu. Native of Australia and Tasmania. Genus Fulica Linnaeus (1758). Coots. Alae keokeo, Hawaiian coot. Endemic 80. Fulica americana alai Peale subspecies of American coot. Gen-(Fulica alai Peale, 1848) erally distributed throughout main islands. Order CHARADRIFORMES, Shore birds, gulls, etc. Suborder CHARADRII Superfamily CHARADRIOIDEA, Shore birds. Family CHARADRIIDAE, Lapwings, plover. Subfamily CHARADRIINAE, Plover, turnstone, etc. Genus Squatarola Cuvier (1817) Black-bellied plover, beetle-. 81. Squatarola squatarola (Linnaeus)

(Tringa squatarola Linnaeus, 1758)

head. Occasional migrant (Kau, Hawaii, 1900; Oahu). Migrating south from arctic Europe, Asia and America; winters in Africa India, Australia, South and tropical America.

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Checklist of Hawaiian birds	- E. H. Bryan Jr - 13
Genus Pluvialis Brisson (1760).	
82. Pluvialis dominica fulva (Gmelin (<u>Charadrius</u> <u>fulvus</u> Gmelin, 1789)	
Genus Charadrius Linnaeus (1758)	
Linnaeus (1758)	Killdeer. Chance migrant (Maui). Breeds in North America from northern British Columbia and southern Quebec south to Mexico.
Family SCOLOPACIDAE, Woodcocks, Sandpipers, Snipe.	
Subfamily TRINGINAE	
Genus Numenius Brisson (1760). Curl	.ew.
(Socionar tahitiangig Gmelin.	Kioea, Bristle-thighed curlew. Winter migrant in small numbers. Supposed to breed in western Alask
Genus Limosa Brisson (1760)	
85. Limosa lapponica baueri Naumann (<u>Limosa baueri</u> Naumann, 1836)	Pacific godwit. Occasional migrant (Kauai, Laysan). Breeds in north- eastern Asia and northwestern North America; migrates throughout castern Asia and winters in Aus- tralia, New Guinea, New Zealand and occasionally in Pacific Is.
Genus Heteroscelus Baird (1858)	
86. Heteroscelus incanus (Gmelin) (Scolopax incana Gmelin, 1789)	Ulili, Wandering tattler. Regular winter migrant. Breeds in south- central Alaska, east-central Yukon and south to Prince William Sound, winters on Pacific islands.
Subfamily ARENARIINAE, Turnstones.	
Genus Arenaria Brisson (1760)	
87. Arenaria interpres interpres (Linnaeus) (<u>Tringa interpres</u> Linnaeus, 175. (Peters is "unable to distinguish" a form <u>Tringa</u> <u>oahuensis</u> Bloxam.)	Akekeke, Ruddy turnstone. Regular winter migrant. Breeds in Green- 8) land, Iceland, northern Europe, Asia and northwestern North Amer- ica; winters south to the south- ern hemisphere.

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Subfamily SCOLOPACINAE

Genus Capella Frenzel (1801)

88. Capella delicata (Ord) (Gallinago delicata Authors)

Wilson's snipe. Occasional migrant (Scolopax delicata Ord, 1825) (Oahu, Maui, Laysan). Breeds in northwestern North America; winters in Central America, West Indies and northern South America.

Subfamily EROLIINAE

Genus Crocethia Billberg (1828)

89. Crocethia alba (Pallas) (<u>Trynga alba Pallas</u>, 1764) (<u>Tringa arenaria</u> Authors)

Hunakai, Sanderling. Winter migrant; especially on Kauai and Niihau. Breeds in the far northern islands of Siberia and North America, Winter: in temperate regions of N. and S. hemispheres.

Genus Erolia Vieillot (1816)

90. Erolia acuminata (Horsfield) 1821)

91. Erolia melanotus (Vieillot) (Tringa melanotus Vieillot, 1819) (Tringa maculata Authors)

Sharp-tailed sandpiper. Occasional (Totanus acuminatas Horsfield, winter migrant (Oahu, Maui, Laysan) Breeds in Siberia; south in winter to Japan, New Guinea, Australia and Pacific Islands; casual on W.N.Amer

> Pectoral sandpiper. Chance migrant (Oahu, Hawaii). Breeds along arctic coasts of Siberia and North America migrates chiefly in Mississippi valley and along Atlantic coast; winters in South America.

Family RECURVIROSTRIDAE, Stilts, Avocets.

Subfamily RECURVIROSTRINAE.

Genus Himantopus Brisson (1760).

92. Himantopus himantopus knudseni Kukuluaeo, aeo, Hawaiian stilt. Stejneger Endemic; probably on beaches and (Himantopus knudseni Stejneger, ponds of all the main islands; more 1887) common on Kauai than Hawaii.

Family PHALAROPODIDAE. Phalaropes.

Genus Phalaropus Brisson (1760).

93. Phalaropus fulicarius (Linnaeus) Red phalarope. Occasional migrant (Tringa fulicaria Linnaeus, 1758)

(Hawaii, Maui, Oahu, Kauai, Laysan,) Breeds locally on coasts and islets of the Holarctic region; winters off the coasts of Chile and west Africa.

BIRDS OF HAWAII

Chloridops kona By George C. Munro

Chloridops kona is a remarkable bird with a large head and an extra ordinary massive beak. It belongs to the thickbilled division of the Drepanid family. Most of its body is olive green in color and its full length is about $6\frac{1}{2}$ inches.

Chloridops was entirely unknown till Scott B. Wilson took a specimen at Puulehua, Kona, Hawaii on June 21, 1887. Rothschild's collector secured a good series of specimens in 1891 and Perkins later collected what he needed. No one else has collected or studied the species.

Perkins considered it rare exen in the restricted area it inhabited. He estimated this to be about four square miles. All the specimens were collected there but my journal notes that Palmer saw a pair farther along southward, on the side of Maunaloa. On the "most favorable and exceptional days" Perkins never saw "more than six or eight specimens". My journal records that on October 12, 1891 we collected 12 specimens, "five of these were together" and "ten of them were not much more than 100 yards apart". This was probably a family group or two as Perkins, who studied it during eight months of the year, never encountered a like concentration of the bird.

Chloridops favored the naio or aaka tree (Myoporum sandwicense) on the very rough lava flows where the lava was loose and sharp. Only on the rarest occasions was it seen on trees in the smoother country where there was a coating of soil over the rock. The naio trees flourished there and bore seed heavily but the birds preferred those on the more recent lava. Perhaps the soil, sparse and out of sight as it was, was richer than the soil on the older ground and consequently the seed was richer and more nutritious. Possibly it was because the cattle had not penetrated on to the aa flows. Perkins had a theory that on the advent of cattle the oos deserted certain country. Its food consisted almost exclusively of the small embryo contained in the hard dry seeds of the naio. Sometimes it cut up and swallowed the green seeds and occasionally green leaves and also ate caterpillars. But generally the stomach and throat were filled with the little germ of the seed of the naio. To break these very hard seeds it had developed a large beak and strong jaw muscles. The heavy head and ponderous beak seemed no impediment to active movement. They hopped "about the aaka bushes with alacrity." "The head is held away from the shoulders. The weight of the bill does not seem to inconvenience them at all". Their call is a low cheep, repeated at intervals. On several occasions I heard them sing. On one occasion Palmer shot a female of a pair. The male kept coming round chirping and singing. He sang quite a long song with a variety of notes. The name Palila as given in some publications is erroneous. Palila is a different bird. The mistake was caused by misreading of a commun-

ication from Perkins to the "Ibis" of which he did not see proof sheets. The mistake was automatically repeated by Henshaw in his publication "Birds of the Hawaiian Islands".

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<u>PLOVER PROTECTED</u> We are delighted with the latest decision of the Board of Agriculture and Forestry that the plover and turnstone are to be completely protected for an indefinite period. The Fish and Wildlife Service in Washington has been interested in the matter, probably a representative of the Service will be sent to Hawaii.