REDISCOVERY OF MAUI NUKUPUU, HEMIGNATHUS LUCIDUS AFFINIS, AND SIGHTING OF MAUI PARROTBILL, PSEUDONESTOR XANTHOPHRYS, KIPAHULU VALLEY, MAUI, HAWAII

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Kipahulu Valley is a prominent geological feature of the east slope of Haleakala Volcano, rising from sea level to 2470 meters where it adjoins Haleakala National Park at the rim of the crater. An expedition sponsored by Nature Conservancy carried out a biological survey of this little-known valley during August 1967.

I participated in the Kipahulu Valley expedition from 17 to 31 August with the principal goal of finding out what I could about several rare species of birds which possibly inhabited the valley. Other expedition members with special ornithological interests included Richard E. Warner, Foundation of Environmental Biology and Expedition Leader, Andrew J. Berger, University of Hawaii, and Gerald Swedberg, Hawaii State Division of Game. It is expected that a full account of the avifauna of Kipahulu Valley will be written later in an ecological context; meanwhile I wish to make available my observations of two rare species not seen by other official members of the expedition.

Scientific nomenclature follows that of Amadon (Bull. Amer. Mus. Nat. Hist. 95:1950) and common names those of Resource Publication 34, Bureau of Sport Fisheries and Wildlife, U.S. Department of Interior, 1966, Rare and Endangered Fish and Wildlife of the United States. Data on observations are furnished from field notes I made immediately after the reported sightings.

Hemignathus lucidus affinis. Maui Nukupuu. Listed by U.S. Department of Interior (op. cit.) as "extinct" and by Jack Vincent, compiler, International Union for Conservation of Nature, Bulletin 16, 1965, as "known or thought to be extinct." Not found by Lawrence P. Richards and Paul H. Baldwin in field work in the Puu Alaea and Wai Anapanapa areas which are adjacent to Kipahulu Valley on the north (Condor 55:222, 1953); nor by George C. Munro who earlier searched the forests of the east side of Haleakala (J. C. Greenway, Jr., Extinct and Vanishing Birds of the World, Amer. Comm. for Inter. Wild Life Protection Spl. Pub. no. 13, N.Y., 1958). Greenway (op. cit.) states of the Maui race of Nukupuu "... none have been seen since 1896, when Perkins obtained specimens."

The first sighting was made at 10:30 24 August at an elevation of 1801 meters while I was descending the expedition's trail alone on the ridge dividing upper

Kipahulu Valley. I was proceding slowly, observing every visible bird with 7×35 binoculars when a small, dull, yellowish bird with a dark eye stripe and a moderately long, distinctly sickle-shaped bill was sighted an estimated 20 to 30 meters away in the crown understory of a large ohia tree (Metrosideros collina, subsp. polymorpha). This individual was active, moving about on the branch and hopping frequently to other twigs. This action afforded various views of its unique bill. After about 15 seconds or so it flew into the crown of another, more distant ohia where a distinctly yellow posterior was noted, and its peculiar hook-bill was silhouetted against an overcast sky. After 10 to 20 seconds in its new location, where it was somewhat less active, it flew away.

The second individual was seen along the same trail 25 minutes later at about 1786 meters elevation. This bird possessed much more yellow underparts with the dark eye stripe contrasting markedly with the moderately bright-yellow head. It was observed for about 30 seconds at a distance of not more than about 10 meters as it foraged 3 to 5 meters above the ground in a community of ohia, pilo (Coprosma sp.), and olapa (Cheirodendron trigynum) trees. Several birds of the genus Loxops were also foraging in the immediate vicinity. Neither this nukupuu nor the first one seen was heard making a sound.

The last sighting of this very rare bird was at 14:05 the same day at about 1740 meters altitude along the same ridge trail. The plumage of this third individual appeared much duller than either of the preceding nukupuus, but the sickle-bill was seen clearly as the bird approached to within about 8 meters in response to my "squeaking" before it flew off. Several sharp shrrp call notes similar to those of Loxops sp. may have been given by this bird, although there were individuals of the latter genus in the immediate vicinity which could have conceivably made these calls. I did not see movement of the bill that would actually pinpoint the nukupuu as the source of the sound. This third bird, unquestionably an immature or a mature female, was watched for about 30 seconds. The heavy understory vegetation along the trail prevented my following any of the three individuals sighted after they flew away.

On this trip, I had been watching particularly for another hook-billed drepanid, Pseudonestor xanthophrys, the Maui Parrotbill. However, the sickle-bills I saw lacked heavy lower mandibles, a diagnostic field character for Pseudonestor, and possessed much longer and more recurved upper mandibles. I was, therefore, puzzled over the identity of these three birds until my return to camp where illustrations in Amadon (op. cit.) permitted positive identification as nukupuus. Substantial periods of time were spent on 25 and 28 August along the section of trail where these birds were sighted, looking for others, but with negative results.

A few weeks after conclusion of the expedition, George Morrison reported seeing a nukupuu in Kipahulu Valley. Mr. Morrison, a National Park ranger, was descending the expedition trail alone 11 September when he made his sighting at about 2048 meters elevation. In a convincing memorandum to the Superintendent, Hawaii-Volcanoes National Park, Mr. Morrison reported seeing the unusual bird several times at distances varying from 8-10 to 12-15 meters. Size, bill shape, and coloration of this individual as described to me by Mr. Morrison were similar to those of the nukupuus I saw. In his letter to the Superintendent, Mr. Morrison described the "tremendously long, curved bill," the upper mandible being "3-4 times the length of the lower" as was evident during a "yawn." Mr. Morrison is interested in Hawaiian birds and familiar with their appearance. I consider his sighting of nukupuu valid, substantiating my own observations in this area. Thus two of the three races of Hemignathus lucidus, those of Kauai and now of Maui, have been rediscovered in recent years; only the Oahu race is now believed extinct.

Pseudonestor xanthophrys. Maui Parrotbill. Late in the afternoon on 29 August, the last day of expedition field work, I was seated at an overlook of the upper Kipahulu Valley at about 2000 meters elevation and prepared to photograph any of the various species of honeycreepers that might visit an ohia tree in bloom below. At 17:33 a smallish, but "big headed" bird was seen to fly into a nonblooming ohia tree, one of a stand below my lookout. Observation through the 7 × 35 binoculars made identification of this bird positive at the first viewing. It was Pseudonestor xanthophrys without a question. It flew toward me and alighted several times, finally perching directly overhead not more than 10 or 20 meters away. Body size and plumage color were not greatly different from the first nukupuu I saw, but the much shorter, more hooked upper mandible and massive lower one

left no doubt of its identity. This individual was actively moving in a more or less direct line through the ohia midstory. It was in sight for about 30 seconds and did not call. The only other sighting in the present century was that reported by Richards and Baldwin (op. cit.).

Sightings of the Maui Nukupuu at from 1740 to 1801 meters (and by George Morrison at 2048 meters), and of the Maui Parrotbill at 2000 meters extend the known altitudinal ranges of these birds considerably above the 1219 to 1372 meter levels previously reported for the Maui Nukupuu and the 1219 to 1524 meter levels ascribed to the Maui Parrotbill. More significantly, this upward extension of range places both of these rare birds in a forest dominated by ohia rather than by koa (Acacia koa). Conservation possibilities for both birds are therefore markedly increased since ohia is the dominant plant in the little-disturbed upper elevation forests of Haleakala's northeast slopes.

Another endangered species, the Crested Honey-creeper (Palmeria dolei), and the rare Maui Creeper (Loxops maculata newtoni) were found in Kipahulu Valley by other members of the expedition as well as myself. Information concerning these two birds will be given later in a general account of the avifauna.

The occurrence of four rare birds in Kipahulu Valley, one previously considered extinct, points up the importance of retaining this area in a natural condition if populations of these birds are to be preserved. In Hawaii, many unique birds found nowhere else in the world have become extinct because of land use practices and environmental changes brought about by civilization.

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BIRDS OBSERVED ON SAN NICOLAS ISLAND, CALIFORNIA

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During the period between 2 May 1962 and 1 January 1964 I was able to make a survey of the birds of San

Nicolas Island, Ventura County, California.

San Nicolas Island is in the Pacific Ocean at 33° 15′ N and 119° 24′ W, or about 60 miles SW of Los Angeles, California. San Nicolas has an area of 20,000 acres and a maximum elevation of 917 feet. It is extremely eroded and quite arid, the annual rainfall being 6.08 inches. There are continuous northwest winds, and the air temperature ranges from 57.2 to 64.4° F. Vegetation is sparse, with coarse grasses and cactus being dominant. There is one ravine with a fresh-water spring and some scrub alders. The only data on the birds of this island appear to be those reported by Howell (Pacific Coast Avifauna no. 12, 1917).

I made observations daily in some areas and weekly in others. The entire island was surveyed at least once monthly. I was the only observer at the time, although the island has several hundred people occupying it. I was frequently in contact with Richard Banks, then of the San Diego Museum of Natural History, and his advice and criticism were invaluable.

Howell (op. cit.) records 52 species for San Nicolas Island. The following list includes 27 of these and 41 additional species. The latter are indicated by an asterisk.

Gavia immer.* Common Loon. Occasional during the winter of 1962–63 and winter of 1963–64.

Aechmophorus occidentalis.* Western Grebe. Three birds were observed within 200 feet of eastern side of island on 11 November 1963.

Fulmarus glacialis.* Fulmar. Several were seen offshore during August 1962 and June 1963.

Loomelania melania. Black Petrel. A single bird was observed at close range about one-half mile off-shore on 28 September 1962.

Pelecanus occidentalis. Brown Pelican. Common throughout the observation period.

Phalacrocorax auritus. Double-crested Cormorant. Breeding resident in small numbers.

Phalacrocorax penicillatus. Brandt's Cormorant. Breeding resident. Five rookeries were present in 1963

Phalacrocorax pelagicus.* Pelagic Cormorant. Resident. Observed in breeding plumage, May 1962 and April-May 1963. None observed nesting.

Ardea herodias. Great Blue Heron. Nonbreeding resident, observed during entire period. Observed flying between San Nicolas and Santa Barbara Island, 25 miles eastward.

Branta canadensis.* Canada Goose. Many flocks were observed passing northward between San Nicolas and Santa Barbara Island in March and April 1963. A single bird was seen in a field on San Nicolas on 1 April 1963.

Chen hyperborea.* Snow Goose. Several flocks were observed 1-9 April 1963 passing offshore. On