

FROM FIELD AND STUDY

Further Records from the Pleistocene of Newport Bay Mesa, California.—Since my previous reports (Howard, Condor, 51, 1949:20–28, and 57, 1955:136) concerning fossil birds recovered from the Pleistocene marine deposits of the Newport Bay mesa, California, several more bones have been acquired from this area by the Los Angeles County Museum. Most of the specimens were taken on the east side of the estuary at locality number 1066, the main locality of the Los Angeles County Museum for vertebrate material in this area; three specimens were taken at the north end of the estuary at invertebrate localities numbers 136 and 240. Seven of the previously recorded species from the Newport Pleistocene are represented plus two more that have not previously been recorded as fossil. That the records may be kept up-to-date for this important region, the identifiable specimens are listed here. Those from localities 136 and 240 are so indicated; the others are from locality 1066.

Gavia stellata. Red-throated Loon. A complete ulna (no. 2423). This is the first fossil record of this species.

Gavia immer. Common Loon. A nearly complete tarsometatarsus (no. 2608 from loc. 240). An incomplete coracoid (no. 2421 from loc. 136) is large enough for *G. immer*, but the glenoid facet is shorter and broader than in available Recent specimens of this species.

Aechmophorus occidentalis? Western Grebe. A poorly preserved proximal end of a humerus (no. 2610).

Diomedea albatrus. Short-tailed Albatross. A complete tarsometatarsus (no. 2617).

Puffinus griseus. Sooty Shearwater. A distal end of a humerus (no. 2621). Another distal end of a humerus (no. 2622) may also belong to *P. griseus*. It is similar in size and in the deep, laterally compressed shaft, but the distal contours are incomplete, and the brachial area, although poorly preserved, appears somewhat less depressed. The specimen may be significant as it is more highly mineralized than is usual for the Pleistocene bones from Newport Bay and thus may represent a secondary deposition from older beds.

Phalacrocorax penicillatus. Brandt Cormorant. One scapula (no. 2611).

Anser albifrons? White-fronted Goose. An eroded distal end of an ulna (no. 2419). A fragment of a carpometacarpus (no. 2615) appears also to be that of a goose, but it is impossible to determine the species.

Chendytes lawi. Three femora (nos. 2606, 2619, 2620) and a tarsometatarsus (no. 2618) of this extinct diving goose are present. Femur no. 2606 is from locality number 136.

Catoptrophorus inornatus. Willet. A nearly complete humerus (no. 2058). This is the first fossil record of the Willet.

In addition to the foregoing, an incomplete carpometacarpus of the Pliocene species, *Mancalla californiensis* (no. 2583) was recovered from the typical Pleistocene strata, in locality no. 1066. The bone is more highly mineralized than those typical of the Newport beds and of a dark, warm brown color. The preservation closely resembles that of specimens of the same species taken from the nearby Pliocene deposits of Corona del Mar. It is suggested, therefore, that it may have been secondarily deposited from older sediments.

The Los Angeles County Museum is indebted to Mr. Fred Feltham, Mr. F. L. Grouard, Mrs. Eleanor McLauchlan, and Mr. and Mrs. Robert Zava for the recovery of eleven of the specimens here listed; the other five were collected by the Museum's curators of paleontology, Dr. Theodore Downs and Mr. George P. Kanakoff.—HILDEGARDE HOWARD, *Los Angeles County Museum, Los Angeles, California, August 26, 1957.*

Notes on the Red Crossbill in Nevada.—In recent years, the author has obtained records of the Red Crossbill (*Loxia curvirostra*) from several mountain ranges in Nevada which add to the fragmentary knowledge concerning the occurrence of this species in the state. Despite persistent field work in western Nevada from 1948 through 1954, crossbills were not detected until March 26, 1953, when two were observed feeding in the tops of pifions at Geiger Summit, 6800 feet, Virginia Range, Washoe County. On August 14, 1954, John S. Spencer and the author found flocks totaling approximately 30 birds in a mature lodgepole pine and white pine forest at Big Meadows, 8700 feet, two miles west of Hunter Lake in the Carson Range, Washoe County. One group of about 15 birds had

at least two lodgepole pines established as feeding trees, one at the edge of the meadow and the other one quarter of a mile distant into the forest. Apparently the crossbills periodically circulated between these points, for by waiting at the latter tree, a total of nine birds was collected at intervals through the afternoon. Crossbills had fed considerably in the two trees, perhaps for several days prior to our visit, as evidenced by the number of freshly emptied cones which littered the ground. On a return visit to the area on August 28, 1954, approximately 15 crossbills were found and a single streaked male was obtained.

According to the plumage sequence as outlined by Tordoff for this species (Condor, 54, 1952: 200-203; Condor, 56, 1954:108-109), the six males from Big Meadows may be segregated as follows: four in varying stages from start to completion of the postjuvinal molt, in each instance by the replacement of streaked juvenal feathers with xanthochroistic body plumage (left testis lengths of 1, 1, 1.5, and 3 mm.), one extremely worn red male which is a first-year bird in that it retains the greenish-edged retrices of the juvenal plumage (testis 4 mm.), and a fully adult red male (testis 6 mm.). It is interesting here to note the apparent correlation between testis length and presumed age as based on plumage characters. Of the four females, two were undergoing the postjuvinal molt and had inactive gonads, one had nearly completed this molt and is in unworn first-year plumage, and one individual is an extremely worn adult. The latter two birds had enlarged ova.

As a group, the ten specimens (University of Nevada Museum of Biology collection) have been assigned to the race *grinnelli* on the basis of general coloration, length of exposed culmen, and wing length, although in the latter character as well as in overall bill mass an approach toward the smaller *bendirei* type is evident. One first-year female is too small for typical *grinnelli* (wing 85.5, culmen 16.3 mm.) and falls well within the range of *bendirei*. The small size of this individual might be due to age, for the findings of Tordoff (1952, *op. cit.*:202) indicate that with regard to wing length and bill measurements first-year birds are significantly smaller than adults, at least in the race *benti*. On the other hand, Jollie (Condor, 55, 1953:195) found that the mean measurements for these two age groups were the same in a series of *bendirei* from Idaho.

On June 11, 1957, between 7800 and 8200 feet on the north slope of Mount Magruder at two and one-half miles east of Indian Spring, Esmeralda County, small groups totaling approximately 20 birds were found generally distributed through the dense piñon groves. Many of the larger trees were heavily laden with cones and the crossbills were seen actively eating the piñon nuts. Two adult males (testis 4 and 5 mm.) and two streaked juveniles were obtained which represent the race *grinnelli* (Museum of Vertebrate Zoology nos. 135378-81). This record supplements the two earlier reports of the species from southwestern Nevada: Grapevine Mountains (Miller, Ecology, 27, 1946:56) and Indian Creek, White Mountains (Miller and Russell, Condor, 58, 1956:76-77). Crossbills have not often been recorded as presumed breeding birds from the piñon zone; it remains uncertain whether the species utilizes this plant formation in years of low cone production.

An additional locality record is provided by the observation, on June 14, 1957, of a small group of crossbills calling distinctively in flight over the old-growth piñon at 7300 feet, Sweetwater Canyon, Sweetwater Range, southern Lyon County.

In northeastern Nevada, the species has been reported once since 1868 (Gullion, Condor, 59, 1957:71). Recent field investigations by parties from the Museum of Vertebrate Zoology have provided specimen records of the Red Crossbill from Elko County. On June 22, 1955, Alden H. Miller collected a male (testis 3 mm.) and a female (largest ovum .5 mm.) at two miles northeast of Jar-bidge Peak, elevation 9000 feet. The following day another female was taken at the same place. The author has allocated these specimens to the race *benti* (Museum of Vertebrate Zoology nos. 133313-15). The females in particular show the characteristic brightness of the ventral yellow, the whitish belly, and the long slender bill of this race. The male is xanthochroistic and rather dusky below, suggesting a degree of intermediacy toward *bendirei*. Despite the collection dates, the birds showed heavy fat and perhaps were post-breeding vagrants. Another male (Museum of Vertebrate Zoology no. 134440) with a testis length of three millimeters, taken by Ward C. Russell on the east slope of Spruce Mountain, 8400 feet, on June 26, 1956, appears to be an intergrade between *benti* and *bendirei* both in color and size (wing 91.5, culmen 18.3, bill depth 9.6 mm.).

A Red Crossbill was found dead by John S. Spencer on a dirt road at 5100 feet, three miles south and one mile west of Centerville, Douglas County, on December 4, 1956. The author salvaged the

bird as a study skin and identified it as *L. c. benti* (Museum of Vertebrate Zoology no. 135382). This identification was confirmed by A. H. Miller who examined the specimen later. There appear to be no other published records of this race from Nevada, although Linsdale mentions an individual obtained on the Arizona side of Lake Mead, November 14, 1938 (Condor, 53, 1951:245).

In his discussion of the race *grinnelli* in Nevada, Griscom (Proc. Boston Soc. Nat. Hist., 41, 1937: 133) states that "in recent years summer specimens have been collected in the Charleston Mountains and the Shell Creek Range." Linsdale repeated this information (1951:245). However, in his geographical summary for Nevada, Griscom (1937:161) lists no records of *grinnelli* from the Shell Creek Range, although a specimen of that race from the Quinn Canyon Range is mentioned. Because he does list an example of *bendirei* from the Shell Creek Range in his summary, it appears that there has been a confusion of localities and that there remains no basis for the recording of *grinnelli* from the same range. An unreported specimen from White Pine County, on deposit at the Museum of Vertebrate Zoology (no. 72356), was taken by H. S. Fitch on June 27, 1937, in bristle-cone pines at the head of Deadman Creek, 10,500 feet, on Mount Moriah, Snake Range. No data on gonad condition for this male were recorded by the collector. The bird is large (wing 97.9, culmen 19.1, bill depth 10.8 mm.) and it has been placed with the race *grinnelli*, with the reservation that an approach to the *benti* shape of bill is apparent.

Linsdale (1951:244-245) overlooked two records mentioned in the literature in summarizing the localities of occurrence for the species in Nevada, that of Bond for Wilson Peak, Lincoln County (Condor, 42, 1940:221) and that of Miller for the Pine Forest Mountains, Humboldt County (Auk, 52, 1935:468).

It is apparent from the information presented here that our understanding of the distribution of the species in Nevada is based in large measure on records of vagrant and non-breeding birds. An appraisal of the extent of intergradation of the races *grinnelli*, *bendirei*, and *benti* in the Great Basin region awaits the further collection of birds decisively known to be on their breeding grounds.

The author is indebted to Alden H. Miller for the opportunity to present the records from Elko County, to Ira La Rivers of the University of Nevada for arranging transportation to the Big Meadows area, and to John S. Spencer for assistance in the field.—NED K. JOHNSON, *Museum of Vertebrate Zoology, Berkeley, California, September 24, 1957.*

Jungle and Domestic Fowl, *Gallus gallus*, in the Philippines.—The following notes are of our impressions, rather than systematic observations, of a situation interesting enough to put on record. In appearance many domestic fowl differ from jungle fowl only in detail, but recent introductions of modern domestic breeds have resulted in variegated birds. The jungle fowl lives on large and medium-sized islands in forest, extensive bamboo areas, and forest edge, and it forages into adjacent fields. It returns to forest trees to roost and it is a wild, shy bird. The domestic bird is widespread, co-extensive with settlement, lives about Filipino houses, where it is fed, and forages into nearby fields. It roosts near or under houses and it is very tame. Interbreeding takes place occasionally; this is sometimes arranged by man to vitalize strains of fighting cocks, and it is sometimes natural. However, in our experience, there are no half wild populations of intermediate habitat such as one would expect if the birds interbred freely.

On Siquijor Island, now largely settled, the progressive destruction of the forests has presumably eliminated the jungle fowl from most of the island. We found it only in the largest block of forest, an area of 500 hectares in rugged territory. The jungle fowl was absent from the next largest forest, an apparently suitable block of 400 hectares on fairly level ground. Perhaps this is an indication of the smallest area of habitat jungle fowl can occupy. It is noteworthy that the jungle fowl is absent from very small islands. By contrast, the domestic fowl can thrive in a dooryard and its immediate surroundings.

The domestic and the jungle fowl are conspecific; probably both descended from the red jungle fowl of India. The domestic fowl, probably more than 3000 years old, has been carried by man over most of the temperate and tropical parts of the world. But a wild type has been introduced, or established by feral birds reverting to a jungle fowl type, only locally in the Malay-Pacific area. In the Pacific area also, there are jungle fowl with an admixture of domestic breeds, and in parts of southern Asia there are half-wild, mixed populations. However, in the Philippines the two forms exist, side by side, each widespread, as though they were each phylogenetically more closely related within them-