

clusion that predation on storm petrels by Peregrine Falcons is widespread.

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A MEXICAN SPECIMEN OF THE YELLOW-BILLED LOON

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On 24 November 1968 I collected an immature female Yellow-billed Loon (*Gavia adamsii*) 1½ mi. N of South Coronado Island, Baja California, México. The specimen (San Diego Soc. Nat. Hist. no. 36831) represents the first occurrence of this species in México and is the southernmost record for North America. The normal wintering range of this loon includes the coasts of southeastern Alaska and northern British Columbia, some 1600 miles to the north of the collecting site. The only published record for California is from Tomales Bay, Marin County (Audubon Field Notes 22:472, 1968), 500 miles distant. Measurements of the specimen are as follows: bill, 75.1 mm; wing (chord), 355 mm; tarsus, 87.0 mm; weight, 7¼ lb, no subcutaneous fat.

In life the loon was immediately distinguishable from Common Loons (*G. immer*) by its pale-headed appearance. The crown was pale gray and markedly lighter than the back, and the white of the face extended above the eye. Except for a small bluish area at the base of the culmen, the bill was entirely pale yellowish; the color darkened within two days after the specimen was prepared. Contrary to the literature, bill size and shape are not reliable field marks for immature birds. I do not know when bill growth is completed, but the specimen was probably no more than five months old when collected. The culmen was decurved (Fig. 1), as in Common Loons, and had not yet attained the straightness or slight upturn that characterizes adult Yellow-billed Loons. The bill length was only 84 per cent that of summer-taken adults (data from Palmer [ed.] *Handbook of North American birds*. Vol. 1. Yale Univ. Press, New Haven, 1962). The specimen also showed a distinct brownish post-auricular spot. This field mark, pointed out to me by L. C. Binford, appears to characterize most immature and adult Yellow-billed Loons (see cover photograph, Audubon Field Notes 22(3), 1968), but is absent in Common Loons. Although this character does not seem to have been mentioned in the literature, it is quite evident in living birds, although in skins it may be mistaken for a dirty smudge.

When sighted, the loon was fishing in an area of calm water of a depth of 20-22 fathoms (U. S. Hydro-



FIGURE 1. Immature Yellow-billed Loon (SDSNH no. 36831) collected at South Coronado Island, Baja California, México. Note the brown post-auricular spot.

graphic Office charts). It made several dives, appeared to be in good health, and showed little fear of our boat. Its stomach was filled with unidentifiable fish remains and a dozen bits of gravel, the largest measuring 13 × 10 mm. Two freshly-caught Pacific sanddabs (*Citharichthys sordidus*), weighing 20 and 67 g, were removed from its gullet. These strictly bottom-inhabiting flatfish occur from Alaska to Baja California at depths of 10-100 fathoms.

The functional significance of the upturned bill in this and certain other diving birds may be related to bottom feeding. Limited data summarized by Palmer (op. cit.) indicate that Yellow-billed Loons feed primarily on bottom-dwelling fishes, whereas straight-billed Common Loons (*G. immer*) take a high percentage of free-swimming fishes. Similarly, in winter at least, Eared Grebes (*Podiceps caspicus*), which have upturned bills, feed largely on bottom-dwelling invertebrates, while the winter diet of Horned Grebes (*P. auritus*), which have straight bills, includes a higher percentage of fishes (Storer, *Proc. XII Int. Ornithol. Congr., Helsinki, 1958*, p. 704). A study of sexual differences in foraging behavior in Western Grebes (*Aechmophorus occidentalis*), in which females' bills are markedly upturned but males' bills are straight, might be particularly instructive (see Selander, *Condor* 68:137, 1966).

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