

AN ADDITION TO THE AVIFAUNA OF PANAMÁ: LONG-BILLED CURLEW (*NUMENIUS AMERICANUS*)

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On 30 September 1966 a specimen of *Numenius americanus* was collected on a grassy field at Fort Sherman, Canal Zone, near the Atlantic terminus of the Panama Canal at our request by Maj. C. L. Wallis, U.S. Army Jungle Operations Command, Fort Sherman. The specimen, a female with ossified skull, and ovary 14.5 mm, weighed 1.5 lbs. It has been placed in the collection of the American Museum of Natural His-

tory. This apparently is not only the first record of the species from Panamá but the most southern report of occurrence; the AOU Check-list of North American Birds (1957) lists it as wintering south to Guatemala, and there is a reported sight observation from Honduras (Eisenmann, Trans. Linnaean Soc. N.Y., 7:29, 1955). E. Eisenmann of the American Museum informs us that the measurements (wing chord, 277 and 280 mm; tail, worn, 105 mm; exposed culmen, 170 mm; tarsus, 85 mm), although within the reported mensural overlap of the two currently recognized subspecies, seem to agree better with those said to characterize the larger, less northern form, *N. a. americanus*.

Leon Linderoth and Loftin first noted a Long-billed Curlew on 24 September on this grassy field. Martin and Powell thereafter saw single, and on one occasion two, individuals there. None was observed after the specimen was collected. We gratefully acknowledge the assistance of Maj. Wallis, who secured permission and collected the specimen. Supported in part by PHS Research Grant AI 06072 from the National Institutes of Health.

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AGE DETERMINATION IN THE BLACK-BILLED MAGPIE

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During a study of breeding biology in Black-billed Magpies (*Pica pica hudsonia*), it was necessary to have a rapid and accurate method for determining age of live-trapped birds on the basis of external characteristics alone. Technics used in age determination in other corvids, such as gape coloration (Marshall and Coombs, Proc. Zool. Soc. Lond. 128:545-589, 1957) or degree of whiteness in the rachis of the primary feathers (Emlen, Condor 38:99-102, 1937), proved unsatisfactory. Linsdale (Pacific Coast Avifauna No. 25, pp. 132-134, 1937) reported several plumage qualities in magpies that made possible differentiation of adult birds and young up to the time of the second molt in the young, but presented neither mensural nor graphic data to support his observations. Measurements of certain characteristics mentioned by Linsdale have permitted separation of adults from first-year birds until the first postnuptial molt of rectrices and remiges of the latter. In southeastern Wyoming this molt occurs in July and August.

Measurements of the length of the black tip on the primary feathers afforded the best accuracy in distinguishing between the two age classes. The fourth primary (P4) was arbitrarily chosen for assessment of this characteristic. This measurement, recorded from banded, free-ranging birds, involved the distance from the apex of the white bar on the feather distally to the end of the feather's black tip. In 20 known-age first-year birds, this black tip averaged 26.9 (SD = 1.5) mm in length. In contrast, 14 known-age adults exhibited a black P4 tip averaging 11.5 (SD = 1.7) mm in length. The maximum length of the black

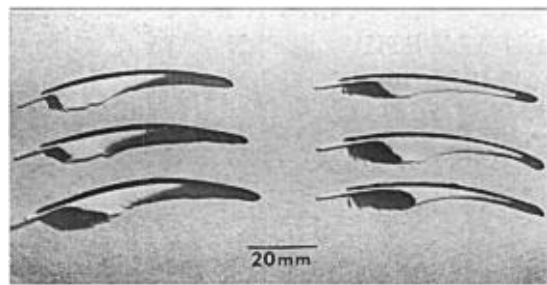


FIGURE 1. Reduced outer primaries from right wings of first-year magpies (on left) and adult magpies (on right).

tip on P4 in known adults was 13.6 mm. The minimal measurement recorded in known first-year birds was 19.8 mm. Overlaps in this plumage characteristic, therefore, were not noted in known-age birds.

In eight of the 140 birds examined during the study, P4 measurements were intermediate between known-age representatives of the two age classes. Age determination in these individuals was performed by means of supplemental indicators. These included characteristic variations in form of the reduced outer primary (fig. 1), sharpness of the black-white junction on the primaries, and the shape of the tip of the outer rectrix. Outer primaries of first-year birds also exhibited a longer black tip and, in addition, were usually broader than outer primaries in adults. In most instances, inspection of the outer primary alone allowed rapid age determination of trapped birds. In first-year birds, the black-white junction on the primaries was generally less well defined than in adults. The distal tip of the outer rectrix was usually rounded in first-year birds and was always squared in adults. It should be noted that the rectrices in magpies were easily pulled out and that, in one case, a first-year bird had outer rectrices in which the tips were heavily