

man and Lowery reported traffic rates of 0-5700 at El Valle and Miraflores, both at least 10 km inland.

During the night of my observations, the winds were very light and from the north (2 kts from 360°). As a result, the birds were probably moving in their "preferred direction" and wind drift was not a factor in their flight track. Their path was along and parallel to the coast, not across the Gulf of Panamá directly to Colombia. This "coasting" or leading-line effect has been described several times previously for diurnal migrants but not for nocturnal migration. Although Newman and Lowery did not report any direction of movement, the two inland sites had much less migration than did the coastal stations. This also suggests that leading-line phenomenon was probably occurring. Because the prevailing winds in late autumn are from the northeast, there could be an ad-

vantage in not crossing the Gulf of Panamá. If a bird were to head southeastward, the northeast winds might drift it out over the Pacific Ocean, possibly beyond reach of land during strong winds. Therefore, those individuals which reach the coast, turn, and remain over land are the more likely to survive.

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Department of Zoology, Clemson University, Clemson, South Carolina 29631. Accepted for publication 28 August 1974.

ADDITIONAL RECORDS OF BIRDS FROM THE MOLLENDO DISTRICT, COAST OF SOUTHWEST PERU

R. A. HUGHES

In an earlier paper (Hughes, *Ibis* 112:229, 1970) account was given of the geography and ecology of the Mollendo district, on the coast of southwest Peru, followed by a systematic list of the bird species recorded there over a period of 16 years. Twelve species were recorded for the first time for the southern coast of Peru.

Since then, an unexpected number of additional species has been observed and the purpose of the present paper is to supplement the information already given and to bring it up to date. Of the 27 new species listed below, 13 here are apparently recorded for the first time for the south coast of Peru, although the presence of a few of these was reported by me in A. W. Johnson's "Supplement to the birds of Chile and adjacent regions of Argentina, Bolivia and Peru" (Platt Est. Graf., Buenos Aires, 1972). Except where otherwise stated, all identifications are based on sight observations in the field.

Phalacrocorax olivaceus. Olivaceous Cormorant. A single bird was present at the Mejía Lagoons during several weeks in November and December 1973.

Hydranassa tricolor. Tricolored or Louisiana Heron. All records refer to birds observed at the coastal lagoons at Mejía: one adult in breeding plumage, October 9-21, 1970, seen also by M. P. Harris on the last date; one immature, July 17, 1971; at least two adults continuously present from July 1972 to April 1974, with as many as six, including a juvenile, on June 30, 1973. These observations represent a southward extension of some 800 km in the recorded range of the species, hitherto not listed from south of Lima, Peru (12° S).

Ixobrychus exilis. Least Bittern. Not scarce in suitable wetlands, especially in dense stands of cat-tails (*Typha*), but extremely difficult to see. Having identified its call in 1971, I can now state that the species is resident in the district. Apparently not previously recorded from farther south than Lima on the Pacific coast of South America.

Anas puna. Puna Teal. A vagrant from the Puna zone of the high Andes. A single bird was seen on October 17, 1970, at a small pond near Mollendo and

lone birds were observed at the Mejía Lagoons on April 30, 1972 and May 11, 1974.

Buteo platypterus. Broad-winged Hawk. A single bird in adult plumage was observed on many dates between December 22, 1972, and March 20, 1973, in irrigated farmland near Mollendo. There appears to be no previous record of this species from the south coast of Peru and I have been unable to trace any reports from nearer than the Lima district.

Parabuteo unicinctus. Harris' Hawk. One adult was seen pursuing small passerines in irrigated farmland near Mollendo, January 22, 1974; two-adult and juvenile-near the Mejía Lagoons, May 11, 1974.

Fulica ardesiaca. Slate-colored Coot. Formerly considered to be a color phase of *F. americana*, for which reason it was excluded from my earlier paper. This coot is a breeding resident, occurring in small numbers on large pools and at the coastal lagoons near Mejía.

Laterallus jamaicensis. Black Rail. A dead bird, evidently a traffic casualty, was picked up from the roadside near the Mejía Lagoons by R. Templeton on March 3, 1972, who subsequently brought me the specimen. It was, unfortunately, unfit for preservation, but the following measurements were taken: wing, 76 mm; tail, 35 mm; bill, 16 mm; tarsus, 21 mm. The recorded range in South America of this elusive species is very spotty and hitherto it was unknown from the Pacific Coast between Lima, Peru (12° S) and Atacama, Chile (26° S).

Haematopus palliatus. American Oystercatcher. Two passing southward over the sandy beach near Mollendo on November 14, 1970, constitute my only record in over twenty years.

Calidris canutus. Knot. A party of 80 birds, some already assuming nuptial plumage, was present on mudflats at the Mejía Lagoons, May 1, 1971. Two birds in winter plumage were seen at the same locality, October 23, 1971.

Calidris minutilla. Least Sandpiper. All records refer to the Mejía district, chiefly to wet places on the grassy pampas which surround the lagoons: 2, December 25, 1970; 2, October 21, 1972; 5, August 30, 1973; 10, November 1, 1973; 25, November 25, 1973; 10, December 24, 1973; 15, January 26, 1974; 6, March 2, 1974; 4, April 6, 1974.

Calidris mauri. Western Sandpiper. At the Mejía Lagoons, one each on October 23, 1971 and March 2, 1974. On both occasions the birds were with flocks of Semipalmated Sandpipers (*C. pusilla*). In view of the close association and the similar appearance of

these two species, it is possible that *mauri* is more frequent than is suggested by the two records given above.

Limosa haemastica. Hudsonian Godwit. All records are from the Mejía Lagoons: 3, October 23, 1971; 1 in breeding plumage, April 28, 1973; 3, December 24, 1973.

Limosa fedoa. Marbled Godwit. One at the Mejía Lagoons, December 8, 1969.

Limnodromus griseus. Short-billed Dowitcher. All records from the Mejía Lagoons: 1, December 25, 1970; 15, May 1, 1971; 2, December 24, 1973; 1, January 26, 1974. Not previously recorded from south of Pisco, Peru (14° S) on the west coast of South America.

Chlidonias niger. Black Tern. Ten birds seen from a fishing boat some 16 km offshore on October 25, 1970. The species invaded the district during the austral summer of 1972/73, during which period Black Terns appeared at practically every lagoon and pool, with at least 120+ at Mejía on March 24, 1973. The first birds were seen on December 25, 1972 and the last on April 7, 1973. Again at the Mejía Lagoons, December 8, 1973 (25), December 24, 1973(3), January 26, 1974(3) and March 2, 1974(8).

Gelochelidon nilotica. Gull-billed Tern. Two birds were seen at the Mejía Lagoons by S. E. Chapman, November 30, 1970; one present for several days in April 1971 on the beaches near Mollendo; Mejía Lagoons, 3 together, November 1, 1972, and another there April 7, 1973. Between June 1973 and May 1974 the species was seen with remarkable regularity at different points along the beaches of the district and at the Mejía Lagoons, with as many as 4 together in November 1973. With the exception of two birds on November 10, all have been in "off season" plumage. No previous records from the coast of south-west Peru.

Thalasseus maximus. Royal Tern. One, fishing close inshore near Mollendo with several Elegant Terns (*T. elegans*), December 23, 1972. It was conspicuously larger than the *T. elegans*. Not hitherto recorded from south of Pisco, Peru, so this observation represents a southward extension of some 600 km in the known Pacific Coast range of the species.

Thalasseus sandvicensis. Sandwich Tern. Three on April 19, 1973; one, April 28, 1973, six, May 6, 1973 and one, May 14, 1973 all observed at close range on the sand beaches near Mollendo. The species reappeared in 1974 and was observed on many dates between February 23 and May 17. In both years the birds were invariably closely associated with groups of Elegant Terns, which they closely approximate in size and general behavior, but at all times the yellow-tipped black bills of *sandvicensis* were a distinguishing feature. Very seldom reported from the Pacific Coast of South America; the previous southernmost observation was at Sechura, Peru (5° S) by K. E. Campbell. Consequently, the Mollendo records represent a southward range extension of over 1600 km.

Sterna hirundo. Common Tern. Measurements of a freshly dead tern picked up on a beach near Mol-

lendo on November 25, 1973, proved conclusively that this species visits the district, as does the Arctic Tern (*S. paradisaea*), which had already been positively identified on the basis on specimens examined in 1966-68. The specimen measured on November 25, 1973, had a tarsus length of 19 mm, and bill 35 mm.

Metriopelia ceciliae. Bare-faced Ground Dove. A local resident in small numbers in the Maritime Range, favoring the inner, drier, and rockier sections of the mountains and appearing only exceptionally on the damp seaward-facing escarpment with its fog-vegetation. First identified in August 1971.

Coccyzus melacoryphus. Dark-billed Cuckoo. One was present in my garden near Mollendo, November 25-26, 1972.

Thaumastura cora. Peruvian Sheartail. Although this striking hummingbird was long known to occur in neighboring districts such as Camaná and Arequipa, I did not see it at Mollendo until February 1970, when one appeared in my garden. Since then individuals have been seen from time to time, high in the Maritime Range as well as in the low-lying irrigated lands, but there does not appear to be any established local population.

Tyrannus tyrannus. Eastern Kingbird. Not previously recorded from the south coast of Peru, this species appeared in the Mollendo district during five consecutive seasons, as follows: two, February 28, 1970; one, November 30, 1970; one, January 22, 1971; one, January 1, 1972; one, January 21, 1973 and one, October 28, 1973. All records refer to birds seen in my garden or in adjacent farmland.

Muscisaxicola rufivertex. Rufous-naped Ground Tyrant. Apparently resident, in very small numbers, in the Maritime Range. It is largely confined to the innermost parts of the mountains at altitudes of more than 800 m above sea level, although on April 30, 1974, one was noted on the outskirts of Mollendo at less than 100 m altitude. It has been seen in every month of the year and is definitely not a seasonal immigrant. Its local status as a resident is particularly interesting because the species had not been reported from below 3300 m in Peru, where it is essentially a high Andean bird.

Vireo olivaceus. Red-eyed Vireo. One was observed at close range in my garden near Mollendo, November 30, 1969. There appear to be no previous records from the coast of Peru, although in April 1957 one was collected at Vallenar, Atacama, Chile (28° S), far to the south of Mollendo.

Setophaga ruticilla. American Redstart. A female appeared in my garden on June 25, 1971. Another, probably the same individual, was present there on August 15-16 of the same year. Another bird, again a female, frequented the garden during three weeks between July 7 and 29, 1973. Hitherto this species has been recorded only from the Amazonian region of Peru and, on the Pacific Coast, south only to Esmeraldas, Ecuador (1° N). However, a bird was seen in May 1972 at San Mateo, near Lima, Peru, by M. Plenge (pers. comm.).

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