

*Oryzoborus crassirostris crassirostris* (Gmelin), LARGE-BILLED RICE GROSBEEK.—Uncommon. Seen on three occasions: May 21 at Carlsen; May 24 at Cuare River Road, three; and May 28, Blanchisseuse Road, one.

*Oryzoborus angolensis torridus* (Scopoli), LESSER CHESTNUT-BACKED RICE GROSBEEK.—Another uncommon finch, noted at Carlsen on April 1 and May 22, one individual; four on May 26 and three on June 5; four on Cuare River Road, May 24; one near Ft. Read May 30.

*Volatinia jacarina splendens* (Vieillot), NORTHERN BLUE-BLACK GRASSQUIT.—Very common in the open country at Carlsen. A widely distributed species seen in large numbers throughout the island.

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## BIRD NOTES FROM EL BAHIRA, TUNIS

BY F. H. BEZDEK

WHILE awaiting discharge of our cargo at the French colonial port of Tunis in the summer of 1944, I had a splendid opportunity to observe some of the bird life of an adjacent salt-water lagoon. At this season the area teemed with shore birds. With only an occasional saltbush patch along its flat, sandy shores, conditions were ideal for observations. This area circumscribes the bird notes recorded below.

The author wishes to acknowledge the assistance of Dr. J. P. Chapin of the American Museum of Natural History, during the preparation of this report.

In the late afternoon of August 13, 1944, our cargo steamer arrived at La Goulette, near the entrance of the canal leading to the harbor of Tunis. Damages resulting from the war made the canal impassible to larger ships, and we were forced to stop here. During the many trolley rides along the canal between the two cities I shall not forget El Bahira both for the abundance of shore birds and its stifling odor. Most striking was the conspicuous absence of bird life at this season on the Lac de Tunis side of the canal. A quick glance at the waters of El Bahira revealed why the avian hosts preferred this feeding ground.

El Bahira is a shallow man-made lagoon bordering the bay and city of Tunis. It is roughly kidney-shaped and approximately five by four miles. Construction of the canal and adjoining dikes created this small artificial 'lake' and cut it off from the Lac de Tunis except for a narrow channel at each end of the canal; in fact, these channels were so narrow in proportion to the overall volume of El Bahira that daily tides did not noticeably affect its depth. Fre-

quent visits to the area confirmed these observations; the shoreline showed a negligible variation for at least a ten-day period.

The diked south side of the lagoon is rocky and, as might be expected, drops rapidly, but the remainder of the beach is monotonously flat. Birds were seldom disturbed, for only an occasional dwelling can be found within 200 yards of the lagoon and the odor emanating from it discouraged all but the most courageous visitors.

The depth of El Bahira was sufficient to accommodate small fishing craft; however, none of them were observed to approach within a few hundred yards of its margins. For some distance from shore, six to ten inches is the greatest depth; flamingoes waded with ease well over 300 yards from shore over all but the south portion.

Wind action seemed to be the dominant force affecting distribution of aquatic fauna and flora. When air currents were negligible a condition approaching stagnation resulted.

According to the authorities, raw sewage is poured into the lagoon at its eastern end. Its waters are a dark green, suggesting the presence of cyanophytic algae—a sharp contrast to the deep blue of the Las de Tunis. Floating colonies of dark green algae are conspicuous, but macroscopic littoral plant life is lacking.

Seldom will one find such an abundance of aquatic life; a small container dipped at random swarmed with minute midge larvae, crustaceans, and other larval metazoa. The shores are paved with gastropod and bivalve skeletons. Fish life is apparently plentiful, as indicated by the abundance of native fishing boats and the frequent hauls of fish. One can only guess the 'choice' flavor of fish from this open septic tank.

I was told that, during extremely hot summer weather, the lagoon often changes to a deep red color, apparently due to rapid reproduction of microscopic organisms. This phenomenon had already occurred in a small brackish pool nearby. It is accompanied by a dying off of myriads of other marine organisms. When this phenomenon has passed, with a return to a more normal ecological state, the two channels seem to provide travel lanes for a reinvasion of marine life.

I was amazed at the clock-like movement of shore birds and gulls between the east and west ends of El Bahira. The bird population could invariably be found feeding along the northeasterly shores in the early morning hours and at the opposite edge in the evening hours. Midday found them resting in scattered groups about the lagoon. These activities seemed to be correlated with the prevailing winds.

During our stay the weather was monotonously uniform: cloudless skies, a light westerly breeze from dawn to early afternoon, followed by a calm, then again a brisk wind from the opposite direction in the evenings. Birds were invariably found along the leeward shores.

#### SYSTEMATIC LIST OF BIRDS

DABCHICK, *Poliiocephalus ruficollis*.—Ten birds fed along the diked shore. They were not frightened by the approach of the interurban trolley.

EARED GREBE, *Colymbus nigricollis*.—Plumage of four of these grebes indicated they were adults. This species is "suspected of breeding in the northern part of the Regency" (Whitaker, 1905).

COMMON HERON, *Ardea cinerea*.—Apparently these were immature birds; the crown was brownish-gray and nuchal plumes were not conspicuous. Gray supplanting the normal black dorsal areas of the adults.

FLAMINGO, *Phoenicopterus antiquorum*.—There were two separate flocks of at least 200 birds each on El Bahira. I saw only one young bird with grayish plumage.

RING PLOVER, *Charadrius hiaticula*.—These small plovers were nearly as abundant as *Tringa totanus*.

KENTISH PLOVER, *Charadrius alexandrinus*.—A few on the shores bordering El Ouina airport.

COMMON CURLEW, *Numenius arquata*.—There seemed to be but eight curlews on the lagoon. Though flushed from many points, always the same number took wing.

BLACK-TAILED GODWIT, *Limosa limosa*.—We observed six godwits in the company of the preceding species.

COMMON REDSHANK, *Tringa totanus*.—The most abundant shore bird; it was not unusual in flocks of 200 birds. They were all extremely wary.

MARSH SANDPIPER, *Tringa stagnatilis*.—Not more than a dozen individuals were seen at El Bahira.

COMMON SANDPIPER, *Actitis hypoleucos*.—Most often feeding singly or in twos. The short, rapid wing strokes and the habit of teetering are good field characters.

TURNSTONE, *Arenaria interpres*.—Two Turnstones were seen several times on the eastern borders near the city of La Goulette.

DUNLIN, *Erolia alpina*.—Three of these mingled with a flock of Redshanks along the eastern shores. The following day several more fed along the mudflats with several Ring Plover.

CURLEW SANDPIPER, *Erolia testacea*.—This species occurred in limited numbers with Ring Plover and Dunlins.

BLACK-WINGED STILT, *Himantopus himantopus*.—A single stilt appeared the first day, August 14, on the eastern shores. I never observed more than one bird, though the area was visited several times.

STONE CURLEW, *Burhinus oediconemus*.—Three individuals were well camouflaged in saltbush along the canal. They exhibited a reluctance to leave the ground; their flight was short and labored, not unlike that of the Pheasant (*Phasianus colchicus*).

YELLOW-LEGGED GULL, *Larus argentatus cachinnans*.—Commonly seen in flocks of 100 or more. The mantle, intermediate between those of *Larus argentatus* and *Larus fuscus*, and the feet, not always yellowish, made identification of some birds difficult. For relationships, I refer the reader to Peters (1934).

NORTHERN BLACK-HEADED GULL, *Larus ridibundus*.—Six birds greeted us at the canal mouth at arrival, along with a single gull fitting the description of Audouin's

Gull. A flock of well over 100 birds often fed over El Bahira, between August 16 and 20; all resembled in plumage adults of the second winter.

BLACK TERN, *Chlidonias nigra*.—This tern was the most prevalent representative of the Sterninae; it was not unusual to see 150 in flight at a time.

GULL-BILLED TERN, *Gelochelidon nilotica*.—At dusk on the third day I saw 50 birds take wing from a small sand spit.

LITTLE TERN, *Sterna albifrons*.—Only the Black Tern exceeded this species in numbers. These agile little birds often plummeted from considerable heights for food while their black relatives preferred to feed much closer to the surface.

## REFERENCES

ALEXANDER, W. B.

1928. Birds of the ocean. xxiii + 428 pp., 88 pls. (G. P. Putnam's Sons, New York-London.)

BANNERMAN, DAVID A.

1927. Report on the birds collected and observed during the British Museum Expedition to Tunisia in 1925. Ibis (Ser. 12) 3 (Suppl.): 1-213, 9 pls.

DWIGHT, JONATHAN, JR.

1925. The gulls (*Laridae*) of the world; their plumages, moults, variations, relationships and distribution. Bull. Amer. Mus. Nat. Hist., 52: 63-401, 5 pls., 384 figs.

PETERS, J. L.

1931-1937. Check list of birds of the world. Vol. I, xviii + 345 pp.; Vol. II, xvii + 401 pp.; Vol. III, xiii + 311 pp. (Harvard Univ. Press, Cambridge, Mass.)

RAMSEY, R. G. WARDLAW

1923. Guide to the birds of Europe and North Africa. xii + 355 pp. (Gurney and Jackson, London and Edinburgh.)

WHITAKER, J. I. S.

1905. The birds of Tunisia, being a history of the birds found in the Regency of Tunis. 2 vols., xxxii + 294 pp., 17 pls., 2 maps. (R. H. Porter, London.)

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## RACES OF THE STRIATED MARSH WARBLER

(*Megalurus palustris* Horsfield)

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WITH the objective of ascertaining the number of recognizable races of *Megalurus palustris*, I have recently had occasion to bring together 85 specimens from Java, the Philippines, and the Asiatic mainland. For the loan of their extensive series of this species, I am indebted to the authorities of the American Museum of Natural History.

<sup>1</sup> Published by permission of the Secretary of the Smithsonian Institution.