

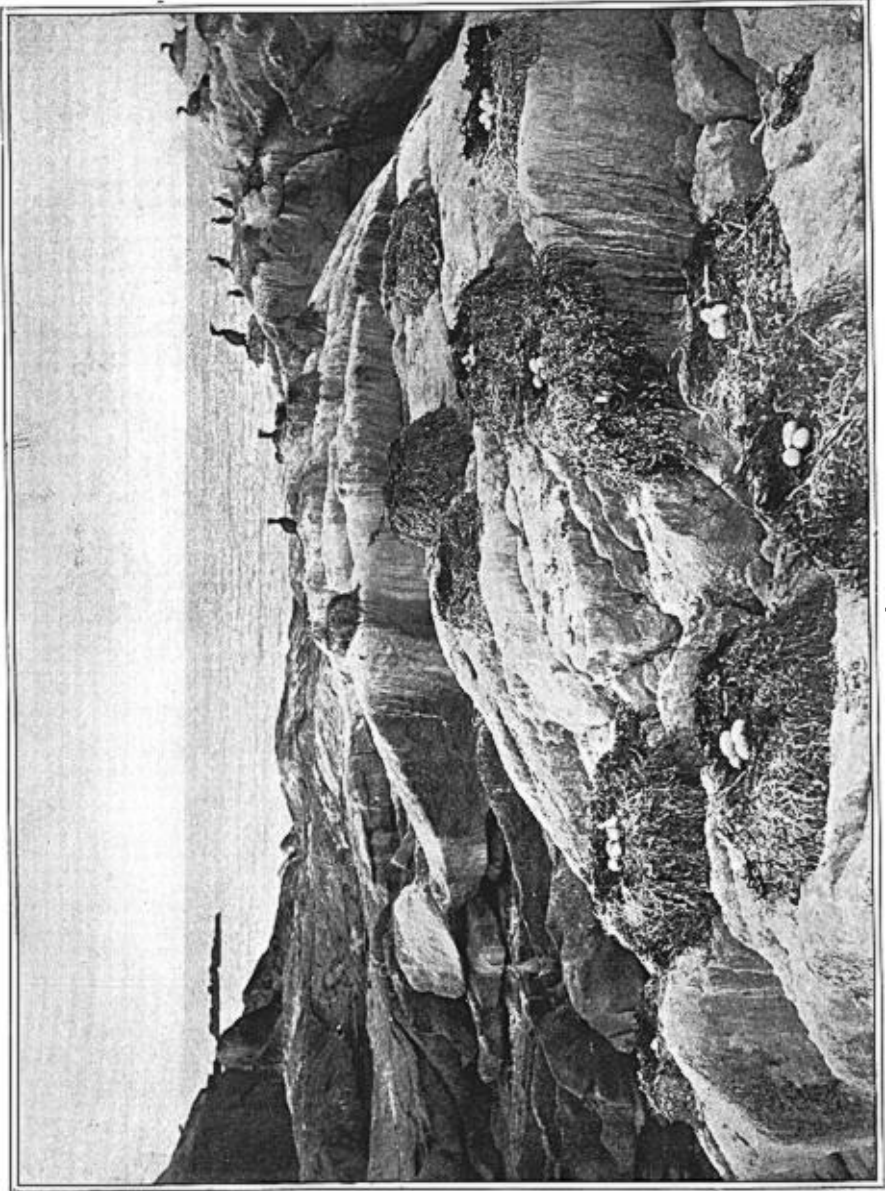
their handsome tails. The reedy shores of the river were the haunts, no doubt, of Ducks, two of which flew past us, and a Heron, gaunt and gray, gazed at the boat with uplifted leg.

As we approached Rotterdam, Terns and Gulls grew more numerous and Cormorants became a characteristic feature of the river. Whether sitting on the water, in Loon-like posture, or flying with outstretched necks athwart the sky, or perched in ungainly attitudes on the poles which rose from the narrow dikes, they were always conspicuous, and always ugly. The Gulls were the small black-headed species found before near Mainz, but near Rotterdam several Herring Gulls appeared. The red-tiled villages, too, became more frequent. The incessant hammering of shipyards assailed the ears. Boats with high and decorated prows driven by dark, patched sails passed the steamer. Soon the masts of countless shipping appeared before us and the steamer made fast to her wharf in Rotterdam, leaving the Rhine and its summer birds far behind.

THE CORMORANT ROOKERIES OF THE LOFOTEN ISLANDS.

BY R. W. SHUFELDT, M. D.

OUR distinguished Corresponding Member, Professor Robert Collett of the Zoölogical Museum of Christiania, Norway, has for the past year or more been attempting the photography of the breeding sites of various species of Norwegian birds. Some of his recent results are very beautiful indeed, and last July (1895) when he was visiting the Lofoten Islands off the coast of Norway, he succeeded in obtaining some particularly good pictures of the breeding places of the Cormorant (*Phalacrocorax carbo*). One of these he has very recently sent me, to use as I see fit, and, as this species breeds upon our own North Atlantic coasts, I must believe that the reproduction of Professor Collett's excellent photograph, illustrating the present paper, will be of interest to our



BREEDING CORMORANTS (*Phalacrocorax carbo*).

own ornithologists. He writes me (11 Jan., 1896) that this view is of a rocky bay on the small island of Borgevæ of the Lofoten group, and that about three thousand Cormorant eggs are collected there annually, "and eaten by the fishermen; the eggs you see in the picture, was the *third* set laid this summer (all the other eggs already taken)." In the illustration are seen a number of the nests of the Cormorants in the foreground, containing from three to five eggs each; while in the distance nine or ten of the birds are in sight. Three or four of these are sitting on their eggs in the nests; others are perched on the rocks, and one is standing on the edge of its nest. Mr. Ridgway in his 'Manual of North American Birds' gives the clutch of eggs for the Phalacrocoracidae as 2-5, and the size of those of *Ph. carbo* as 2.50×1.61 , being "elongate-ovate, pale bluish green, with a more or less continuous white chalky crust" (pp. 77, 78). The present writer has examined the eggs of this Cormorant in the collections of the U. S. National Museum, for which courtesy he is indebted to Major Bendire. The eggs of some species of Cormorants are wonderfully like those of the Western Grebe (*Aechmophorus occidentalis*), and not at all easily distinguished from them.

The Lofoten Islands are off the northwest coast of Norway between $67^{\circ} 30'$ and $69^{\circ} 20'$ N. lat., and between 12° and $16^{\circ} 35'$ E. long. It is a large group and noted for its picturesqueness, and the location given also includes the Vesteraalen. We are told that the "extreme length of the group from Andenæs, at the north of Andö, to Röst, is about 130 English miles; the aggregate area amounts to about 1560 square miles, supporting a permanent population of about 20,000. The islands, which are all of granite or metamorphic gneiss, are precipitous and lofty; the highest peaks are in the Lofoten group, Vaagekallan on Öst-Vaagö rising directly from the sea to a height of 3090 feet. The climate is not rigorous, and in summer the snow-line is at 3000 feet. There is no wood upon these islands."

In the 'Dictionary of Birds' Professor Newton says: "The Cormorant, *P. carbo*, frequents almost all the seacoast of Europe, and breeds in localities at various stations most generally on steep cliffs, but occasionally on rocky islands as well as on trees. The nest consists of a large mass of seaweed, and, with the

ground immediately surrounding it, generally looks as though bespattered with whitewash, from the excrement of the bird, which lives entirely on fish. The eggs, from four to six in number, are small, and have a thick, soft, calcareous shell, bluish-white when first laid, but soon becoming discolored. The young are hatched blind, and covered with an inky black skin. They remain for some time in the squab-condition, and are then highly esteemed for food by the northern islanders, their flesh being said to taste as well as a roasted hare's. Their first plumage is of a sombre brownish-black above, and more or less white beneath. They take two or three years to assume the fully adult dress, which is deep black, glossed above with bronze, and varied in the breeding-season with white on the cheeks and flanks, besides being adorned by filamentary feathers on the head, and further set off by a bright yellow gape. The old Cormorant looks as big as a goose, but is really much smaller; its flesh is quite uneatable." (Pt. I, p. 105, *Cormorant*.)

It will be noticed, that Mr. Ridgway says the Cormorants, speaking generally of the family, lay from *two* to *five* eggs, while Professor Newton in the above account says from *four* to *six*. When I printed my 'Comparative Oölogy of North American Birds,' I had apparently overlooked this discrepancy in the two authorities just quoted. In Professor Collett's photograph the clutches of the nests in sight are evidently three to five each, but the number in the set here may have been influenced by the birds having been so often interfered with, and their nests so frequently robbed.

CRITICAL REMARKS ON THE MEXICAN FORMS OF THE GENUS *CERTHIA*.

BY HARRY C. OBERHOLSER.

THAT there exist in Mexico two well defined races of the genus *Certhia* appears to have been first recognized by Count Hans von Berlepsch. He, in 1888, described¹ a new subspecies of the

¹ Auk V, 1888, 450.