THE ORNITHOLOGICAL RESULTS OF THE POLAR EXPEDITION UNDER DR. NANSEN.

(A REVIEW.)

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WHAT was accomplished for the science of ornithology during the journey of the *Fram* under Dr. Nansen and the intrepid explorers and naturalists who accompanied him in the North-European polar seas, during the years 1893-96, now appears in the form of a valuable quarto brochure, issued by its distinguished authors, to whom my thanks are due for a complimentary copy.¹

This excellent work exhibits throughout great care in preparation, scientific accuracy, and a marked attention to details, descriptions and methods of presentation of the facts in the hands of its authors. It is handsomely printed and is illustrated by two plates devoted to Rosse's gull (*Rhodostethia rosea*). The first of these is an uncolored one, facing page 16, and represents two specimens of the bird, suspended by their legs in such a manner as to exhibit the pattern of the plumage upon their ventral and dorsal aspects. They were shot August 3, 1894. In the second plate, at the close of the work, we have a beautiful colored figure of this famous gull sitting on the ice, with another individual in flight in the background. In the distance we see the *Fram* firmly frozen in the ice pack, while far beyond the horizon the picture is completed by the cold red sky of those north polar seas. The birds in this plate are specimens of the young in first plumage.

By the aid of my camera I have copied this latter plate and offer it here as an illustration to the present review.

¹ *The Norwegian North Polar Expedition, 1893-96*. Scientific Results edited by Fridtjof Nansen. — IV. An Account of the Birds by Robert Collett and Fridtjof Nansen. Published by the Fridtjof Nansen Fund for the Advancement of Science. Christiania, Jacob Dybwad; London, New York, Bombay, Longmans, Green & Co.; Leipzig, F. A. Brockhaus, 1899. Cloth, pp. 1-54, 1 plate, 1 figure in text.

From the Introduction we ascertain that the work is divided into four (IV) sections. In the first three sections the observations recorded are extracted from Dr. Nansen's personal journals, and supplemented by his verbal comments and explanations during the preparation of the work. The first section (I) has to do with the journey along the north coast of Siberia, from

Rosse's gull (*R. rosea*). Young in first plumage. From a photograph of original plate by the author.

Yugor Strait (July 29, 1893), until the closing-in of the ship to the north-west of the New Siberian Islands on Sept. 25, 1893 (78° 50' N. Lat., 132° 20' E. Long.).

"The birds observed during this time were principally on their way southwards. After the closing-in of the ship, no birds were seen until the following year."

The second section (II) gives the observations made at the time that the *Fram* was drifting with the ice towards the north-west, during the first summer, 1894, up to the time

when Nansen and Johansen started on their sledge journey, March 14, 1895. This last point lies in about 84° N. Lat., 101° 55' E. Long.

"The first bird seen in the spring of 1894 (a gull, probably *Pagophila eburnea*) appeared on May 13; birds were seen now and again until after the middle of August. After August 23, or the day when all the channels and lanes about the ship began to freeze up, no birds were seen."

Eight specimens of *R. rosea* were shot and preserved during this part of the journey. They were all young birds of the year.

The third section (III) gives the observations made during the aforesaid sledge journey, in the spring of 1895 to August 1896. During the journey in the Polar Sea, the first bird seen (a *Fulmarus glacialis*) was observed on May 29, when the travelers had begun to approach the north side of Franz Josef Land. That part of the journey in which the highest latitude, $86^{\circ} 13.6'$, was reached was undertaken so early in the year that "no birds were yet visible."

The fourth section (IV) gives the observations made on the *Fram* after Nansen and Johansen had left in March, 1895, until the return of the ship in August, 1896. Great importance attaches to the ornithological records made during this part of the exploration. In the first place, "birds were observed in the highest northerly latitudes, in which birds on the whole have been known to exist," and farthest north of all was found *F. glacialis*, of which a specimen was observed in $85^{\circ} 5' N.$ Lat.

During this part of the cruise, the *Fram* being confined to a comparatively limited area northeast of Franz Josef Land, the total number of species observed was ten (10), namely, *Plectrophenax nivalis*, *Sterna macrura*, *Pagophila eburnea*, *Rissa tri-dactyla*, *Rhodostethia rosea*, a specimen of a *Larus*, which is stated to have been black-backed, a *Stercorarius* (species undetermined), *Fulmarus glacialis*, *Cephus mandti*, and *Alle alle*. "None of the species, however, seemed to occur in any great quantity."

"The last summer, 1896, when the *Fram* was north of Spitzbergen, the first bird (a snow bunting) was observed on April 25. It now appeared that for a distance of at least four hundred kilometers north of Spitzbergen, or between 81° and $83^{\circ} N.$ Lat., the Arctic Ocean is inhabited by an abundant bird life, doubtless consisting principally of young, not yet mature birds, which spend the summer months here, in and near the open channels in the ice." "Among the specimens occurring here, sometimes in great numbers, may be named *Cephus mandti*, *Alle alle*, and *Pagophila eburnea*. A few specimens of waders (*Ægialitis hiaticula* and *Crymophilus fulcarius*) were also found in these northern latitudes, and a specimen of *Xema sabini* was observed."

Under the names of the various birds observed in the body of this memoir are given full accounts of habits, localities, plumage descriptions, and matters of general interest to ornithologists everywhere. At the close of the work we find an index, which simply presents the scientific names of the thirty-three (33) species of birds observed during the entire journey. They are as follows: *Ægialitis hiaticula*, *Alle alle*, *Anser segetum*, *Archibuteo lagopus*, *Arquatella maritima*, *Branta bernicla*, *Cephus mandti*, *Colymbus arcticus*, *Crymophilus fulicarius*, *Falco æsalon*, *Fratercula a. glacialis*, *Fulmaris glacialis*, *Harelda glacialis*, *Lagopus lagopus*, *Larus argentatus*, *L. fuscus*, *L. glaucus*, *L. marinus*, *Nyctea scandiaca*, *Pagophila eburnea*, *Phalaropus hyperboreus*, *Plectrophenax nivalis*, *Rhodostethia rosea*, *Rissa tridactyla*, *Somateria mollissima*, *Squatarola helvetica*, *Stercorarius crepidatus*, *S. longicaudus*, *S. pomatorhinus*, *Sterna macrura*, *Totanus nebularius*, *Uria lomvia*, and *Xema sabini*. In other words, it will be noted that there was but one passerine bird observed (the snowflake, *P. nivalis*) ; a ptarmigan, five waders, two hawks and an owl, two ducks and two species of geese; and the balance of the list, made up of gulls, terns, guillemots, auks, fulmars, jægers, and the dovekie, together with divers and puffins, represent strictly a circumpolar avifauna — few birds, and those essentially boreal forms. Taken as a whole, this is one of the most important contributions to the ornithology of high northern latitudes now extant, and it constitutes a very substantial addition to our knowledge of the habits, species and migrations, plumages and variations of the ornithology of the Arctic Circle, and its distinguished authors are to be congratulated upon the completion of their worthy labors.