

Wildfowl research on the White Sea Coast

V. N. Karpovitch & N. N. Skokova

(No reply to a request for details of current research in the U.S.S.R. has yet been received, other than Professor Kumari's valuable accounts of work in the Estonian S.S.R. (see pp. 33 and 108). However, a recent publication Communications of the Baltic Commission for the Study of Bird Migration, No. 1 (Tartu, 1961, 77 pp.) included two short papers from a research station on the White Sea which is largely concerned with wildfowl: V. N. Karpovitch, "The activities of the Northern Ornithological Station," pp. 43-52, and N. N. Skokova, "Notes on visible bird migration in the region of the White Sea, 1958-1959," at pp. 53-9. We are indebted to Mr. D. D. Harber for translating the Russian texts, from which these notes have been drafted).

The Northern Ornithological Station was established in 1958 in the Kandalaksha State Nature Reserve, on the north-west coast of the White Sea.

The main object of conservation and research in the Kandalaksha Reserve has always been the Eider *Somateria mollissima*. Its ecology has been studied in all parts of the Reserve—on the Gulf of Kandalaksha, the Seven Islands, the Ainov Islands and on Novaya Zemlia where, until 1951, there was a branch of the Seven Islands Reserve. The ecology of the Eider during the nesting period has been investigated in detail and proposals for the rational exploitation of Eider colonies have been based on twenty years' research.

Recently attention has been concentrated on the ecology and behaviour of Eiders outside the nesting period: their migration routes, moulting and wintering areas. In the summer of 1959 an important moulting area was discovered on the Tersk shore of the Kola Peninsula, where 5000 drakes were present at one time.

On the basis of sample counts of 4,400 birds, it appeared that the total wintering population of the Murmansk coast from Petchenga Bay to the Gulf of Nokeuv was 10-12,000 in the winter of 1959-59. The Eiders winter in small flocks of up to 100 birds, larger concentrations occurring only in the moulting and migration periods. Very few winter in the Dvinsk Gulf, which usually freezes over. The Gulf of Onega, which does not normally become wholly frozen, is used regularly. At the end of February, 1960 more than 600 Eiders were counted on small patches of open water to the south-west of the Solovetski Isles and in early April an examination of all the open water in the Gulf showed that 2000 Eiders were present.

A number of questions have yet to be answered, such as the amount of annual variation in the size of the nesting population and the extent to which the numbers in each locality depend on breeding success there and in the surrounding area. Such problems can only be solved by large-scale ringing. "Since the best method of trapping Eiders has not yet been worked out, it is planned in 1960-61 to try out different methods which are sufficiently safe for the population."

The other main field of research is the study of migration. This is not confined to wildfowl, but ducks and geese are abundant and regarded as the most interesting group. Seven observation points have been manned, lying between 64°N. and 67°N. on a line about 330 kilometres long, on the western shore of the White Sea. The four southern stations are on the mainland, the three northern ones on islands.

Visible migration was more intense in the south than the north but even there was weak by comparison with that seen on the Baltic coasts. The number of species seen was also larger in the south (92 at Virma, 109 at Pongoma) than in the north (63 on the Kem-Ludy islands, 56 on the Kandalaksha skerries).

Among the wildfowl there were marked differences in the species seen at the different stations. Listing them from south to north: at Virma the Bean Goose, Mallard, Wigeon and Long-tailed Duck were all seen in abundance; at Pongoma, the Scaup and Red-breasted Merganser predominated; at Kem-ludy, the Eider and Red-breasted Merganser; and on the Kandalaksha skerries the Eider, Common Scoter and Goldeneye.

The numerous small bays of the Karelian coast and the archipelago of the Reserve serve as nesting places and feeding grounds for migrating flocks of Goldeneye, Common Scoter and Red-breasted Merganser and as an assembly place for the local Eiders before their move to winter quarters. The Eiders migrating from the Gulf divide into two streams, one going south into the Gulf of Onega (mentioned above), the other east along the Tersk coast. The majority follow the eastern route and winter in the Barents Sea.

Pongoma Bay and those to the north of it serve as resting and feeding areas for migrating Brent Geese in August, for diving ducks and sawbills in September and October and for swans later in the year.

In Virma Bay, autumn assemblies of dabbling ducks, especially Wigeon and Mallard, are characteristic. The majority of the wildfowl, divers and gulls leaving the White Sea in autumn fly south west from Virma across the lakes of Karelia and Finland to the Baltic.

In 1959 the numbers of wildfowl seen on spring passage were much smaller than those recorded in autumn. At Virma they comprised about 75% of all birds seen in autumn but only 22% of those in spring; at Pongoma about 28% in autumn and 12% in spring. At Virma 57 times as many wildfowl were seen in autumn as in Spring and at Pongoma seven times as many. Two waves of duck migration were found at Virma in the autumn in both 1958 and 1959, the first at the end of September, mainly Mallard and Wigeon, the second in the middle of October, mainly sea-ducks and particularly Long-tailed Ducks.

It is worth recording that, although the Wildfowl Trust is not directly concerned with studies parallel to these in the White Sea, other British ornithologists are actively engaged on similar lines. Population research on Eiders is being undertaken by workers from the Universities of Durham (on the Farne Islands) and Aberdeen (on the Ythan estuary). The migration of sea-ducks and Brent along the coast of the English Channel has been watched for many years.

