

## Asian-Pacific Flyways

### A note on the significance of Wrangel Island (71°N 180°E), East Siberian Sea, for waders and its nature conservation status in the future

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de Roos, G.T. A note on the significance of Wrangel Island (71°N 180°E), East Siberian Sea, for waders and its nature conservation status in the future. *Wader Study Group Bull.* 83: 55-56.

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Wrangel Island, at 71°N 180°E, and surrounded by the East Siberian Sea and Chukchi Sea, is far beyond the polar circle in the middle of the ice of the Arctic Ocean. It has 7,000km<sup>2</sup> of land and the island's landscapes are being shaped by cryogenous processes. It is the most easterly nature reserve within the territory of the former USSR.

Before 1975, the Asian part of the Russian Arctic had no nature reserves at all. Three large reserves were established there between 1975 and 1986: Wrangel Island reserve, established in 1976; the Taimyr reserve, established in 1979; and the Lena Delta reserve established in 1986. Wrangel Island is the only big island, intersected by the meridian 180° and is therefore in both the eastern and the western hemisphere. It is an island of mountains, rivers and lakes. Almost 1,500 rivers and streams and about 900 lakes of different sizes are to be found there. Even small rivers turn into rapid streams due to thawing snow. In flood-time it is almost impossible to travel on the island, whereas in summer the rivers grow shallow and even disappear altogether.

Ushakov, "the island's first president" was the man who contributed most to its development and studies. The people who arrived in 1926 were the island's first residents and, since that time, a Soviet weather station has been founded as well as a permanent settlement at

Ushakovskiy on the south coast. Today Wrangel is inhabited by a small settlement of Chukchi and Inuit people, who arrived at about the same time. Life was not easy, but as time went on the island became the settlers' native land. They learned how to hunt walrus, polar bears, polar foxes and snow geese and to procure mammoth bone. The results of these efforts were soon quite obvious. The Polar Meteorological Station started functioning on a regular basis and communication was permanently maintained with the mainland. Air transport connected the island with the mainland round the year. The Meteorological Station, later called Hydrometeorological Station has now become a research laboratory. The celebration of the tenth anniversary of the establishment of Soviet power on the island in 1936 was a memorable event in the island's life. Among the guests of honour was Otto Schmidt, a prominent scientist whose name is associated with the exploration of the northern part of the former USSR.

The influence of the Pacific Ocean and the increasing temperatures in this part of the planet result in an average July temperature of 2.5°C but the central parts of the island which are protected against cold winds, can reach temperatures of 18°C on some sunny summer days. In deep valleys, snow cover can sometimes be 20-25 cm and there are only two weeks above freezing.

The average temperature of the warmest month is 2.3°C, the coldest is -21.3°C. On the island there are 310 flowering plants, 320 species of mosses and about 100 species of lichens. Eighteen species of mammal occur, eight of which are marine mammals. A total of 150 bird species have been recorded, including 50 breeding bird species.

Before the settlement of Ushakovkiy was founded in 1926, Snow Gees *Anser coerulescens* nested in nearly all the valleys in the mountainous central part of the island. In the flowering years, the annual collection of large numbers of goose eggs by local inhabitants, as well as by scientific expeditions and a rapidly increasing Arctic Fox *Alopex lagopus* population, sustained by waste from the inhabitants' sea mammal exploitation, caused a decrease in goose numbers.

Then, in 1948, and 1954 about 150 Reindeer *Rangifer tarandus* were introduced and soon increased in number. By 1978 there were 7,000. While the Arctic Foxes increased still further in number through feeding on the waste from the annual autumn Reindeer harvest, thousands of Reindeer now migrated every spring through the upland valleys, occupied by breeding Snow Geese, to reach their summer grazing in Academy Tundra. They walk through the goose colonies, trampling nests, disturbing the birds and breaking the eggs, which they eat in reasonable numbers. They also damage the nests of other, less common, breeding birds

like ducks and Calidrid species. Normal predators are Arctic Foxes and skuas like Pomarine *Stercorarius pomarinus*, Long-tailed *S. Longicaudus* and Arctic *S. parasiticus*.

The mountains on Wrangel Island range up to 1096m above sea level and, during the long Arctic night, the weather is so inhospitable that the animals who brave the winter in such harsh places exist on the very edge of survival.

In 1975, a small herd of Musk Oxen *Ovibos moschatus* was reintroduced to Wrangel Island from North America. Today, there are about 100. On the island there are no Wolves *Canis lupus* and so the adult Musk Oxen rarely need to form a defensive ring round their calves to protect them, as they do in the rest of their range where wolves are their main predators.

The most common breeding wader species is the Turnstone *Arenaria interpres* and then, in decreasing sequence: Grey Plover *Pluvialis squatarola*, Red Knot *Calidris canuta roselarii*, Dunlin *Calidris alpina sakhalina* and Pectoral Sandpiper *Calidris melanotos*. The only breeding site in the former USSR for the rare Buff-breasted Sandpiper *Tryngites subruficollis* is on Wrangel Island on the slopes of the Zvezni mountains. Temminck's Stint *Calidris temminckii* and Baird's Sandpiper *Calidris bairdii* are probable breeding birds, according to a Swedish-Russian expedition.

