

Breeding conditions for waders in the tundras of the USSR in 1989

Kondratyev, A.Y. (ed.) (translated by Jadwiga Gromadzka)

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Information about the 1988 breeding season for arctic waders in northern USSR (WSG Bull. 57: 40-41) has resulted in great interest. A similar review is given here for 1989. This has previously appeared in the third Bulletin of the Working Group on Waders (1990) of the USSR Academy of Sciences (pp. 40-48). Observations from central Taymyr have also been included following a joint Soviet-German expedition to this area in 1989 (IWRB News 3: 8-9).

Information was collected by many ornithologists working in the tundras of northern USSR in 1989. Each of the following numbered sections refer to an area shown in Figure 1, and at the end of each section the name of the relevant informer is given.

1. Coastal areas and islands in Murmansk region

Spring started very early: snow finished melting in mid-May in the Aynov Islands, compared to the long-term average snow-melt date of 27 May. The weather during spring and summer was warm but characterised by heavy rains. In the coastal tundra there were no lemmings, and the number of Arctic Foxes *Alopex lagopus* was not high. There were losses of recently-hatched wader broods observed on islands after heavy rains. The autumn migration of Purple Sandpiper *Calidris maritima*, Dunlin *C. alpina*, Curlew Sandpiper *C. ferruginea*, Little Stint *C. minuta*, Ruff *Philomachus pugnax* and other species was characterised by very low numbers, suggesting low breeding success.

(I.P. Tatarinkova)

2. Eastern Bol'shezemel'skaya Tundra and Yugorskiy Peninsula

In common with the other European parts of the USSR, there was an unusually early and rapid spring: 2-3 weeks earlier

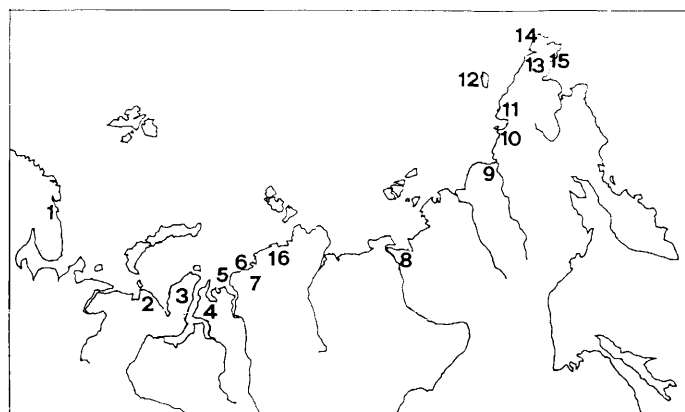


Figure 1.

than average. In tundra habitats there was 70-90% snow melt between 20-25 May, and the ice on rivers broke up at the end of May/beginning of June. The summer was exceptionally hot, with rainfall occurring mainly as rain-storms. During the winter there had been very high numbers of lemmings; a situation which remained up to the end of June in Bol'shezemel'skaya Tundra and to mid-June in Yugorskiy Peninsula. Later, a sharp decrease in lemming numbers was noticed up to depression level. As a result the breeding success of some avian predators was very low (Rough-legged Buzzard *Buteo lagopus*, Hen Harrier *Circus cyaneus*, Short-eared Owl *Asio flammeus*) and some others did not breed at all this season (Snowy Owl *Nyctea scandiaca*, Pomarine Skua *Stercorarius pomarinus*). Arctic Foxes were very numerous but they did not reproduce. Timing of wader breeding was normal, but with extremely low success on Yugorskiy Peninsula because of predation by raptors. Breeding success of waders in eastern Bol'shezemel'skaya Tundra was also lower than normal.

(V.V. Morozov)



3. Yamal Peninsula

Weather conditions were favourable for breeding with an early spring and warm summer, though some nests disappeared after heavy rains. Lemmings were numerous during spring, but decreased considerably during summer. Predators, both mammals and birds, then fed on bird eggs and nestlings. As a result breeding success of waders was close to zero. Little Stints had already started to concentrate in post-breeding flocks at the beginning of July. Such a low breeding success had only been previously noticed in the 1974 season.

(V.K. Ryabitsev)

4. Gydan Peninsula

In the subarctic tundra habitats, snow cover disappeared in mid-June and the ice on the frozen river Yuribey broke up at the end of June. After the peak in the numbers of Arctic Lemming *Dicrostonyx torquatus* in 1988, a rapid population decline was noticed, and numbers of both species of lemmings decreased during the summer. Arctic Foxes were abundant, and Snowy Owls were numerous in the first half of the summer although they did not breed. Skuas also did not breed, and their numbers decreased during the summer.

Breeding efforts of Rough-legged Buzzard were unfavourable - ca. 70% of nests disappeared. Breeding success of waders (Dunlin, Lesser Golden Plover *Pluvialis fulva*, Ringed Plover *Charadrius hiaticula*, Red-necked Phalarope *Phalaropus lobatus*) was also low.

Little Stint, Temminck's Stint *C. temminckii* and Ruff finished breeding earlier than other species. Grey Plover *Pluvialis squatarola*, Curlew Sandpiper, Jack Snipe *Lymnocyptes mimimus*, Common Snipe *Gallinago gallinago*, Pin-tailed Snipe *Gallinago stenura*, Wood Sandpiper *Tringa glareola* and Pectoral Sandpiper *Calidris melanotos* were breeding in low numbers. Generally the breeding season for waders was not successful.

(V.S. Zhukov, O.D. Golubyev)

5. Sibiryakov Island and Taymyr near Dikson

Spring was very late and prolonged once it finally arrived. On the 20 June, the tundra remained covered in deep snow, except for the tops of higher hills. On Sibiryakov Island there was rapid melting of snow between 3-5 July, i.e. 2-3 weeks later than usual. The coast was free of ice on 25 July. During summer only two warm days (with mosquitoes) were noticed. The first snow was on 1 August. There were low numbers of

6. Western and Central Taymyr (to Verkhnyaya Taymyra river in the east)

lemmings; Arctic Fox numbers were also not high. The breeding season was extremely unsuccessful for geese, gulls and waders. Snowy Owls, skuas, eiders and Long-tailed Ducks *Clangula hyemalis* did not breed at all. The nest density of Grey Plover, Turnstone *Arenaria interpres* and Little Stint was very high, and the density of Dunlin nests was normal, but nest losses were as high as 90-95% because of predator activity. At the end of July/beginning of August waders practically disappeared, and only single broods of Dunlin and Little Stint were seen, and then only rarely.

(A.I. Koshelev, O.A. Chernikov, E.A. Dyadicheva, E.E. Syroechkovskiy jr., A.S. Abolits, A.N. Voronov)

Spring was prolonged and cold. In some areas many birds lost their broods, after heavy rain and then frost in the second half of June. These included, amongst others, geese, ptarmigans and Lapland Buntings *Calcarius lapponicus*. The density of lemmings decreased sharply and they disappeared completely in some places. The number of Arctic Foxes was low everywhere. Most of the large and many of middle-sized lakes were covered with ice during the whole season. Most rivers had very high water levels and were almost flooding. Snow remained on 10% of the tundra surface, mainly on north-facing slopes. The summer was cool (in June the temperature rarely exceeded 10°-12°C), and first snows occurred on 28 July and 2 August. Breeding success of waders was lower than average everywhere. Big flocks of non-breeding sandpipers and phalaropes occurred along rivers and at polygonals.

(A.A. Vinokurov)

7. Western and Central Taymyr

The 1989 breeding season was exceptional in terms of its low productivity for wading birds. This was due to the late and cold spring causing the normal progression of ecological processes to be one month late. Most waders practically did not breed, the number of lemmings was extremely low while fox populations were high. In the basins of the Binyuda, Mokoritto Lyungfada and Yangoda rivers (the lower Pyasina region) the results of wader censusing showed practically no waders. Only single nests were found, most often with an incomplete clutch. The almost complete absence of Bar-tailed Godwits *Limosa lapponica* was striking.

(Y.I. Kokorev)



8. Yakutya (between rivers Olenek, Lena, Kharaulakh, Kuslay)

The winter was characterised by frequent, large snowfalls, especially in the forest-tundra, mountains and southern parts of the tundra, where the last snow fell on the 20 June. The snow melted slowly, with many snow patches still remaining in mid-August. Summer was cold, with rain and wind. The density of lemmings and voles was low; there were extremely low numbers of mosquitoes. Lemmings, most probably, did not reproduce at all and were moving (migrating?) long distances. Rough-legged Buzzards and skuas (particularly Pomarine Skua and Arctic Skua *Stercorarius parasiticus*) were scarce, occurring mainly in river valleys. None of 20 Rough-legged Buzzard nests that were found contained eggs. Ruff, Wood Sandpiper, Temminck's Stint, Common Snipe, Pintail Snipe and Spotted Redshank *Tringa erythropus* all bred in large numbers. However, wader breeding success was not high due to unfavourable weather conditions (many clutches disappeared after heavy rains). Waders started autumn migration 5-7 days earlier than usual.

(A.I. Artyukov)

9. Yakutya - lower Kolyma region

According to information from E.P. Potapov, general conditions were similar to those in the Chaun lowland.

(A.V. Kondratyev)

10. Chaun lowland

Spring was relatively early, with a widespread snow melt taking place at the beginning of June. The number of Lemmings was very low. All birds started to breed intensively but many of their clutches were destroyed by Arctic Foxes and Pomarine Skuas (the latter did not breed). Around mid-summer, Pomarine Skuas were replaced by Arctic Skuas and Long-tailed Skuas *Stercorarius longicaudus* (flocks up to 100-500 birds). On 23 June there was a major deterioration change in the weather, with temperatures to -1°C and snow up to 10 cm deep, which remained for two days. This resulted in the mass disappearance of clutches of all small birds and also of Sabine's Gull *Larus sabini*. Raptors began to eat the eggs of larger birds, and the waders and small passerines which had laid replacement clutches (5-10% of pairs) experienced very low breeding success due to predator pressure. As a result, in early August, only single Dunlin were present. Most waders had left the tundra by 5 August.

(A.V. Kondratyev)

11. Coast of western Chukotka

In the area between Nolde Guba and Mys Billings the density of rodents was very low. The snow cover was gone by 10 June and the summer was warm. The density of Arctic Foxes was c.3.5 individuals along a 10 km transect, but only few animals reproduced (in one plot of 50 km² only one fox family occurred). In valleys between 20-30 km from the sea, lemmings were quite numerous. However the density of waders and foxes was significantly higher (x3 and x2 times respectively). Snowy Owls were fairly common, though no breeding was confirmed. In mountain areas Rough-legged Buzzard bred.

(M.S. Stishov)

12. Vrangal Island

Though snow started to melt at the end of May (following warm weather), the summer was relatively cold and wet, not allowing the tundra to dry out. The small numbers of lemmings present during spring had disappeared completely by the summer. Snowy Owl and Pomarine Skua did not breed. The number of Arctic Foxes was high but they did not reproduce. All located nests of eiders and Long-tailed Skuas were destroyed by raptors. In a breeding colony of Snow Geese *Chen caerulescens*, 40% of nests were destroyed and all goslings were liquidated. None of the nature reserve staff in the area found any wader broods.

(V.V. Bayanyuk)

13. Chukotka Peninsula - middle and lower Amquema river

Spring was early, with the snow melting during the first 10 days of June. There was a noticeably strong reduction in numbers of Collared Lemming *Dicrostonyx hudsonius* and Siberian Lemming *Lemmus sibiricus* and the low density of the Tundra Vole. Arctic Foxes did not reproduce (in lower region of the river), Red Foxes *Vulpes vulpes* reproduced only in low numbers. Both these predators mainly occurred in flooded areas adjacent to the river, where higher numbers of Arctic Ground Squirrel *Spermophilus parryii* and Willow Grouse *Lagopus lagopus* occurred. Nestlings and recently-fledged waders were also noted on the floodplains.

(I.V. Dorogoy)

14. Chukotka - north-western part (coast from Enurmino to Uelen)

In the second half of summer no lemmings were met. The

