

XIII. PRESENT STATUS OF THE *BRANTA RUFICOLLIS* POPULATION AND MEASURES FOR ITS CONSERVATION

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With regard to the recommendations of IWRB's XXII Board Meeting, work has been done on the study of the present population status and seasonal distribution of *Branta ruficollis* and on the intensification of measures in the field of its conservation.

Organization of work

a) The nesting grounds of *B. ruficollis* in the Arctic regions and its migration areas in West Siberia are vast and sparsely populated. *B. ruficollis* is quite unlike other geese. That is why in the Soviet magazine "Hunting and hunting management" a colour drawing and an appeal to hunters and nature lovers to send information about this species to the All-Union Institute on nature conservation were published in 1977 by A. Vinokurov. The employees of the state hunting inspectorate were also involved in the work of data gathering.

b) *B. ruficollis* as an endemic species was included in the Red Data Book of the USSR. By this act the attention of ornithologists was drawn to this species. An appropriate appeal was made at the Fourth All-Union Meeting on Anseriformes (Moscow, 1977).

c) In the Central Research Laboratory for hunting management (Moscow), in the Extreme North Scientific Research Institute of Agriculture (Norilsk) and in the All-Union Research Institute on Nature Conservation (Moscow), the study of *B. ruficollis* was included in the programme of research during 1976 - 1980.

d) The following scientists took part in this work in different years: from Moscow: V. Krivenko, A. Vinokurov, I. Kostin, G. Ivanov, A. Lin'kov and others; from Norilsk: V. Zyryanov, V. Dorogov, B. Pavlov, B. Borzhonov, G. Yakushkin and others; from Sverdlovsk: N. Danilov, A. Balakhanov, V. Ryzhanovski; from Melitopol: V. Lysenko; scientists from Astrakhan, Krasnovodsk, Kurgaldzin, Naurzum and Kyzyl-Agach state reserves and also many specialists and hunters-correspondents from various regions of the USSR responded to the appeal.

Direction of research and the amount of work done

a) In the course of expeditions to Yamal, Gydan and Taimyr the distribution of nesting and moulting *B. ruficollis* was investigated. Aerial counts were made from an AN-2 aircraft (in 1977–1981 the distance covered by air was more than 35 000 km, about 9000 km of this above rivers at an altitude of 40–60 m), from a motorboat (more than 3000 km along the rivers of Taimyr, Gydan and also Yamal). Stationary observations were made in some places on the Rivers Pyásina, Purá, Agápa, Lagáta and Garbóta (Taimyr) and Shchuch'ya (Yamal).

b) Regular observations in March-April and in October-November were carried out in the staging places of *B. ruficollis* along their migration flyway at Manych (Rostov region) and Kalmykien (*V. Krivenko, A. Linkov*), on the North-Western coast of the Sea of Azov ("Molochny liman"; *V. Lysenko*), in Kyzyl-Agach reserve (*T. Vorobjeva*). Also examined were the North-eastern Caspian (Turkmenian SSR from Kara-Bogaz-gol to Gassan-Kuli; *N. Skokova* and *A. Vinokurov* in October 1979) and wintering grounds of geese in Kyzyl-Agach and Ak-Gel reserves (*N. Skokova* and *A. Vinokurov* in October-November 1980).

c) Information received from hunters and specialists about observations of *B. ruficollis* in the nesting, moulting, migration and wintering grounds was analysed (more than 100 answers).

The results of the research

Information, received from expeditions, answers of specialists hunters and also some data collected for the book "Rare, threatened and inadequately known birds of the USSR" (Proc. of the Oka reserve, vol. 13, 1976), made it possible after only a year and a half to prepare and publish an article about the present status and migrations of *B. ruficollis* (*Vinokurov et al.*, 1978 – in English). Unfortunately the map of seasonal distribution of *B. ruficollis* has not been published in this paper.

a) Nesting period

Nesting areas of *B. ruficollis* nowadays extend as before on the Yamal, Gydan and Taimyr peninsulas. Nesting grounds and areas of concentration for moulting are found sporadically (see Map 1). The picture of birds' distribution and their numbers in different places changes from year to year. In different years the correlation of nesting birds (with young) and moulting birds (individuals) changes; this is especially apparent at the northern and southern extremities of the range.

The total number of adult and young *B. ruficollis* in 1978–1979 was in the post-nesting period (end of July-August) approximately 22 000–27 000 birds. Of these, 17 000–20 000 were on Taimyr, 3000–4500 on the Gydan, and not more than 2000–3000 on the Yamal (*V. Krivenko*). According to other data (*V. Balakhanov et al.*, 1979; *N. Danilov et al.*, 1977) the numbers of *B. ruficollis* on the Yamal does not exceed 500–600 individuals. The Yamal territory is being intensively developed now for natural gas, but there are quite enough

nesting and moulting grounds for *B. ruficollis*. On the Gydan and particularly on the Taimyr natural habitats for *B. ruficollis* are more favourable. In recent years there is a tendency to some increase in the population size and habitats of *B. ruficollis*, in particular, the spread of nesting grounds to the East.

Research on ecology

Work has been done on hatching and growth of young, breeding success in various years and on food of *B. ruficollis* (I. Kostin, 1981; V. Zyryanov, B. Pavlov, 1979; V. Dorogov et al., 1979). Breeding success varies substantially in different years. It was highest in 1976 and 1978 (36–38% of birds bred), in 1977 only 4–5% bred (the same in 1971). The quantity of young in broods also varies from 4.5 to 7.5 (average over several years – 5.7 young per pair).

Ringling and marking of *B. ruficollis* has not been done on a large scale and it is premature to speak about the results of this work.

b) *B. ruficollis* migration

The main picture of migrations since 1968–1969 has remained without change: *B. ruficollis* flies from the nesting grounds along the basins of the Ob, Irtysh and Tobol Rivers – North-Western Kazakhstan – Northern Precaucasus – Southern Ukraine to the Danube delta (A. Vinokurov et al., 1978; Yu. Isakov, 1979). Big concentrations of resting and feeding *B. ruficollis* are recorded in the Ob valley (Oktyabr'ski and Khanty-Mansiyski districts of Tyumen region), on the lake plateau in the area between the upper reaches of the rivers Tobol, Ubagan, Ul'kayak and Turgai (Kustanai region) and on Manych (Precaucasus). The greater part of the *B. ruficollis* population flies between these areas without stopping.

Between Manych and the wintering grounds (in exceptional years *B. ruficollis* is found on Manych even in winter) there are some staging places of *B. ruficollis* where their numbers and length of stay depend on weather conditions.

In recent years *B. ruficollis* has been found in Central and East Siberia; there is a possibility that the birds, having spread to the eastern part of the Taimyr peninsula, are beginning to fly to China to winter.

c) Wintering area of *B. ruficollis*

Information received between 1976 and 1980 about *B. ruficollis* wintering outside the USSR is not sufficient for accurate localisation of the species' wintering grounds.

B. ruficollis is found in winter (apart from Manych and north Black Sea coastal region) from the Danube delta to Evros/Meriç delta. Small groups of these geese winter in Transcaucasus, in Iran, and sometimes in Iraq (see references).

In the USSR in south-eastern regions of the Caspian, conditions are not suitable for wintering *B. ruficollis* (because of the lack of food). In south-

Branta ruficollis

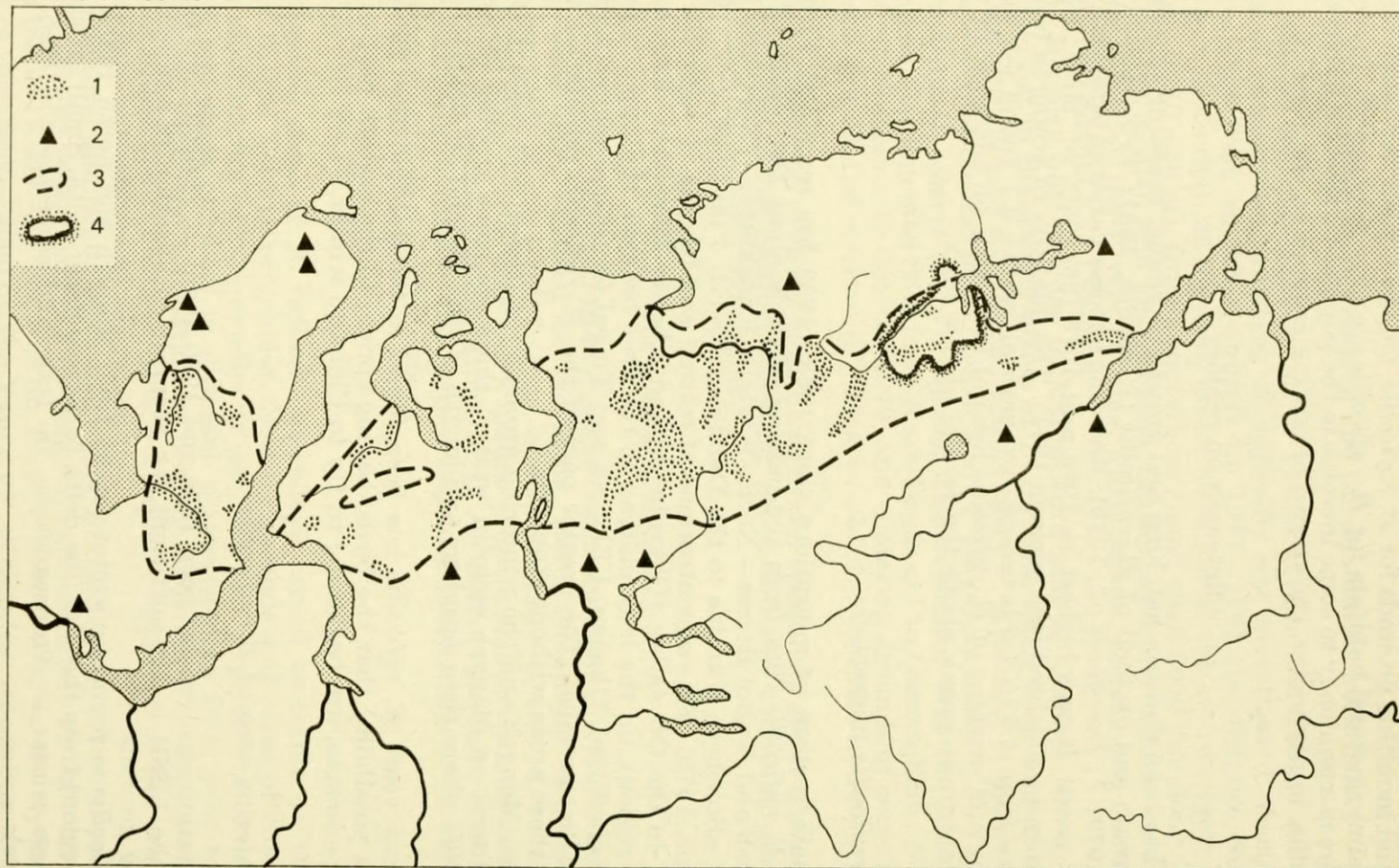


Figure XIII/1: Summer area of *B. ruficollis*. 1. Areas where nesting and moulting birds concentrate, 2. Scattered pairs and flocks, 3. The boundary of the main territory in summer in 1976–80, 4. Taimyr strict reserve

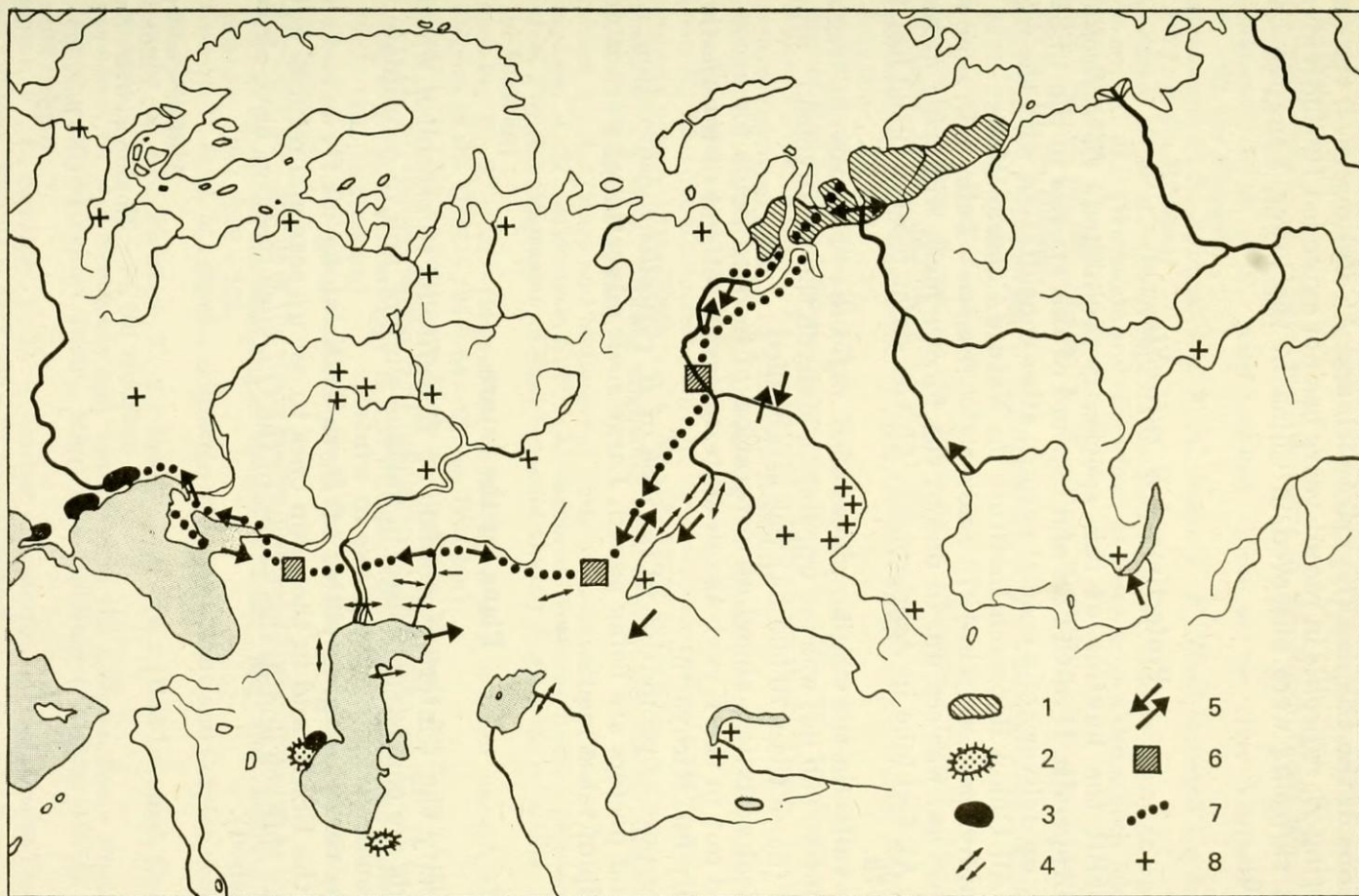


Figure XIII|2: Distribution and migrations of *B. ruficollis*. 1. Breeding area, 2. Wintering grounds before 1968, 3. Wintering grounds after 1968, 4. Occurrence on passage before 1968, 5. Occurrence on passage since 1968, 6. Mass staging-points during migration, 7. Probable flyway, 8. Occasional occurrences

western regions of the Caspian (Kyzyl-Agach and Ak-Gel reserves) the number of wintering *B. ruficollis* in recent years has not exceeded 100 individuals.

A few *B. ruficollis* were observed in China in the lower Yang-tze basin (Cheng, 1976).

Protection of *B. ruficollis*

In the USSR the hunting of this species is prohibited. *B. ruficollis* is included in Appendix II of CITES and capture of this species in the USSR is allowed only on delivery of a special permit, after consultation with the scientists of the All-Union Research Institute on Nature Conservation.

On the Taimyr peninsula in 1979 a new strict reserve – Taimyrski zapovednik (1 324 000 ha) was set up. In one of the former mass wintering areas of *Bi ruficolis*, Ak-Gel lake in Azerbeidzan, Ak-Gel strict reserve (9100 ha) was set up in 1978.

In the Ob valley in the staging places of *B. ruficollis* “Elizarovski” regions reserve (about 80 000 ha) was set up, and at Manych the “Manychski” republic’s reserve (more than 70 000 ha) was established.

Biotechnical activities aimed at restoration of feeding fields for geese are being carried out in the Kyzyl-Agach state reserve (wetland of international import “Zaliv im. Kirova”).

For the purpose of promotion of the idea of *B. ruficollis* conservation, a lot of leaflets and posters are being issued. Large scale educational work is done with the help of mass media.

Plans for the future

a) To specify the wintering grounds of *B. ruficollis* to establish whether these grounds are consistently used in various winters, and to coordinate the efforts for conservation of this goose in winter.

b) To discover all staging places of *B. ruficollis* along its flyways in the territory of the USSR, and in the main ones to set up seasonal refuges in the main ones (at Manych and in the Valley of the Ob, such reserves have already been established).

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Remark* In these articles are some data about migration, wintering, numbers or biology of Red-breasted Goose. (A. Vinokurov)