

## Wild reindeer in the USSR, their protection and utilization

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**Rangifer**, Special Issue No. 1, 1986: 347 - 349

The wild reindeer is one of the most valuable species of our country's natural resources. With the intensive development of the Far North and Far East, the problems of protecting and propagating this species have become more complicated. Therefore, the reserves of wild reindeer, their protection and a scientifically based approach to the management of the populations being utilized are the question with which Soviet theriologists and game management experts are most concerned.

Because of the measures taken by our country to protect wild reindeer, their numbers have increased more than 3-fold over the past 20 years, from 308 000 head in 1965 to 980 000 head in 1985. Reindeer are the most abundant of all the wild hoofed mammals in the USSR. It should also be said that in comparison with other countries, northern reindeer breeding is quite a developed industry in the USSR. Besides the 980 000 head of wild reindeer, we have 2 230 000 head of domestic reindeer, which naturally poses certain difficulties in determining the ecological policy regarding this species. Whereas the numbers of domestic reindeer have remained stable over the past 10 years, those of wild reindeer have shown a tendency to increase and to occupy the ecological niches free of domestic animals. The solution to this problem in different regions of the country is coordinated with the given situation.

In the *European North* as a whole, there are 30 000 - 33 000 head of wild reindeer and

380 000 head of domestic reindeer, and we observe a definite regeneration of reindeer populations. We also observe the revival of the Kola population which was undermined by unreasonable utilization at the beginning of the 1970's, as well as a growth in the numbers of forest reindeer in the Karelian and Komi taiga pastures which are free of domestic reindeer. Reindeer hunting is prohibited. The ecological capacity of the reindeer areas of the European North allows for a 4 to 5-fold increase in the number of wild reindeer in this region.

*Western Siberia* is a region with well-developed reindeer husbandry numbering 450 000 animals in the tundra and forest-tundra zones. The wild reindeer in this region occupies the taiga pastures at the watersheds of the Western Siberian lowland. Its numbers are fairly stable and stand at 24 000 - 25 000 head. Reindeer hunting is prohibited, and a number of zakazniki has been set up at the calving and wintering grounds.<sup>2</sup>

On the whole, the taiga zone of this region has all the prerequisites for a significant increase in the number of wild reindeer.

*The mountainous areas of southern Siberia* are populated by wild reindeer in individual isolate localities, predominantly in the alpine or mountain tundra and in the taiga at its upper boundary. Approximately 25 000 head of reindeer inhabit the extensions of the Altai, the Eastern and Western Sayan mountains and the mountain ranges of the eastern coast of Lake

Baikal. Hardly any reindeer hunting is allowed in this area. About 300-350 animals have been killed over the past hunting seasons.

Domestic reindeer breeding is poorly developed in this region (30 000 head), and with an improvement in protection measures, one can expect an increase in the number of wild reindeer here. The establishment in this region over the past 10 years of the *zapovedniki* «Sokhondinsky», «Azassky» and «Sayano-Shushinsky» and the long-existent «Altaisky» will definitely promote an increase in the abundance of the mountaine-taiga forms of wild reindeer.

*Central and Eastern Siberia* are the main regions with a mass population of wild reindeer. In the tundra and taiga pastures from the Yenisei to the Indigirka rivers, we find the largest tundra populations of wild reindeer: the Taimyr population numbering 570 000 - 575 000 head, the Bulun population numbering 55 000 - 60 000 head, the Yana-Indigirka population numbering 100 000 - 110 000 head, and the Sundrun population numbering 25 000 - 27 000 head.

The numbers of wild forest reindeer are also quite high here (100 000 - 110 000 head).

A new branch of game management, commercial reindeer harvesting, has developed in this zone on this basis of the utilization of tundra populations. Up to 80 000 head are utilized commercially each year from the Taimyr population and up to 25 000 head from the Bulun and Yana-Indigirka population (Table 1). Mass tagging of reindeer from the Taimyr population and analysis of the results have enabled us to establish its range (1 500 000 km<sup>2</sup>), distance of migrations (1500 km), populations size and the presence of contact and exchange of animals with the Bulun population.

Annual aerial surveys, monitoring of the population structure, aerial surveillance of the

seasonal migrations and the capacity of the seasonal pastures give us reason to believe that the commercial utilization of these populations can be increased within the next 2-3 years.

The under-utilization of the tundra populations in this region has the danger of triggering a self-regulating mechanism which will be followed by a decrease in numbers.

This region is characterized by highly competitive relations between the wild and domestic reindeer, the numbers of which stand at 107 000 head in the Krasnoyarsk Krai and 360 000 head in the Yakut ASSR<sup>2</sup>.

A number of *zapovedniki* (Taimyr, Central Siberian, Ust'-Lena) and *zakazniki* (Putoransky, Puro-Pyasinysky) have been set up or are in the process of being established in this region. Among other things, they are responsible for protecting the calving and wintering grounds of the wild reindeer.

*The Far East* is the principal area of developed domestic reindeer breeding. The northeastern part of this region has 830 000 domestic reindeer which utilize the pastures resources almost completely. As a result, the numbers of wild reindeer are quite low.

In the central part of the Chukotka region, an isolated herd has remained at a level of 5000 - 6000 head for a long time.

On the eastern coast of Kamchatka, wild reindeer have stabilized at a level of 4000-4500 head.

In the Khabarovsk Krai and in the Amur and Sakhalin Oblasts, wild reindeer have varied from 20 000 to 25 000 head over the past 20 years, and hunting is prohibited<sup>3</sup>.

There is a possibility of increasing the numbers of reindeer in the mountaine-taiga areas of the southern regions of the Far East where domestic reindeer breeding is not carried on.

Table 1. Population size and commercial utilization of the Taimyr population.

Years	Size prior to commercial utilization (1000's)	Recommended quota of utilization (1000's)	Actual utilization (1000's)	Less than recommended quota (1000's)
1981	510	80	80	—
1982	525	100	76	24
1983	540	100	80	20
1984	575	120	80	40

## Arctic islands

*Novaya Zemlya.* By the 1950's, only a few of *Novaya Zemlya* subspecies of the wild reindeer have survived, and so these animals were added to the «*Red Book of the USSR*».<sup>1</sup> The population has risen now about 6000 head, which has made it possible to allow limited utilization with annual monitoring of the numbers of this unique population (B.V. Novikov, 1983. Current status of island northern reindeer populations. Collection of scientific works, Central Research Laboratory of the Glavokhita, RSFSR Moscow. 101-107.)

*Severnaya Zemlya.* The three islands of *Severnaya Zemlya* have long been inhabited by several hundred wild reindeer. The absence of predators and the extremely limited productivity of the pastures have resulted in a stable small population.

*The Novosibirsk Islands* are inhabited by one of the largest island populations of reindeer, which maintains constant contact with the

mainland during the winter. The present numbers stand at 7500 - 10 000 head (Kupriyanov, A.G. and Belikov, S.S. 1985. Northern Reindeer in the Arctic Islands, *Priroda* (Nature) No. 3: 46-51.)

*On the Wrangel Island zapovednik*, the reindeer population originated from domestic reindeer brought in from Chukotka. Its population stabilized at 2000 - 2100 head (Novikov, 1983).

It is possible to significantly increase the wild reindeer population in the USSR. In the opinion of Soviet theriologists, the wild reindeer herds can actually be increased to the level of the domestic herds within the next 25 years in the vast unoccupied taiga and tundra. Therefore, the priority measures at this stage consist of protecting and restoring the wild reindeer populations, and then solving the questions concerned with the economic utilization of large populations.

<sup>1</sup> *Editor's note:* There are several types of protected areas in the Soviet Union. The two important types include the *zapovedniki* nature reserves which are natural areas set aside for research in the natural sciences and *zakazniki* (wildlife preserves) concerned generally with a specific species found within its protected boundaries. The *zakazniki* may be temporary or permanent in nature depending on the purpose of the protection. Permanent *zakazniki* are generally used to protect wintering or nesting birds and calving and wintering grounds for wildlife.

<sup>2</sup> *Editor's note:* A «Krai» is an administrative unit with a level of political jurisdiction immediately under the republic. There are six Krai in the Russian Soviet Federated Socialist Republic (RSFSR). An «ASSR» - Autonomous Soviet Socialist Republic - has the same level of political jurisdiction as a Krai, but is formed on the basis of a nationality grouping as well. There are 20 ASSR's in the USSR, 16 in the RSFSR.

<sup>3</sup> *Editor's note:* An «Oblast» is an administrative district with the same jurisdictional level as a «Krai». There are 122 Oblasts in the USSR, 49 in the RSFSR.

<sup>4</sup> *Editor's note:* The «Red Book of the USSR». It refers to a catalogue of rare and endangered species.