

## MOOSE HUNTING IN RUSSIA

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**ABSTRACT:** Moose (*Alces alces*) have become one of the popular big game species in Russia, whereas only decades ago, low moose numbers precluded hunting. The rapid increase in moose numbers is primarily the result of forest harvest practices and intensive moose management policies. At present, according to the Russia Statistical Committee, the moose population is stable at around 700,000 animals. Use of intensive biotechnical moose management measures such as ashtree cutting, feeding of wood waste, and rock salt, combined with large scale protective measures have also favored this population increase. However, data collected by the All-Union Research Institute show that moose density in some regions has exceeded the carrying capacity of game preserves for many years. This is the result of poor moose population estimates and low harvest rates. As a result of low harvest intensity, and in the absence of management actions aimed at increasing the carrying capacity on moose preserves, forest resources and habitat quality have been damaged in some economic regions and severely degraded in areas of the ASSR. The author suggests a winter feeding strategy for moose on hunting preserves that would use wood waste that is left after logging. This strategy would allow a more effective means of supplementing winter forage, but may be difficult to implement.

ALCES SUPPLEMENT 2: 123-126 (2002)

**Key words:** biotechnical moose management, carrying capacity, hunting preserves, hunting societies

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Moose (*Alces alces*) have become one of the popular big game species in Russia, whereas only decades ago, low moose numbers precluded hunting. In 1929, only 200 moose inhabited the Moscow region. By 1959, moose had increased to 15,000. Currently, the Moscow Society of Hunters and Anglers harvest over 1,000 moose annually from a total population of about 6,000.

### DISCUSSION

The rapid increase in moose numbers is primarily the result of forest harvest practices and intensive moose management policies. Extensive clear-cuts throughout forested regions have resulted in substantial increases in moose habitat quality. Use of intensive biotechnical moose management measures such as ashtree cutting, feeding of wood waste, and rock salt, etc., com-

bined with large scale protective measures, have also favored this population increase.

At present, moose are found throughout all regions of the Russian Federation, with the exception of the Caucasus and parts of the Far East. Moose numbers in the Russian Federation have increased considerably during the past 40 years. In 1950 there were 266,000 moose. By 1960 the moose population had almost doubled to 480,000. Moose numbers continued to increase during the 1960s, although at a slower rate. According to Glavokhota (personal communication) of the RSFSR, by 1966 the moose population had reached 730,000–790,000. Some researchers believe this is the highest moose abundance to occur in the past 200 years.

At present, according to the Russia Statistical Committee, the moose population

is stable at around 700,000 animals. A large portion of the total moose population (253,900) inhabits the game preserves of hunting societies, mainly those of the Russian Hunter's and Fisherman's Union (RHFU), which owns 14.5% of the hunting area in Russia (Table 1).

In the last decade, moose in the European part of Russia were concentrated in its northwestern, central, and northeastern regions. The highest densities are in central, eastern, and forest–steppe regions (Table 2). On the preserves of hunter's and angler's societies, the increase in numbers progresses from northwest Russia (Leningrad region 2.0–3.2 moose/1,000 ha; Novogorod region 3.8–4.6 moose/1,000 ha; Kalinin region 3.6–6.4 moose/1,000 ha), through central Russia (Moscow, Ryazan,

Table 1. Number of moose and moose hunts (x 1,000) in all of Russia and on the preserves of the Russian Hunter's And Fisherman's Union (RHFU), 1976–1989.

Year	Number of Moose		Number of Moose Hunts	
	Russia	RHFU	Russia	RHFU
1976	740	224.4	50.8	25.7
1977	750	217.4	56.3	25.5
1978	750	218.3	58.2	27.9
1979	770	213.5	57.2	27.9
1980	730	216.1	59.5	29.0
1981	790	206.0	56.8	26.6
1982	740	198.2	57.6	25.3
1983	780	190.7	58.4	26.0
1984	740	194.0	58.4	23.8
1985	780	192.7	61.1	26.5
1986	754	196.0	60.9	27.3
1987	–	201.6	–	30.8
1988	697.5	227.6	63.8	34.4
1989		253.9		36.2

Table 2. Average moose density in the game preserves of the Russian Hunters and Fisherman's Union, 1985–1988.

Hunting regions/ economic provinces	Density (moose/1,000 ha) <sup>1</sup>
European North	1.7–1.4
Southern Taiga	3.6–4.1
Central Area	3.0–3.2
Volga Area	3.5–4.2
Urals	4.4–4.4
Caucases	0.1–0.1
Western Siberia	2.2–2.4
Eastern Siberia	0.8–0.8
The Far East	0.6–0.6

<sup>1</sup>According to the All-Union Research Institute.

and Lipetsk regions 3.4–4.2 moose/1,000 ha), to the east (Vladimir region 4.0–5.1 moose/1,000 ha; Ivanovo and Yaroslavl regions 4.1–7.1 moose/1,000 ha); and to the south–east (Mari and Udmurt, Assian Soviet Socialist Republic (ASSR) 4.2–4.5 moose/1,000 ha; Tatar ASSR 4.6–8.5 moose/1,000 ha; and Penza region 5.0–5.6 moose/1,000 ha).

Moose numbers in forest–steppe regions have also increased during the last few years. In the Kujbishev and Orenburg regions, densities increased from 2.9 to 5.5 moose/1,000 ha and from 2.8 to 6.1 moose/1,000 ha, respectively. In the Saratov region moose abundance increased from 4.3 to 5.5 moose/1,000 ha and then declined to 3.9 moose/1,000 ha.

It should be noted that, according to the All-Union Research Institute, moose density in some regions has exceeded the carrying capacity of game preserves for many years. This is the result of poor moose population estimates and low harvest rates. In many regions of the European part of Russia, the average annual harvest of moose

(post-commercial) generally ranged between 6.2 – 11.4% of the total population and did not exceed 25%. Between 1980 and 1985 the number of moose harvested in the entire Russian territory was only 3.5% greater than during the previous 5 years.

As a result of low harvest intensity, and in the absence of management actions aimed at increasing the carrying capacity on moose preserves, forest resources and habitat quality have been damaged in some economic regions and severely degraded in some areas of the ASSR. The destructive effects of moose on forage resources are already extensive in the Northern Urals, Central Blacksoil, and particularly in the Central and Volga regions. As a consequence, only 19% of the area of moose preserves in the European part of Russia is capable of sustaining a moose harvest without using intensive biotechnical management measures. Habitat quality on 76% of the area of preserves fell below the average level and on 4.7% of the area in preserves, habitat quality declined below the level that moose hunting is economically viable.

The present moose harvest level in the European part of Russia and the condition of moose during winter leave no doubt that in the near future the quality of moose preserves will deteriorate. To prevent disastrous consequences, hunting preserves in some regions of the Central and Southern zones must intensively harvest moose to bring their numbers into balance with current carrying capacity. In some areas it may also be possible to increase carrying capacity and improve key habitats.

The members of the Central Board of the RHFU are aware of their role in the sustainable management of moose. However, moose management is hampered by current management systems. Hunters, in our case those of RHFU, do not have complete management authority for their preserves. The moose harvest is managed by

Republican bodies in charge of hunting. These management bodies often do not follow the recommendations of the scientific community.

Great problems have been caused by excessive regulation of the moose harvest along border zones between different administrative regions, in areas of seasonal concentration of moose, and along their migration routes. State control of the distribution of licenses and hunts is not effective. In my opinion, hunting societies could, however, determine reasonable moose harvest quotas and the allocation of the harvest among the various hunting groups. Decisions on these issues could be made collectively at interregional meetings of the societies.

Analyses of current supplemental winter feeding strategies for moose on hunting preserves indicate that they provide a maximum of 24.8 – 27.6 feeding units per 1,000 ha during the winter. This is no more than 4% of the total winter forage requirement of 1 moose. A more effective means of supplementing winter forage would be to use wood waste that is left after logging. This could be done in conjunction with moose population control measures. The amount of waste that is annually destroyed at logging and storage sites is much greater than the amount of forage stored on hunting preserves. However, implementing such a strategy would be difficult, in spite of agreement between forestry and hunting preserves.

As noted earlier, the preserves of the RHFU contain a large portion of the moose population in the European part of Russia, and these areas account for over 50% of the moose harvest by Republican hunters. On these preserves the annual moose harvest exceeds 15% of the population (Table 1) compared to an average of less than 10% for all of Russia.

One third of moose shot are harvested

under sport licenses. The remaining two thirds are harvested under commercial licenses. Between 1986 and 1989, 128,700 moose were harvested on the preserves of the RHFU, producing 18,600,000 kg of valuable and delicious meat.

I believe the use of the term “commercial hunt” is incorrect. Hunting under both “sport” and “commercial” licenses is done by amateur hunters and according to accepted hunting ethics. The statements of some opponents that amateur hunters are engaged in commercial hunting are therefore quite erroneous. In this case, hunters of the Society fulfill the social task of the state and supply local people with wild meat.