

UDC 636.293.5(571.56)

DOI: 10.18101/978-5-9793-0754-1-119-121

COMMUNITY-BASED INFORMATION ON MUSKOX RESETTLEMENT INNORTHEASTERN YAKUTIA

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Abstract. *Community-based information on particular observations offers good opportunities for solving problems related to ecological management. Usually traditional ecological knowledge is not considered by the officials during strategies development for biodiversity conservation or protected areas management in the Sakha Republic (Yakutia), however first step has already been taken.*

The author accomplished experimental project on collecting information from the local community of the northernmost settlement on the Indigirka River — Russkoye Ustie village that is located in Allaikhovskiy region in order to study the expanding of the species within the region and the attitude of the locals regarding the introduction of the Muskoxen into the area.

The Muskoxen resettlement in Yakutia was started in 1996. Nowadays there are about 1.500 animals in general that thrive in Yakutian tundra. There were two shipments of Muskoxen to a studied area in 2000 and 2009.

Fishing and hunting are the main activities of the local people from Russkoye Ustie village. During summer period they are usually involved in commercial net fishing and live along the Indigirka River according to their fixed sites in the community. Members of the community were identified as the focus group and asked the questions offered in the questionnaires.

The survey on community-based information supports the suggestion that animals in general move northwards into tundra. Obtained data supplement official information and give additional information on herds movement and single roaming specimens. Another important point is that the number of meetings with animals in the wild has increased significantly recently.

Constant community based ground surveys may be useful and can contribute significantly to official monitoring. Involvement of the community can also help with prevention of poaching and will provide people important information about this conservation project and its prospects for future generations.

Keywords: *muskox, resettlement, community-based monitoring, biodiversity, Indigirka River, tundra, Arctic, Republic of Sakha (Yakutia).*

Muskox is a typical "tundra-steppe" representative of Eurasian and American mammoth fauna. Skeletal remains of the species were found in lowlands of Yana-Indigirka and Kolyma Regions in Yakutia, Yamal and Taymir Peninsula, Chukotka and at numerous places in Western and Eastern Europe [1]. Due to uncontrolled hunting only about 3,500 animals occurred in the Northern Greenland and on the Canadian Arctic Archipelago islands at the beginning of the 20th century. After successful conservation measures the number of animals increased up to 200,000. In Russia Muskox resettlement project was launched in 1974. In general animals were brought from Canada and Alaska (USA) to Taimyr Peninsula and Wrangle Island in Russia [2]. The project on Muskox resettlement in Yakutia was started in 1996 when 22 animals were brought from the Taimyr Peninsula to Bulun Region (Delta of the Lena River) for the first time. In general the project in Yakutia may be divided into three major stages. During the first stage (1996-2002) 94 animals were brought to Allaikhovskiy (North-eastern Yakutia), Anabar (North-western Yakutia) and Bulun regions. 49 animals were delivered to Allaikhovskiy and Bulun regions during the second stage (2009-2010). At the third stage 25 Muskoxen were shipped to Lower Kolyma region (North-eastern Yakutia) in 2014. In general 38 animals (23 males and 15 females) were brought to the studied area in 2000 and 2009 [1].

Muskox resettlement has a huge potential for the socio-economic development of the Arctic region in Yakutia. According to international experience when the number of animals becomes sufficient for meat production that may improve economy of local Arctic settlements. Yakutian tundra

can support up to 150 thousands Muskoxen without causing damage to reindeer husbandry. That means people will be able to utilize up to 30-40.000 animals every year, which is about 4.000 tons of meat (that is approximately equal to meat amount of 100.000 wild reindeer). In course of time Muskox hunting will be able to support traditional industry and will ensure supplies of high quality food, leather and fur source for people all year round. Processing and production of Muskox consumable goods will create a number of jobs for the locals in traditional sectors of industry [1].

Nowadays 1,500 Muskoxen inhabit various parts of the Arctic Yakutia. Since the process of resettlement is progressing, ensuring the effective management on regular monitoring of trends in herds boundaries is of a great importance. In order to investigate year-round movements of muskoxen and determine population number, aerial and ground surveys are used however they are expensive and logistically complicated. Another effective tool is GPS collars, one is usually attached to a particular female from the main herd, thus provide limited information.

In order to obtain additional information on resettlement process of Muskox in the Allaikhovskiy region and to study the attitude of the locals regarding the introduction of the Muskoxen into the area experimental project on collecting information from local community from the northernmost settlement on the Indigirka River — Russkoye Ustie village was accomplished. The population of the village is about 129 people [3]. Fishing and hunting are the main activities of the local people. During summer period they are usually involved in commercial net

fishing and live along the Indigirka River banks according to their fixed sites within the community. Members of the community were identified as the focus group and was interviewed through the questionnaires. Among permanent residents of the village we managed to collect data from 52 people that is 61% of the population of age between 17 to 76 years old (fig.1).

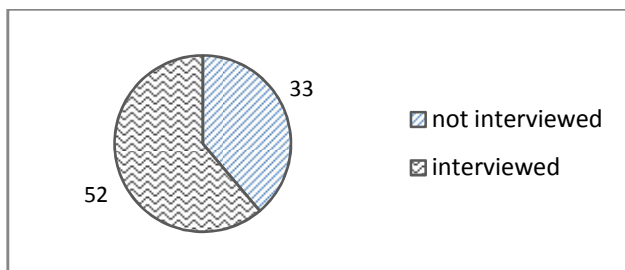


Fig.1. The number of interviewed people

According to the data, people have started to observe Muskoxen occasionally since 2003, in general we registered 71 cases (fig.2).

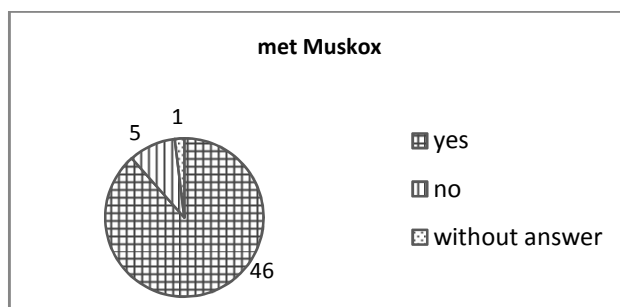


Fig.2. The number of people who met Muskoxen in the studied area

Animals are often observed during summer period, when people actively use Indigirka River and its tributaries as a transport route. The behavior of Muskoxen is described as non-aggressive. The distance between humans and animals or a herd is between 50 m to 3 km, however in average the distance is about 200-300 m. People answered they try to keep distance when meet animals in the wild. Several cases when solitary animals approached human houses in the fishing areas and when they may become a real threat if forced by humans or dogs have also been described.

According to the fig.3. the number of meetings has increased significantly, obviously due to the second shipment in 2009 and successful reproduction of the local population and expanding process (fig.3).

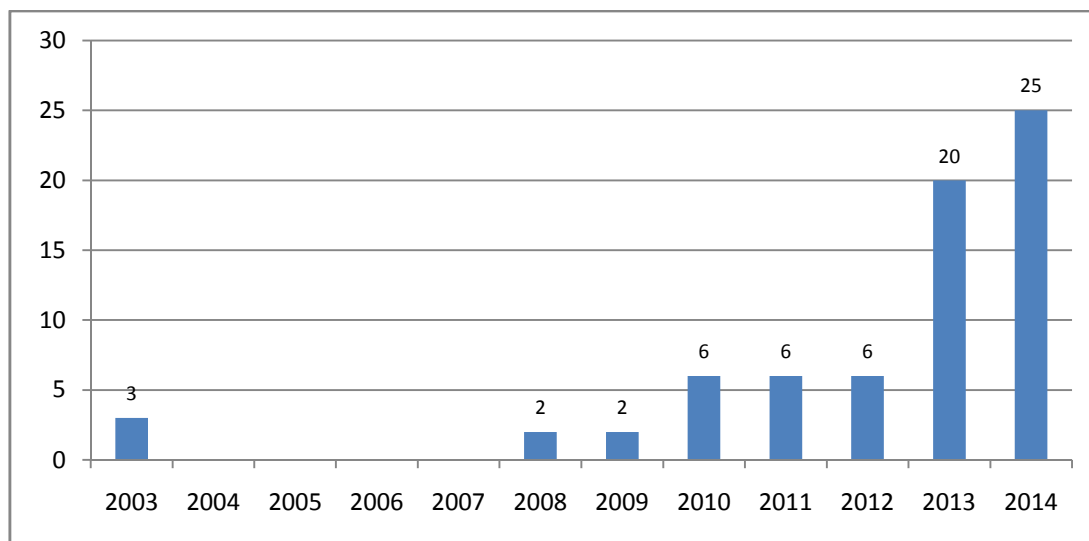


Fig. 3. Dynamic of Muskoxen observation numbers of by local people between 2003 and 2014

Participants of the interview noted that the main herd began to explore an area in the middle of the Indigirka River Delta and some solitary animals move eastwards. In general 19 spots for Muskox observations by people were identified. According to the official monitoring data of the herd movement got through GPS collar (attached to a one female from the main herd), the data coincide with the opinion of the local community and even provide more information on several observations from the remote areas.

In order to ensure the support of the idea of Muskox resettlement in the area form the local people and avoid cases of

poaching the project should be accompanied by a special program on ecological education and outreach. In order to create such program and recommendations for future management, opinion of the local residents for the current moment about the conservation project was studied.

According to obtained data 75% (36 people) of the respondents support the project, 9% (5) against the conservation project, 8% (5) are neutral and 8% (4) are not identified. (fig.4). The main reason of negative attitude of people is that they are afraid that animals will trample down the tundra, including berries.

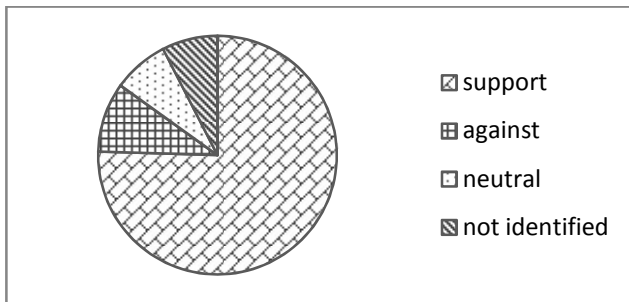


Fig.4. Attitude of the local people to the Muskoxen resettlement project

In general people are not informed about potential threat that may be induced by incorrect behavior during meeting the animals in the wild and in fishing areas and what measures should be taken to avoid such cases.

It is important to mention that the majority of local people suppose this project will be economically beneficial for the future generations.

The study yielded information on Muskox resettlement processes within Allaikhoivskiy region through community-based monitoring. The positive results reveal that use of this method is advantageous and it is important to promote it for official conservation projects in the Sakha Republic (Yakutia). The number of meeting the animals in the wild has increased recently, thus actions on ecological education and outreach is an important component that should be implemented by the official governmental conservation organizations.

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