

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Erforschung biologischer Ressourcen der Mongolei
/ Exploration into the Biological Resources of
Mongolia, ISSN 0440-1298

Institut für Biologie der Martin-Luther-Universität
Halle-Wittenberg

2016

Conflicts between Human and Wildlife in Baytik Mountain, China

Wenxuan Xu

Chinese Academy of Sciences

Weikang Yang

Chinese Academy of Sciences

Canjun Xia

Chinese Academy of Sciences

Xingyi Gao

Chinese Academy of Sciences

Follow this and additional works at: <http://digitalcommons.unl.edu/biolmongol>



Part of the [Asian Studies Commons](#), [Biodiversity Commons](#), [Environmental Sciences Commons](#), [Nature and Society Relations Commons](#), and the [Other Animal Sciences Commons](#)

Xu, Wenxuan; Yang, Weikang; Xia, Canjun; and Gao, Xingyi, "Conflicts between Human and Wildlife in Baytik Mountain, China" (2016). *Erforschung biologischer Ressourcen der Mongolei / Exploration into the Biological Resources of Mongolia, ISSN 0440-1298*. 178. <http://digitalcommons.unl.edu/biolmongol/178>

This Article is brought to you for free and open access by the Institut für Biologie der Martin-Luther-Universität Halle-Wittenberg at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in *Erforschung biologischer Ressourcen der Mongolei / Exploration into the Biological Resources of Mongolia, ISSN 0440-1298* by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

Erforsch. biol. Ress. Mongolei (Halle/Saale) 2016 (13): 457-460

Conflicts between human and wildlife in Baytik Mountain/China

Xu Wenxuan, Yang Weikang, Xia Canjun, Liu Wei & Gao Xingyi

Abstract

Baytik Mountain was a traditional pasture used by nomads, divided into summer pasture, winter pasture and transitional pasture, and most of their livestock were goat and sheep. Many rare and endangered animals occur in this region, including snow leopard, lynx, Mongolian wild ass, ibex and argali. There have long history of conflicts between human and wildlife. Minority nationalities (Uighur, Kazakh, and Mongols, etc.) in China do not have a one child policy. As a result, many families have become quite large because of improvements in living standards, medical care, and living conditions. In addition, these living conditions force the local people to keep more and more livestock. Because of the interference by the fence and the road, in the desert and desert grasslands of the Baytik mountain area, no khulan, ibex, or argali were found; only Goitered gazelle and some birds (such as *Anthropoides virgo*, *Buteo*, and *Milvus*) were counted. Moreover, according to the local herdsmen, the wolf is the biggest threat to their livestock; each family will lose five sheep or goats per year (on average) because of wolf predation. Since 2003, the government constructed fences for the purpose of vegetation restoration, but it has bad effect on the wild animals. These fences decreased the population of wild ungulates leading to a reduction of food sources for carnivores such as the wolf. More and more cases of wolf hunting the livestock were reported in recent years, because less and less food can found in the wild. We suggest the building of fences should be stopped and fences already built should be removed if possible, we also suggest opening the border fence gates on the China-Mongolia border for creation of an ecological corridor for wild animals.

Key words: Baytik Mountain; conflicts with wildlife; trophy hunting; fence

Overview of the Baytik Mountain

Baytik Mountain (44°59' ~ 45°21'N, 90°30' ~ 90°53'E) was a traditional pastureland used by nomads. In the early 18th century, this mountain was first recorded by Europeans with the name of "BAI-TAGE" (BAI means many, TAGE means peak in local language) on the map of Johan Gustaf Renat (1682-1744), a Swedish military-man and cartographer. According to the rock paintings found in this mountain by archaeologists, there has been a long history of conflicts between human and wildlife there.

As a part of the Altai Mountains., highest peak of Baytik Mountain is 3290 m, with the average altitude of 1600 m. The altitude of alluvial fan ranges from 500 m to 1300 m. The annual precipitation of the western part in the area is 100 ~ 200 mm, relatively higher than the eastern part (50~100 mm). The average temperature in January ranges between -12.5 °C ~ -15° C, and 18 °C ~ 23 °C in July. There is no perennial river in the survey area, only intermittent rivers and streams could be seen, springs are the major water sources (GAO et al. 2002). The area of the mountain is an ecotone of the north forest steppe and the central Asian desert, and many rare and endangered animals live in this region. Species of interest include snow leopard, lynx, Mongolian wild ass, ibex, and argali. The Saiga and wild horse was also once distributed in this area before it was extirpated from the wild in the area of China.

In this area, the Kazakh people still maintain their nomadic life-style and they continue to divide this area into summer pasture, winter pasture, and transitional pasture. Most of their livestock

include goats and sheep. Local people in Baytik Mountain pasture belong to Xinjiang Production and Construction Corps (XPCC). There have school, clinic, market and veterinary service in the settlements. The government invested the funds to build a lodging school with good room and board condition.

Community and wildlife survey

The community survey conducted through oral interview with the local people, and the point transect method was used to survey the wildlife in Baytik Mountain. The interviews include the wild animals distribution and living conditions, the effect of human activities (such as enclosure) on the wild animals, nationalities, populations, the social and economic conditions etc. All animals we saw were counted and their location recorded together with their distance from the car and the angle they made with the transect line or the angle of the circular observation.

Results

In total, we investigated 15 Kazakh families in the Baytik Mountain area; all of them belong to the XPCC Sixth Agricultural Division. The XPCC (Xinjiang Production and Construction Corps) was founded by Wang Zhen in 1954 under the orders of Chairman Mao. The stated goals of the XPCC are to develop frontier regions, promote economic development, ensure social stability and ethnic harmony, and consolidate border defense (STATE COUNCIL of the People's Republic of China 2003). Usually, the schools, clinics, markets and the veterinary services were built up in some big settlements. All children of the local Kazakh people get bilingual (Chinese and Kazakh language) education at school.

We have not counted any individuals of wild herbivores and carnivores during survey time in summer pasture of Baytik Mountain because of the strong human interference. According to the local herdsman's testimony, ibex and argali occur there, and when the domestic livestock migrate to the summer pasture, the wild animals come to the winter pasture; and when the domestic goats come back to the winter pasture, the wild animals return to the summer pasture.

According to interviews in 2008, a few of their livestock were taken by wolves, bears, and snow leopards, and nearly no livestock died due to diseases or starvation in winter. However, many livestock were killed by wolves in winter 2009. All Kazakh shepherds are workers of the XPCC without a salary, they earn their life by herding the sheep, and for each sheep they need pay 5 RMB per year to XPCC. If there have disaster, just like the snowstorm in 2012 and the flood in 2013, they can receive aid and support from government. When they are at the age of 60, they receive pensions.

In past times, transportation was a big problem faced by local people, but now a new road has been built along the border by the government, solving that problem, and local herdsmen have exchanged their horses for motorcycles. In addition, children in junior and middle school can now get some subsidies from the government (30-40 RMB per month). Social security and medical care are the biggest problems for the shepherds in the XPCC, and according to interviews, shepherds spend a large part of their family expenditures on social security. Through the "Western's Volunteer Program", many university graduate students come here to work as education assistants, but most of them can only stay just one year and then go back to the east because of the difficult living conditions. The same situation is common for hospitals.

Discussion

Because of the interference of the fence and the road, in the desert and desert grassland areas of Baytik Mountain, no khulan, ibex and argali were found during our study; only Goitered gazelle and some birds (such as *Anthropoides virgo*, *Buteo*, *Milvus*) were counted. During our survey, we only found one wolf on the south slope of the mountain. According to the local herdsmen, predation by wolves is the biggest threat to their livestock; each family will lose five sheep or goats per

year in average because of wolf's predation. The government since 2003 for the purpose of vegetation restoration built grassland fences, but it has bad effect on the wild animals. Therefore, such fence decreased the population of wild ungulates thus leading to reduction of food for wild carnivores such as the wolf. More and more cases of wolf hunting the livestock were reported in recent years, because less and less natural game can found in the wild by this predator. We suggest the building of fences should be stopped and the fences should removed if possible. We also suggest opening the border fence gates on the China-Mongolia border for creation of an ecological corridor for wild animals.

After the "Wild Animal Protection Law" was enacted in 1989, the law received popular support in China. According to our interviews, the local herdsmen are sure wild animals should be protected, and poaching, in general, is not seen or reported. Most local people in this area are nomadic, living very close to nature, and conflicts between human beings and wildlife were not a problem in the past.

Unlike people of the Han nationality, minority nationalities (Uighur, Kazakh, and Mongols, etc.) in China have much more liberal laws regulating limitations on the number of children in families. Recent improvements in living standards, the level of medical care, and living conditions have resulted in a considerable decrease in mortality, especially among children, and an increase in longevity. As a result, many families have become quite large, and the local people are forced to keep more and more livestock to support larger families. In addition, the number of livestock a family holds is a primary factor in determining the degree of success for family welfare. Most herdsmen have positive attitude to the nature conservation ideas; they only wish that wild ungulates wouldn't graze their pastures. They don't see that protection wild animals provide any benefit for them, and may even be a disadvantage. We suggest that the local people should have compensation on wildlife protection. If the local people can get benefits, trophy hunting is a way for solving the conflict between local people and wildlife. As George B. Schaller said, "The only justification for trophy hunting is that it should benefit conservation and benefit local communities."

In order to protect the environment, the government now built many settlements to try to encourage the Kazakh people to give up their nomadic lifestyle. This may be a good way to solve any conflicts between humans and wildlife, but the local Kazakh people are worried about their future since they don't know how to farm the land.

Most herdsmen belonging to XPCC we interviewed in Baytik Mountain have very low education, some of them even have not been to school, some of them graduate from primary school, and most of them graduated from the local Junior high School. So the herdsmen pay a lot attention on their children's education, they hope their children can get good education, get the knowledge to change their destiny. But actually, most of young generations just graduate from high school and keep there parents' traditional nomadic life, only a small part of them have the chance to go to university and college. From all families we interviewed, only one family has a child studying in a college in Urumqi. For living in the remote area, the quality of education is low; the major problem currently is bad infrastructure conditions and a shortage of teachers. Expenditure on education occupies a large portion of domestic expenses, and because of that, they need subsidies from the government.

The expenses of local family including cost of living, educational expense, truck rental for migration, money for coal and livestock forage in winter, medical expense and grassland managerial fee etc. However, because the income is based only on selling the lambs during summer, some of them also need guaranteed income supplement from government. Even the pension of their retired parents is also a source of income for some families. Because of inflation and the single income source, most families are unable to afford such a lot of expenses. The single income source also decreases their ability to weather a calamity, such as the snowstorms and floods these people experience in winter and summer, respectively.

Acknowledgements

We are grateful to Oikos insititute, Italy, for financing this investigation. We thank Mrs. Valeria Galanti from Istituto Oikos and Mr. Rossella Rossi, President, Istituto Oikos for their valuable comments and help on our survey.

Reference

GAO, X.; YANG, W.; QIAO, J.; XU, K. (2002): Wildlife in the Beita Region, Xinjiang. - Arid Zone Research **19** (4): 75-82. (In Chinese with English abstract).

STATE COUNCIL OF THE PEOPLE'S REPUBLIC OF CHINA (2003): IX. Establishment, Development and Role of the Xinjiang Production and Construction Corps. - <http://www.china.org.cn/e-white/20030526/9.htm>.

Addresses:

Xu Wenxuan* Xia Canjun
Yang Weikang Liu Wie
Gao Xingyi
Xinjiang Institute of Ecology and Geography
Chinese Academy of Sciences
Urumqi, 830011

* Corresponding author

E-mail: wenxuan-xu@126.com