



Rufford Small Grant

(for Nature Conservation)

SUPPORT TO THE ERMELI SAIGA BREEDING CENTER IN KALMYKIA, RUSSIA

The project aims to maintain the functioning of the 'Centre for Wild Animals of Kalmykia' at Ermeli settlement.

The main activities are the continued functioning of the Centre, housing and maintaining a herd of over 100 saigas, breeding them and boosting male numbers in the wild herds.

Following budget cuts by the Kalmykian Government; external funding was critically needed to ensure that the Center remains open. The Center is safeguarding the North-West pre-Caspian population of the critically endangered saiga antelope. The Center is important not only as a captive breeding facility, but also undertakes research into saiga ecology and steppe dynamics and desertification. The Center provides a highly valuable educational and community resource, as well as offering local employment opportunities.

The saiga antelope is a nomadic inhabitant of the semi-arid rangelands of Central Asia. Saiga were formerly numerous in Kazakhstan and Russia, with a small population in Mongolia. It was hunted historically for meat, hide and horns. Horns are borne by males and highly valued in traditional Chinese medicine. In the years immediately following the end of the Soviet Union, the saiga was heavily poached for its horns for export to China. A dramatic decline in the proportion of adult males in the population was observed, but fecundity rates remained high, as expected in a polygynous ungulate. Poaching became less selective as the collapse of the rural economy led to local demand for meat. From 1980 to 1994 the total numbers of the Saiga Antelope fluctuated around 670,000 - 1,251,000 animals. All four populations of *S. t. tatarica* experienced dramatic population declines from 1998 onwards. Annual decline rate for the total *S. t. tatarica* population between 1998-1999 was about 35 % and in 1999-2000 even became higher - up to 56 % (Luschekina et al., 1999; Milner-Gulland et al., 2001). According to recent censuses and experts' assessment there are not more than 70,000 saigas in the whole range of this species. If this dramatic decline is not stopped we could lost this unique animal.

The international awareness of a critical situation with saiga led to the listing of this species in Appendix II of CITES in 1995 and as a critically endangered species in the IUCN Red List in 2002. In 2004 the critical situation with saiga in the whole range was reflected in resolutions adopted by CITES COP-13 and IUCN WCC. After tireless efforts of CMS/CITES in 2006, a Memorandum of Understanding (MoU) on conservation and restoration of saiga has been signed by 4 range states. These countries started implementation of an Action Plan, a draft of which was prepared at the international workshop (Elista, Kalmykia, 2002).

The saiga is a highly fecund species, resilient to the extremes of weather of the Central Asian rangelands. Females give birth in their first year of life, and routinely twin as adults. Populations fluctuate dramatically as harsh winters, droughts and disease cause mass mortality. There is tight clumping of rutting and birth dates, to take advantage of the spring peak of forage availability. Females also gather to give birth in large aggregations, which are presumed to be a predator-swamping mechanism. Predicted effects of a lack of adult males include failure to conceive and an extended birth period, resulting in higher juvenile mortality. During recent

years the population size declined rapidly, as did the number of adult males in the population. Currently, the proportion of males does not exceed 5%, in previous conditions it was more than 18-25%. As a result, individual paternal lines are very rare and of the population of newborns share common ancestors. The gene drift during the sharp decline of the population and low numbers of adult males are both very important reasons to expect the future decrease of the genetic diversity of European Saiga population. A lot of different genotypes may vanish from the genetic fund of the population. This trend will bring down the general adaptive potential of the European Saiga population.

Participants at the 2002 International workshop in Elista discussed combating poaching and illegal trade. Main topics included the monitoring of populations/habitats of saiga; the role of strictly protected natural areas; and collaboration with local population. They also discussed building interregional and international cooperation with special attention to establishing captive breeding centers for genepool conservation to abate the loss of genetic diversity. These centers would build an insurance population to save some unique Saiga genotypes for the future. The first experimental breeding center was established in 2000 under a Decree of the President of Republic of Kalmykia and with a financial supported kindly provided by the Munich Zoological Society (Germany) and Bernhardtin Fund (the Netherlands). The original Center for Wild Animals was created 17 km from Elista, the capital of Kalmykia with four 25 x 25 m enclosures to support this ex situ management program. In the spring of 2000 newborn wild saigas were captured and successfully hand-reared in the open-air enclosures of the Center. These animals formed the original breeding herd. Seventeen females were paired with one adult male, and in the spring of 2001, 14 saigas were born.

After this initial success, the Center received 800 ha of pristine grassland in the Yashkul district (60 km east of Elista, near the Ermeli settlement) from the Kalmykian Government in 2002 to continue the captive saiga breeding program. A new Center was constructed on this site with the generous help of the (Columbus?) Zoo and Large Herbivore Foundation. The Center includes three animal enclosures (60 ha in total), an observation tower, a small house for the animal keepers and for research laboratory. The Center has permanent water and energy supplies (including a solar panel and wind turbine). The Center currently maintains 100 saigas of different age and sex.

Work at the Center has generated new information about the captive management of saiga including techniques for acclimating animals to captivity, hand-rearing, nutrition and reproductive management. Through a special agreement between the Government of Kalmykia and Administration of the Rostov region, the Center has provided dozens of captive-born saiga to its newly established branch in the Rostov region. Now it is possible to conduct observations and experiments with captive-bred animals at two sites. The Rostov branch uses the rations for adult and newborn saigas fortified with vitamins, antibiotics and mineral additives developed in the Yashkul center which increase considerably the survival rate of animals kept in enclosures. The Center has also provided animals for the Moscow Zoo.

The staff at the Center have also implemented several scientific studies. One of the Center's goals is to release males into the wild, as the number of males currently in the wild is completely inadequate for normal existence of the population. In 2004, five males equipped by satellite collars (kindly provided by University of Wisconsin-Madison, USA), were released in the Stepnoi Reserve. These animals were tracked with the assistance of the rangers at Stepnoi. These animals were successfully integrated into the wild herds, although one was lost due to predation. This experiment will be continued in 2009.

The captive population of saiga at the Center provides the opportunity to have an access to animals at any time. Endocrine monitoring (with support of laboratory research from INTAS and Darwin Initiative) was started to show how to use biochemical and hormonal indicators for a determination of fertility and reproduction success in wild population. Application of such

modern methods will facilitate the regular monitoring of saiga population in nature and will help to avoid any its unnecessary disturbance. Additional reproductive research at the Center seeks to develop methods of artificial insemination for saigas. This work could help to guarantee the highest reproductive rate for captive animals to provide surplus animals to supply other breeding centers or commercial saiga ranches. This project was started recently and we expect good results next spring.

The Center still has a lot of land available for construction of additional animal enclosures, haymaking for providing winter forage for them and grazing of limited number of domestic animals belong to the Center's staff. Because saiga in the wild share pastures with domestic animals (no competition was observed) using the fenced enclosures of different size it will be possible to conduct some experiments on the rotational use of pastures by livestock and saigas, to implement techniques for pasture improvement and to determine allowed combined load on pastures to prevent overgrazing leading to desertification, as previously occurred in Kalmykia.

Students from Kalmyk State University and other institutions are able to use the resources at the Center to conduct their scientific work.

Each year, many people of different age and social status (from kids to decision makers) visit the Center for educational programs. Since the other buildings at the center including the research laboratory and animal keepers home did not have adequate space for this purpose, a visitor's center was constructed at the Center in 2006 with small grants received from US FWS, TNT-Express, and the Denver Zoological Society. The Center's programs help to strengthen public awareness and demonstrate the Center's achievements in saiga conservation. The Center produces booklets, posters, calendars, and other printed material which is widely distributed not only in Kalmykia, but far beyond the limits of the Republic's border. The visitor's Center was built to resemble a traditional Kalmyk yurt. It has permanent and regularly updated exhibits showing different aspects of ecology and conservation of saiga and its steppe habitats, traditional knowledge of Kalmyks used in cattle-breeding and protection of wildlife. The building is used for popular lectures, films or slide shows, or as the base for groups visiting the Center for excursions or field trips to promote ecological education.

The displays at the visitors Center form the basis for a mobile exhibition, including informational material, posters, and audio-visual equipment. We are visiting some remote places regularly and use the saiga mobile exhibition to distribute outreach materials in different human settlements within saiga's range. These programs are used as a basis for discussions with local people and administrations about local perceptions of saiga status and the potential role of saiga conservation in rural life in combination with traditional cattle breeding. Our work particularly targets school children, with school parties being invited to the visitor Center, and the mobile exhibition regularly visits local schools. We run a countrywide children's drawing competition based on their knowledge on the saiga's ecology and the steppe ecosystems for which it is a key species. Previous awarding ceremonies conducted in Elista were shown at local TV and publicised in local mass media. This has provided additional exposure for saiga conservation programs. Our previous experience with children's drawing competitions has been very positive and a relevant poster with many paintings has been shown in HQ of UNESCO in Paris.

Scientific and public awareness activities have been done in collaboration with wide range of local governmental agencies (like the Ministry of Natural resources of the Republic of Kalmykia, Kalmyk State University, Chernye Zemli Biosphere Reserve, Sanctuary "Stepnoi" (Astrakhan Oblast), Institute of Ecology and Evolution, RAS (Moscow), non-governmental organizations (like Center for Ecological Projects of the Republic of Kalmykia, Ecological and Biological Center for kids) and foreign organizations (like Imperial College London). The Center hosted many foreign guests (students, scientists, and tourists from USA, UK, Germany, Italy, Mongolia, China, Tunisia, etc.), from different international organizations including CITES, CMS, and UNESCO. The staff at the Center have presented their activities at different local and

international meetings and published numerous scientific and popular papers local and international journals.

During October 29 – November 1, 2009 in Almaty, Kazakhstan a meeting of Saiga Conservation Alliance (Center recently became as an institutional member of the Alliance and professor Yu. Arylov is a member of the Alliance Executive Committee) was held. During the meeting a presentation on Center's activities has been delivered and support of Rufford Small Grants Foundation has been acknowledged.

Funding (261558 rub. 76 kop. According to Sberbank exchange rate) kindly provided by Rufford Small Grants Foundation (13.02.08 – 13.02.09) helped a lot to maintain the functioning of the Centre for Wild Animals of Kalmykia' at Ermeli settlement. Special security lighting was installed along the perimeter of the enclosures to protect them against penetration of livestock, wolf etc. and we had no any accidents as it was in previous years. Animals had good feeding with additional hay and regular water supply. Several solar batteries have been purchased and installed to get supplementary power supply and our electricity bill for the reporting period was low in 30% than it was previously. The buildings (guest house, visit center, other facilities) constructed in previous years with generous support of LHF and other donors have been renovated. The Center was able to pay an annual rent for the land and support animals keepers giving them additional money to their very small monthly salary (70 USD per month) to improve their living standard. All these and other activities mentioned above implemented with the Rufford Small Grants Foundation and at the volunteer basis allowed Center during the reporting period to improve conditions for animals which are keeping in enclosure, to maintain animals' health, conduct lectures for visitors in the renovated visit center.

In conclusion we would like to express our sincere thanks to the Rufford Small Grants Foundation for its generous help to maintain the functioning of the Centre for Wild Animals of Kalmykia at Ermeli settlement. We will be very grateful if the Rufford Small Grants Foundation will find a possibility to support the Center in future since due to financial crisis and very severe situation in the Republic of Kalmykia the Center suffered very much from lack of funding.


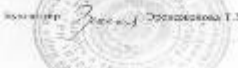
Financial information

	Total (rub.)
Rent of land (800 ha)	11800,00
Purchasing of fodder (hay, grain& pellets)	42250,00
Communication	7000,00
Purchasing of drinking water	9100,00
Centre fuel and electricity bills	20360,85
Animal keepers salary	61535,64
Special flash-lights for enclosures	13549,00
Fuel& vehicle maintenance	22715,20
Building maintenance	60853,26
Contingency	12394,81
TOTAL	261558,76

Счет: "О расходовании бюджетных ассигнований средств в целях финансовой поддержки центра на содержание сельскохозяйственных животных(птицы)"
 Организация: ИУ "Центр диких животных РК"
 Номер счета: №1
 Назначение: Исходный бюджетный фонд Калькуляционный фонд

Исходный бюджетный фонд: 261558,76 руб.

№ счета / №	Наименование операции	Проектная статья	Дата по счету	Сумма руб.
1	Задолженность участника проекта	Гарантийная оплата	25.06.2018	30407,81
1	Платежи с ЧСД	Контрактная на ФСОТ	02.06.2018	11588,13
1	Счета (платежи) Гидро-Полиэтил	Итого		41995,94
2	Закупка кормов (кормовых смесей) "Агро-Техника-Беларусь"	Увеличение стоимости материальных запасов	24.06.2018	50510,82
3	Закупка кормов (кормовых смесей) "Агро-Техника-Беларусь"	Увеличение стоимости материальных запасов	15.07.2018	50510,00
4	Закупка кормов (кормовых смесей) "Агро-Техника-Беларусь"	Увеличение стоимости материальных запасов	21.06.2018	22501,00
5	Закупка кормов (кормовых смесей) "Агро-Техника-Беларусь"	Увеличение стоимости материальных запасов	23.06.2018	11475,20
5	Закупка кормов (кормовых смесей) "Агро-Техника-Беларусь"	Увеличение стоимости материальных запасов	27.06.2018	11291,00
5	Закупка кормов (кормовых смесей) "Агро-Техника-Беларусь"	Увеличение стоимости материальных запасов	29.06.2018	5180,00
5	Закупка кормов (кормовых смесей) "Агро-Техника-Беларусь"	Увеличение стоимости материальных запасов	24.06.2018	2162,91
6	Закупка кормов (кормовых смесей) "Агро-Техника-Беларусь"	Увеличение стоимости материальных запасов	15.08.2018	11509,81
6	Закупка кормов (кормовых смесей) "Агро-Техника-Беларусь"	Увеличение стоимости материальных запасов	25.11.2018	4280,81
	Итого:			188417,00
7	За услуги связи (ММТ Казань) "Связь"	Услуги связи	02.06.2018	7501,00
7	За услуги связи (ММТ Казань) "Связь"	Услуги связи	22.06.2018	4300,00
	Итого:			11801,00
8	За услуги связи (ММТ Казань) "Связь"	Услуги связи	16.11.2018	1016,00
8	За услуги связи (ММТ Казань) "Связь"	Услуги связи	26.06.2018	10761,00
	Итого:			11777,00
9	За услуги связи (ММТ Казань) "Связь"	Услуги связи	02.06.2018	6001,00
9	За услуги связи (ММТ Казань) "Связь"	Услуги связи	06.06.2018	1040,00
9	За услуги связи (ММТ Казань) "Связь"	Услуги связи	01.07.2018	4300,00
9	За услуги связи (ММТ Казань) "Связь"	Услуги связи	01.11.2018	3100,00
9	За услуги связи (ММТ Казань) "Связь"	Услуги связи	02.06.2018	900,00
	Итого:			15541,00
10	За услуги связи (ММТ Казань) "Связь"	Услуги связи	02.06.2018	6100,00
10	За услуги связи (ММТ Казань) "Связь"	Услуги связи	27.06.2018	1524,04
	Итого:			7624,04
11	За услуги связи (ММТ Казань) "Связь"	Услуги связи	01.07.2018	4100,00
	Итого:			4100,00
	Итого:			261558,76

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Director of the Center
 Professor
 Yuriy Arylov

Photos illustrated Center's activities



HQ of the saiga breeding center near Ermeli settlement (Photo Nadezhda Arylova)



HQ of the saiga breeding center near Ermeli settlement (Photo Nadezhda Arylova)



Rebuilding of water storage (Photo Yuriy Arylov)



Restoration of the visit-center (Phot Yuriy Arylov)



Restoration of the guest house (Photo Yuriy Arylov)



Enlargement of old enclosure (Photo Yuriy Arylov)



Repairing old enclosure (Photo Yuriy Arylov)



Construction of a small Buddhist temple (Photo by Anna Lushchekina)



A new field for growing saiga forage (alfalfa) (Photo Yuriy Arylov)



Delivery of hay for feeding saiga in enclosure (Photo Yuriy Arylov)



Feeding saiga during the winter season (Photo Yuriy Arylov)



Saiga herd in enclosure (Photo Anna Lushchekina)



Saiga male near manger with grain (Photo Anna Lushchekina)



Yuriy Arylov, Director of saiga breeding center given a lecture to kids from Elista children's home in the visit center (Photo Nadezhda Arylova)



School children from local schools frequently visit saiga breeding center (Photo Yuriy Arylov)



Horse cart which is using for excursions around enclosures (Photo by Anna Lushchekina)



White monk is saiga protector in the steppe (sculpture near Buddhist temple in Elista city; photo Anna Lushchekina)