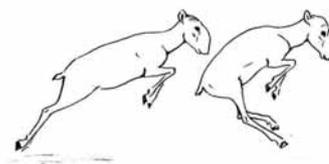


Saiga News



Summer 2005: Issue 1

Drawing by Vladimir Smirin

Providing a four-language forum for exchange of ideas and information about saiga conservation and ecology

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Feature Article - Genetic differences between saiga populations

There has long been controversy over the genetic variation within the species *Saiga tatarica*, and particularly over the position of the Mongolian saiga, which is morphologically and ecologically different to the sub-species found in the rest of the range (see picture for differences in horn morphology). Given that the Mongolian saiga's status is now so precarious (750 at the last count in 2003 - L. Amgalan pers comm), it is important to know quite how genetically different they are, in order to highlight to the international community the potential loss of biodiversity that the extinction of this sub-species would represent.

There is also the issue of the genetic distinctiveness of the four populations of the nominate sub-species. As the Betpak-dala saiga population reaches critically low numbers, is it vital to intervene urgently to prevent catastrophic loss of genetic diversity from the loss of this population? Or might limited funds be better spent on populations that stand a better chance of long-term survival, if the Betpak-dala population is not genetically distinct? What are the implications of mixed origin captive herds and of translocations between populations? A project funded by INTAS aimed to answer these questions.



Saiga males:
a) Nominate sub-species *S.t.tatarica* at the Centre for Study & Conservation of Wild animals of Kalmykia, photo by EJM.G.
b) Mongolian saiga, photo from WWF-Mongolia, www.wwf.mn.



Samples were collected non-invasively from all 5 saiga populations by saiga experts, and analysed by Marina Kholodova at the Institute of Ecology & Evolution in Moscow, with technical support from the University of Warwick, UK (funded by the Darwin Initiative) and the Zoological Society of San Diego, and with the help of a grant from the Russian Fund for Basic Research. The results showed that:

- The Mongolian samples showed little genetic variation, and although they were not very different genetically from *S.t.tatarica*, there was no overlap. This suggests that classification as a subspecies is justified, that the Mongolian population has little genetic variation, but that it is genetically not too distant from other saigas.
- The 4 nominate saiga populations were not genetically separable. However although there were several shared haplotypes between the populations on the left side of the Volga (Kazakhstan/Uzbekistan), there were none shared with the Kalmykian population. This may suggest that the Kalmykian population is genetically more distinct than the others, but the sample sizes were small.
- All populations had unique haplotypes. Again, sample sizes are small, but the precautionary approach to conserving genetic diversity suggests that all populations should be maintained as genetically distinct entities.
- In all cases, including Mongolian saiga, the genetic distance between individuals within populations was greater than that between populations. This suggests that all saigas are descended from one genetically heterogeneous population and were relatively recently separated - which ties in with saiga's nomadic habits and wide distribution in historical times.

Results taken from Kholodova, M.V., Milner-Gulland, E.J., Easton, A.J., Amgalan, L., Arylov, Iu.N., Bekenov, A., Grachev, Iu.A., Lushchekina, A.A., Ryder, O. (in press) Population genetics of the critically endangered saiga antelope. *Oryx*. More information from mvkholod@hotmail.com

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All contributions are welcome, in English or Russian languages. Please send them to esip@tkt.uz or to one of the editors. We publish twice a year.

This publication is available online at <http://saigak.biodiversity.ru/publications.html> and www.iccs.org.uk/saiganews.htm, as a pdf, or in hard copy on request in English, Russian, Chinese and Mongolian.

This publication is funded by:



with additional support from:

Editorial

Welcome to the first issue of *Saiga News*, the new six-monthly e-bulletin for all who are interested in the conservation of the saiga antelope. We are serving a wide constituency, from people who are working on the ground in saiga conservation and are interested to know what is going on in other countries and internationally, to those who attend international forums and need up-to-date information about conservation work. Our aim is to provide reliable, objective information to all who need it, and to do this in four languages (English, Russian, Mongolian, Chinese), to ensure that no one is disenfranchised through language barriers.

We cannot succeed without support from all who care about saigas. Please send us any information that you think would be useful to share with others, whether it be press cuttings or updates on your own work. Please pass on to us the contact details of anyone who you think would like to receive *Saiga News*, and share it with your friends and colleagues.

We are a group of volunteers and have no designated funding for this publication beyond the first four issues. A small amount of funding would make a big difference to our operations, enabling us to spend more time on this work, make the newsletter self-sustaining, and print additional copies for distribution in the range states. If you are able, please subscribe to *Saiga News*, to help us in our work. The form is below.

The Editorial Team

Contact: Elena Bykova esip@tkt.uz

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Updates

INTERNATIONAL AND REGIONAL

International Meetings recognize Saigas

Saigas were on the agenda both at the 13th Conference of the Parties to CITES in October 2004 and at the World Conservation Congress in November 2004. In both cases, resolutions were passed urging all stakeholders to work together to halt the decline in saiga populations.

WCC resolution: http://www.iucn.org/congress/members/adopted_res_and_rec/REC/RECWCC3113%20-%20REC031E-Rev1%20Final.pdf

CITES resolution: http://www.cites.org/eng/dec/valid13/13-27_35.shtml



Situation with the Mongolian saiga attracted attention of international experts: meeting in Ulaanbaatar, October 2004

The meeting on the Mongolian saiga (*Saiga tatarica mongolica*) was organized by the WWF Mongolian Program Office and the Mongolian Academy of Sciences. This was a timely meeting at which the dire status of the Mongolian saiga was outlined. In recent years, conservation intervention by WWF-Mongolia and colleagues has had substantial success; in 2002 the population had reached a peak of around 5000 animals, and local people had been engaged by a benefit-sharing project funded by WWF's Large Herbivore Initiative. However funding ceased, and a series of bad winters combined with poaching reduced numbers to around 750 in spring 2004. The meeting was very concerned about the effect that another bad winter in 2004/5 might have on the population, and policy recommendations were dominated by suggestions for actions to mitigate the effects of bad weather, as well as continuing to enlist the support of local people for saiga conservation. Presentations were given by members of the UK Darwin Initiative supported project "Using saiga antelope conservation to improve rural livelihoods" on their work in Kalmykia and Kazakhstan, strengthening conservation capacity and raising public awareness. Information was also given about the successful captive breeding facility that exists in Kalmykia, and it was suggested that there might be a strong case for collaborating to set up a similar facility in Mongolia.

The Mongolian saiga has been too long neglected by international conservation bodies, and this needs to change if this sub-species is not to be lost. It was agreed that awareness could be raised by ensuring that Mongolia was included in the Memorandum of mutual understanding concerning conservation, restoration and sustainable use of an the Saiga antelope (*Saiga tatarica tatarica*) to be signed under the CMS, and in the action plan for saiga conservation drawn up in Elista in 2002. For more information see:

<http://www.wwf.mn/documents/Recommendation%20from%20International%20Saiga%20Workshop.pdf>



"Take care of the Steppe"
by Nadezhda Gorayeva, age 14.

"Children are drawing": Saiga Competition in Kalmykia

A children's art competition was held in Kalmykia over the summer of 2004. The competition attracted more than 100 entries from all over the Republic, but particularly from the districts where saigas can still be found. The competition was supported by UNESCO's Man And Biosphere programme, the People's Trust for Endangered Species and the Darwin Initiative.



"Saiga" by Bulgun Badma-Garyeva, aged 10

Saiga in animation – an expo in Astana, Kazakhstan

An exhibition of the results of the contest for the best scenario of animated cartoons about saiga was held in Astana (Kazakhstan) on 22nd-26th November 2004. The contest organized by People and Nature (Germany) and Asia Art+ (Kazakhstan) included seven creative groups from Almaty, Chimkent, Kyzyl Orda, Semipalatinsk, Novosibirsk. The winner was the scenario of the Chimgan studio ZHEBE. The contest was conducted within the project SaigaArt headed by the German ecologist Martin Lenk. The project was sponsored by Shell Kazakhstan, Global Fund of Nature (Germany) and NABU (Germany). The animated cartoon is to be filmed in 2005.

Saiga film shown on French TV

A film crew from Marathon Productions accompanied a team of saiga biologists on their expeditions last year, filming their work in Kazakhstan and Kalmykia. The researchers were working on a collaborative research project funded by the UK's Darwin Initiative and INTAS. The resulting film, "Aline and the saigas" was a finalist at the 15th International Wildlife Film Festival" held in Albert, France, on 18th-20th March 2005. The film received a jury commendation in the "Prix de la Publique" category, for being among the top three most popular films at the festival as voted by the public. The film was shown on Canal+, a French network, in December 2004. See

<http://www.marathon.fr/detailcat.php?IDFICHE=313&CODELANGUE=UK&IDCAT=9> for more details about the film.



Saiga reintroduction in China

The Chinese State Forestry Administration has decided to reintroduce saigas again. The first reintroduction was conducted in 1987 in both Xinjiang and Gansu provinces. Xinjiang is the province that has historical records of saiga population in the wild, while Gansu is the only province that keeps a small captive population in China for over ten years. There is no clear schedule for the reintroduction as yet, but both provinces are working towards it.

Saigas in the news

KAZAKHSTAN * MONGOLIA

Novoe Pokolenie, June 4, 2004

The silence of the lambs

Kazakhstan marks another Day of Nature Protection with a sad event: saiga, one of the symbols of our steppes, is on the brink of extinction. Only ten years ago the numbers of the local population of these graceful divine creatures reached a million. Today, a miserable 2% of this number – less than 20,000 individuals — remain of the innumerable herds. The cause is the total genocide of saigas because of their main decoration – horns with miraculous medicinal properties. Annually, tons of saiga horns are shipped to China for the demands of traditional medicine there despite the prohibition of saiga hunt passed in 1998.

For centuries this species has been the object of hunting. But hunting did not threaten the existence of saigas. In 1959, the commercial hunt of saigas began in the country. In some years the number of the hunted saigas reached 500,000. In 1993, the legal export of horns reached the peak of 60 tons. But even this commercial hunt did not pose a threat for this animal, while the state (then the Soviet power) strictly controlled hunting on the basis of scientific data and did not allow the poachers get out of control.



With the collapse of the Soviet Union and the economic crisis, this balance of coexistence of man and animal was disturbed. People living in rural areas simply had nothing to eat: it was the time for people to be protected from societal collapse. Herds of saigas began to decline quickly, and, we repeat, a full prohibition on hunting saigas was imposed six years ago. Nevertheless, in 2001, 5000 kg of saiga horns, in 2002, 18,000 kg, and in the last year, 9000 kg were shipped to China. The above-stated figures of the export of saiga horns to China by "Ohotzooptom" [State hunting agency in Kazakhstan *edit*] are explained as the natural death of animals, confiscation of horns from poachers and old stocks, which for many years had been stored in warehouses. According to the Committee of Forestry and Hunt Farming, in the last year only 16 instances of saiga poaching were recorded, as well as confiscation of 116 dead bodies. In translating to the price of horns it is, perhaps, 9 kg, but not 9 tons at all. Probably, not all instances of poaching are registered? As to storage of horns in warehouses, they have been empty for five years. The last storage of horns took place in 1998. In 1997, only about two tons of horns were exported.

In 1990-91, by order of the Minister of Ecology, Mr. Anatoly Dubitsky, during the operation *Saiga*, inspectors were found out to be engaged in poaching using motorcycles obtained from "Ohotzooptom". There was a case when about eight tons of horns were confiscated from one inspector.

In 1988, a cooperative movement was initiated. Businessmen organized cooperative societies "Sinegorie" and "Rostok", which were engaged in stocking saiga horns. People exchanged one kg of horns for two packs of Indian tea or a liter of vodka. Thus, co-operatives stimulated poaching among the local population and sold the goods in Hong Kong and Singapore.

Since then little has changed. People continue to destroy saigas ruthlessly. If we calculate the price of saiga horns sold in the last three years at the price of 100 dollars for one kg, the price given by Chinese on the border, kopecks are earned – hardly more than three million dollars. From the beginning of reorganization in 1985 until 1998, 131 tons had been exported. The approximate sum of the income of the state is 13 million dollars. It is the price, which someone (in fact it is clear, that this someone is obviously not peasants, exchanging expensive goods for tea and soap) has estimated the whole species of fauna. Of course, not thirty pieces of silver, but nevertheless...

By Galina Naumova

Full story from <http://saigak.biodiversity.ru/publications/naum1.html>

The UB Post, April 2004

Study finds saiga on verge of extinction

According to a recent study by WWF-Mongolia (WWFM), the population of saiga antelope (*Saiga tatarica mongolica*) in the country has been reduced to 750. The census providing the information for this report was taken in December 2003. Only four years ago, an official census counted 5,200 of the animals.

WWFM specialist Yu. Onon stated that the decline in saiga is a direct result of poaching. An illegal market for saiga antlers exists, supported by a network of poachers and smugglers.

The organization has tracked down and spoken with several poachers in the course of their investigation. The procedure for hunting saiga has been reported as follows: the animals are pursued by automobile and hit, and then the antlers are cut off with an axe while the animal is still alive. The hunters do not utilize any other parts of the animal. Rather than processing the saiga for meat, the poachers leave the injured animals to bleed to death. Generally the hunters would prefer not to harvest the antlers while the antelope are alive. The market conditions make it impossible to do otherwise. The Chinese buyers pay much more for antlers of this sort - they contain more blood than those taken from dead antelope.

An official source put the market price of a single antler at Tugrik 20,000-30,000 [18-27 dollars *edit*].

The WWFM census covered an area of over 2,860 km where saiga have traditionally roamed. The researchers were able to confirm that the area had maintained no major damages to the environment, nor had there been any significant deviation in natural conditions or temperature. The research sufficiently established that the reduction in population was directly related to human activity. The extent of poaching activity had, until then, been grossly underestimated. Onon implored locals to get involved in the protection effort. He also pushed for stricter legal measures against poaching. "By law, an individual arrested for hunting rare animals incurs a fine of Tg 20,000-50,000 [18-45 dollars *edit*], while organizations found guilty are subject to fines of up to Tg 250,000 [220 dollars *edit*]," he stated. "Although this law should be upheld very seriously a criminal can, in reality, quite easily evade criminal responsibility." WWFM representatives beseeched the authorities to tackle the matter in earnest. "We believe that the government must adopt a concrete stance before the saiga antelope is driven to extinction."

By B. Bulgamaa

Full story from http://www.saigak.biodiversity.ru/eng/publications/ub_post.html

Saigas in the news

UZBEKISTAN

Pravda Vostoka, 20 November 2004

Saiga can be saved

The saiga population suffered loss as a result of human activities when in 1972 the Kungrad-Beineu railroad was built. A new damage to saigas took place in 1975, when builders laid gas pipes 1060 mm in diameter along the dugout trench. The pipes were welded to become as long as 20-40 km. Before being placed into the trench, they became a barrier on the migratory route of the animals. Saigas were afraid to cross this obstacle. On his way 120 km to the north from Urga, Dr. O. P. Bogdanov counted about 1000 dead bodies of males at that time at that time.

For the present-day generation of saigas the railroad is no obstacle, nor is the road crossing Ustyurt along the railroad. But these animals are faced with a more horrible scourge: stations have been built along the Kungrad-Beineu railroad, around which villages have emerged. Poachers from these villages hunt saigas all the year round.



TV relay station in Eastern chink of Ustyurt, Uzbekistan (left);

Transnational high way building, Kungrad-Beineu site (right).

Photo by Alexander Esipov



Poachers can be divided into three categories: the first category comprises people shooting saigas to feed their families and to sell meat. Saiga meat is sold in Kazakhstan for 2000-2500 tenge [about 15-20 dollars *edit*]. Meat is openly sold in trains going to Kazakhstan at the price of 1000 soums [about 1 dollar *edit*] for 1 kg. The second category comprises poachers killing these animals for horns, which are sold in China. The horns of three males reach one kg, which yields USD300 to USD350. The third category consists of high-ranking officials, for whom hunting is entertainment. The hunters use high-speed jeeps and are accompanied by a gamekeeper and policemen.

Among the poachers there are many unemployed. By the most conservative estimate the poachers killed 80.000 saigas in the period of 32 years (1972-2004).

The first noted case of imprisonment took place in November 1983. More than 10 poachers of saigas were convicted in 1990-1999. Currently, an operative group of State Committee for Nature Protection of the Republic of Karakalpakstan, Ustyurt, is engaged in revealing of poachers. The head of this group is Begdulla Utebergenov. The group comprises an inspector and two non-staff workers.

The decree of the Cabinet of Ministers of the Republic of Karakalpakstan No 311/12 of 29 November 1991 enabled the establishment of the Saigachiy reserve (zakaznik) on the Ustyurt Plateau with an area of 1 million hectares. The State Committee for Nature Protection of the Republic of Karakalpakstan supervises this zakaznik. However, in fact there is no such zakaznik; nothing is done for its proper functioning. Ironically, saigas are shot by poachers in the area allocated by the government all the year round.

It is important to understand that poaching and indifference are a great force. Only the power of joint knowledge and efforts of scientists, vigor of NGOs and mass media can oppose it. It is necessary to urgently establish a taskforce inspection on the basis of the Ustyurt group. Apart from protection of saigas, this renewed inspection will engage in nature-protection activities with the purpose of conserving rare and vanishing mammals and birds. Relict and endemic plants of Ustyurt will be protected.

By Valentin Bochin

Full story from <http://pv.uz/?inc=5&news=197> and <http://kungrad.narod.ru/4/s.htm>

Recent saiga publications

D.Kugultinov, G.Kukareka. 2004. "V kolybele kovylei" [In a cradle of feather grass]. Elista. 36 pp. The book can be requested from the Centre for Wild Animals of the Republic of Kalmykia: 36 Tchkalov str., 358000, Elista, Russian Federation.

"The saiga antelope - teetering on the brink but still cause for hope." (2004) Y. Arylov, V. Badmaev, A. Bekenov, J. Chimeg, A. Entwistle, Y.A. Grachev, B. Lhagvasuren, A. Lushchekina, D. Mallon, E.J. Milner-Gulland, V. Ukrainsky. Oryx 38, 250-251.

"Pravo na zhizn..." [The right to a life...] (2005) E. Kreuzberg-Mukhina. Stepnoi Bulletin 17, 10-13.

"Sostoyznie populyaciy saigaka v Kazakhstane v 2004 godu" [The status of the saiga population in Kazakhstan in 2004] (2005) Iu.A. Grachev, A.B. Bekenov. Stepnoi Bulletin 17, 15-16.

"Mezhdunarodnyye soveschaniya po ohrane dzerena i saigaka" [International meetings on conservation of the Mongolian gazelle and Saiga antelope]. (2005) Kiriluk V., Lushchekina A. Stepnoi Bulletin 17, 17-19.



Articles

Background of Saiga Horn Use in Traditional Chinese Medicine

Aili Kang, WCS China Programme

These horns not only make the saiga become a famous species in TCM, but also lead it into the lists of endangered animals of IUCN and CITES

Saiga horn in TCM

The popular name of saiga horn in Chinese is 'Lin Yan Jiao' and the pharmaceutical name is Cornu Antelopis. It is as famous and valuable as musk, pilose antler and rhino horn, the four most-renowned animal medicine materials in traditional Chinese medicine (TCM thereafter). The text record of using 'Lin Yan Jiao' may trace back to the 'Shengnong Bencao' (Divine Husbandman's Classic of the Materia Medica) 2000 years ago.

In TCM, the properties of saiga horn are identified as salty and cold. From 1990 to 2004, we collected 161 papers on saiga horn research in TCM, among which 63 papers refer to clinic tests. They show that the saiga horn can be used for treatment of 1) high fever, especially caused by virus infections; 2) childhood convulsions due to high fever, 3) epilepsy, 4) some kinds of hypertension due to ascendant liver yang, 5) cerebral hemorrhage or other brain disease, 6) asthma and other tracheitis of children, among other conditions.

According to those papers, more than 30 TCM prescriptions 40 kinds of traditional medicine or patent medicine contain saiga horn. In 'New-Edited Chinese Patent Medicine' (Song and Guo 2002), saiga horn is the main component of 18 kinds of medicines for detoxification, cold treatment and lung disease.

In addition to medicine, people can use horns directly, cut them into powder or slices, and boil them in water. This decoction can either be taken together with other decoctions or separately. In our collection, 30 papers discussed direct use of the horn for illness, esp. for cold or high fire.

Substitutes for saiga horn

In China, there are 6 species in subfamily antilopinae, including the Tibetan antelope (*Pantholops hodgsoni*), Tibetan gazelle (*Procapra picticaudata*), Przewalski's Gazelle (*Procapra przewalskii*), Goitered gazelle (*Gazella subgutturosa*), Mongolian Gazelle (*Procapra gutturosa*) and Saiga antelope (*Saiga tatarica*). All of their horns can be called 'Ling Yang Jiao'. Based on comparison between the 'Ling Yang Jiao'-producing area mentioned in historical references and the historical distribution of the saiga population, Zang (1990) suggested that 'Ling Yang Jiao' referred in TCM may relate to more than one species.

Given that saigas have disappeared from China, but are in high demand for TCM, the State Health Department has, since 1978, asked local institutes to conduct research on horns from Goitered gazelles and Mongolian gazelles as substitutes (reviewed by Xu 2003). The potential substitutes include horns of Mongolian gazelle, Angora goat (*Capra hircus*), Tibetan antelope, Goitered gazelle, sheep (*Ovis aries*) and water buffalo, some of which are also endangered through overhunting. Some researchers even tried to use Angora goat hooves in place of saiga horns. The earliest report on Mongolian gazelles as substitutes was published in 1963 (Qu 1963).

Most past research focused on component analysis and comparison. There is a lack of wide clinical tests on the effectiveness of these substitutes, and little interest in developing medicines from them. TCM practitioners have little knowledge of the endangered status of the wild saiga antelope population. Therefore, the application of substitutes has not yet developed.



*The cut saiga's horns with fragment of the skull.
Photo by Alexander Esipov*

Conservation efforts of the Chinese government

In order to protect TCM resources, the State department of PRC enacted "Regulation for Wild Medicine Resource Protection" in 1987 and listed Saiga antelope as a highest-rank protected species. The 'Law of Wild Animal Protection of PRC' was announced in 1988, in which saiga is also a Class I protected species. In 1987, the State Administration of Traditional Medicine of PRC and State Forestry Administration built a breeding center and launched a reintroduction project (see the Updates section, page 2).

Conservation Challenge

The endangered status of the saiga antelope is a challenge both for wildlife conservation and TCM. No one would like to see 'Ling yang jiao' following rhino horn in disappearing from TCM. Meanwhile, sustainable use of wild resources is an important concept of both conservation and TCM. It is vital for conservationists and TCM scientists and practitioners to enhance communication at this critical period. Cooperation will be helpful in recovering the wild population of saiga antelope in its range area and developing substitutes for use in TCM, reintroduction and improving public awareness in China.

More information from yqiling@online.sh.cn

Articles

Saiga in Turkmenistan: past and present

Jumamurad Saparmuradov

National Institute of Deserts, Plants and Animals of Ministry for Nature Protection, Turkmenistan

In Turkmenistan, Saiga (*Saiga tatarica tatarica*) inhabits the northern and north-western part of the country, mainly around the Kara-Bogaz-Gol bay, in South Ustyurt, and Sarykamish. Nowadays saigas mostly overwinter in Turkmenistan, with migration triggered by weather conditions. During severe winters with thick snow cover the animals migrate southward from Kazakhstan for over-wintering. Thus saigas from the Ustyurt population can be found in Turkmenistan.

In XVII-XIX centuries saigas were spread over the South Ustyurt plateau. At that time the southern border of their habitat ran from the south-eastern part of the Kara-Bogaz-Gol bay to the midstream of the Amudarya river, north of Turkmentabad (earlier Charchzhou). But later, because of habitat changes and population reductions saigas could not be found in Turkmenistan for several decades during the first half of XX century.

During the severe winter of 1946-1947 with thick snow cover, a mass migration of the animals to Turkmenistan was observed. Most of them penetrated into the south-western part of the Karakums, single animals being observed even in the foothills of the West and Central Kopetdag. Starting in the mid-1950s, saiga has more or less regularly penetrated into the north-western part of Turkmenistan during its winter migrations. A small number of saigas reproduce near the Kara-Bogaz-Gol bay and the area adjacent to the Turkmen-Kazakh border.

The size of the over-wintering saiga population in Turkmenistan depends on the total size of the Ustyurt population, as well as weather and forage conditions in the winter period. Some years, the number of saigas wintering in the north-western part of the country reaches 25,000 or more animals. In the winter of 1965-66 more than 40,000 saigas were counted there. In summer 1984, a record-breaking number of saigas, almost 30,000 animals, stayed in Turkmenistan. In the last few years, the saiga population wintering in our country has significantly decreased, as in the rest of its range, and does not exceed 2,000-3,000 animals. Some years they do not migrate to Turkmenistan at all.

Some activities are underway in Turkmenistan in order to protect saiga. As an endangered species, saiga has been included in the Red Data Book, and hunting for this species is prohibited everywhere. Part of its winter habitat is protected by the Kaplankyr State Nature Reserve and its sanctuaries. It is planned to establish an Ustyurt sanctuary near the border with Kazakhstan, which would cover the main saiga habitats, both winter and summer, from the Kara-Bogaz-Gol bay to lake Sarykamish. More information from saparmuradov@mail.ru.



Project round-up



Saiga Conservation in Betpakdala (Kazakhstan)

This project is funded by Frankfurt Zoological Society and implemented by the WWF Central Asian Programme. The project started in summer 2002 with the main goal of stopping the catastrophic decrease in the Betpak-dala saiga population. The objective of the project is conservation and restoration of saiga populations in Kazakhstan with the future possibility of sustainable use. It includes immediate measures to stop poaching in key populations in Kazakhstan, population monitoring, analysis of the seasonal distribution, migration routes etc, as a basis for practical conservation measures. For effective protection of the species and its habitat it is necessary to implement a system of ecological, legal and socio-economic measures.



Saiga in summer. Photo by Yury Grachev

We consider it to be very important to join all the efforts on saiga conservation – so 2 agreements were developed and signed by all the partners. One of the Agreements – NGO multilateral – was between WWF, FZS, Imperial College London and the Republican State Official Enterprise Okhotzooptom of the State Committee of Forestry and Game Management of the Ministry of Agriculture of the RK, Institute of Zoology of the Ministry of Education and Science of Republic of Kazakhstan and the Kazakh National Agrarian University of the ME & S of RK – representing the main national participants in the project. The second Agreement is bilateral – between WWF and the State Committee of Forestry and Game Management of the Ministry of Agriculture of the RK. According to these Agreements we regularly exchange information and try to balance our activities so as to make them complementary, in order to cover gaps in government funding with project funds.

From the very beginning the project included technical support for anti-poaching activities in the areas protecting key seasonal habitats of saiga.

We started with Andasaiskii sanctuary, which had been created long ago in the main wintering site of saiga. Further monitoring has shown that this area has lost its importance, and some saiga concentrations are registered now in other sites.

A detailed survey was conducted in the frame of the project, including a vehicle survey of saiga distribution in Betpakdala during different seasons; questionnaires on saiga observations, anonymous data on poaching, etc (this survey was complementary with the socio-economic study conducted by the Darwin Initiative project).

So, important areas of saiga winter and spring-summer concentrations were identified, and teams of rangers working in these areas received technical support for patrolling. Also we started to develop a system of educational programmes, lectures, work with children and local communities, preparation and publication of leaflets and posters.



Mobile group of rangers. Photo by Victor Ukrainsky

One of the most important tools for saiga conservation is a system of protected areas, which can guarantee population sustainability. An Okhotzooptom team was appointed and funded by the Government of RK to develop proposals for creation of new protected areas in key saiga habitats, and they received some minor complementary support from our project. The practical implementation of these proposals for development of new PAs is one of our main goals. It is quite clear that today's situation, with a tendency to of saiga numbers to increase in Betpakdala, can't be considered the result of our project alone – but only of common efforts of all teams, and principally of the Government of Kazakhstan and its responsible bodies. For further details about this project contact opereladova@wwf.ru.

Project round-up



Using saiga antelope conservation to improve rural livelihoods

This project is funded by DEFRA's Darwin Initiative programme and has just started its third and final year. The main collaborators are Imperial College London, the Institute of Ecology and Evolution, Russian Academy of Sciences, and the Institute of Zoology, Kazakhstan. Our partners are the Centre for the Study and Conservation of Wild Animals of Kalmykia, the Kazakh National Agricultural University, IUCN Antelope Specialist Group and Fauna and Flora International. The project's purpose is to save the critically endangered saiga antelope from extinction and support impoverished rural communities by building a framework integrating saiga conservation and sustainable use of natural resources with communities' needs and aspirations.

We have developed a protocol for monitoring saiga reproduction in birth areas, and a questionnaire survey form for collecting information on livelihoods of people living in the saiga range areas, their attitudes to saigas and their ideas for saiga conservation in the future.

Both of these are available in Russian and English from aline.kuhl@imperial.ac.uk. We hope to disseminate these protocols widely in order to promote consistent monitoring methods throughout the saiga range. We have also carried out extensive public awareness activities at all scales from international to local, including liaising with government and regional administrations. We have collaborated with the Chernye Zemli Biosphere Reserve in Kalmykia, to help train the rangers and improve their equipment and living conditions.

So far, we have carried out social assessments in two villages in Kalmykia and two villages in Betpak-dala. This year we will extend our work to Ustiurt. We are continuing our programme of monitoring calving in Kalmykia and Ustiurt. We expect to publish our results later this year.

For more information, contact e.j.milner-gulland@imperial.ac.uk.



Interview with a family in Tavan Gashun village, Kalmykia.
Photo by Lini Kuhl

Socio-economic survey in the critically endangered Saiga antelope range of Uzbekistan

The project was aimed at understanding the socio-economic causes of the decline of the saiga population in Uzbekistan. It was carried out by the workers of the Institute of Zoology of Uzbek Academy of Sciences in 2004 with the financial support of FFI (Fauna and Flora International). In order to obtain comparative results, we used the methodological approaches developed by the

Darwin Initiative project, in particular, the method of questionnaires aimed at revealing the living standards of the human population and its attitudes to saiga, as well as Participatory Rural Appraisal methods. The survey was conducted for a case study settlement, Jaslyk. We also interviewed individuals in all settlements in the Uzbek part of Ustyurt plateau, including transient workers (road builders, drivers, etc.).

The study revealed the prevalence of the industrial-agrarian type of human activities in the Uzbek part of the Ustyurt Plateau. The majority of the population is involved in servicing gas pipes and railroad. Poaching was revealed to be the main cause of saiga population decline. A high demand for saiga meat and horns, as well as low levels of incomes, are the main causes of poaching. The proximity of the state border stimulates the smuggling of saiga horns and meat in Kazakhstan. The most important settlements in terms of poaching are Jaslyk, Karakalpakiya, Bostan and Kubla-Ustyurt.

The low effect of measures aimed at detection and prevention of poaching, as well as lack of knowledge of local residents about the work of nature protection and management agencies was noted. Zakaznik Saigachiy set up in the northern part of Ustyurt in Karakalpakstan in 1991, fails to perform its mission of saiga protection. None of the interviewed residents had ever heard about this zakaznik.



Traditional use saiga skull as amulet, Jaslyk village, Uzbekistan (left);

Interview with local man in Jaslyk village, Uzbekistan (right).

Photo by Alexander Esipov



Educational work was performed with local residents within the project framework. This included publication of booklets and a meeting with schoolchildren. Besides, on the basis of the results obtained, guidelines were developed on the conservation of saiga in Uzbekistan, which, with the support of the Institute of Zoology of Uzbek Academy of Sciences, were submitted to the State Committee for Nature Protection of the Republic of Uzbekistan. Among priority actions the following were noted: organization of a special service for the protection of saiga, establishment of an intergovernmental Protected Area (Uzbekistan-Kazakhstan) for the conservation of the Ustyurt population of saigas, as well as the signing of an agreement with the Republic of Kazakhstan on measures of saiga conservation. For more information, contact esip@tk.uz

Reproductive Ecology of the Critically Endangered Saiga Antelope

This project is funded by INTAS (www.intas.be), and is coordinated by Imperial College London, with collaborators the Institute of Ecology and Evolution, Russian Academy of Sciences, Institute of Zoology, Kazakhstan, Centre for the Study and Conservation of Wild Animals of Kalmykia, Kazakh National Agricultural University, Institute of Zoology, Uzbekistan Academy of Sciences, and the University of Oslo, Norway. It is just starting the second year of a three year project.



Blood sampling male captive saiga.
Photo by Anna Lushchekina

The aims of the project are to characterise saiga reproductive behaviour and the influence of human disturbance on reproductive success, and to develop a non-invasive, scientifically based programme for monitoring fecundity. We are monitoring the reproductive behaviour and sexual segregation of herds in Ustiurt (Kazakhstan, Uzbekistan) and the Chernye Zemli Biosphere Reserve (Kalmykia, Russian Federation). We are also using the captive herd at CSCWAK to develop a method for detecting pregnancy using hormone concentrations in faeces. This year we are calibrating the test using the captive herd; next year we will use samples from wild animals in the Chernye Zemli Biosphere Reserve to field test it, and compare the results to observations of calf:female ratios. If successful, this could be a major step forward, enabling us to monitor reproductive success without killing or capturing pregnant females, and without the sampling error and bias inherent in counts of calf:female ratios.

The collaboration between the Institutes of Zoology in Kazakhstan and Uzbekistan is generating comparable data for the first time on the status and distribution of the saiga antelope from both sides of the border in Ustiurt. This information will be extremely useful in planning transboundary saiga conservation interventions in the area in the future, because it will give a clearer picture of where saigas are at different times of the year. For further details about this project contact e.j.milner-gulland@imperial.ac.uk.