



Text & Photos JEAN-FRANCOIS LAGROT

Survival of the Saiga

The **saiga antelope**, one of the world's most endangered mammals, may soon disappear because there are not enough males to go round.

The remains of an aged male saiga that may have been killed by wolves in the steppes of Kalmykia

During the birth season in May, mothers leave their young early in the morning. The newborns gather in huge nurseries in the steppes to hide and wait for their mothers to return from grazing.



Small And Stout

Hardly taller than a goat, the saiga marks its way with small heart-shaped footprints and a thick cloud of dust. Its small, stout body is supported by spindly legs. The saiga's most notable feature is its inflatable, humped nose which closely resembles that of tapirs. Its nose filters out dust during summer migrations across Central Asia's steppes and warms the air that enters the lungs during icy winters. Its bulging face has a wide range of mobility and a unique internal structure, with convoluted bones, and many hairs and mucous-secreting glands. Only male saigas have horns which are about 20 to 25cm long.

Another unique characteristic of the nomadic saiga is its gait – it ambles like a camel and giraffe, and walks with its head very close to the ground. Sometimes, it jumps up suddenly – a single spring – in the middle of a herd. This sudden action probably allows it to check if there any predators around – mainly wolves commonly found in the steppes.

Known for its high fecundity, female saigas begin breeding from the age of 1 and will generally give birth to twins, sometimes triplets.

Dramatic Decline

At the beginning of the 20th century, the saiga almost disappeared because of intensive hunting and a few harsh winters. It was only in the 1930s that the saiga population started growing again, under the protection of the Soviet authorities. By 1950, the recovery allowed commercial hunting to develop in Kazakhstan and Kalmykia. The saiga population was maintained at around a million, thanks to the efforts of the Soviet forest department and a reproduction pattern that allowed the species to grow by up to 60 percent over one year.

Between 1950 and 1990, the managed commercial hunting played an important role in Kazakhstan's economy. More than 5.5 million saigas were slaughtered for their meat over that period without upsetting the natural population growth. It was an early example of what sustainable use of a natural resource could be, and saiga was then a cheap source of meat and leather.

However, the fall of the Soviet Union caused a sudden disorganisation of the commercial hunting system. The sustainable wild population turned into wild poaching. More saigas were slaughtered by poachers than officially allowed. Today, official hunting has been suspended but poaching still continues as it is a means of survival in the countryside of Kalmykia and Kazakhstan where unemployment is severe.

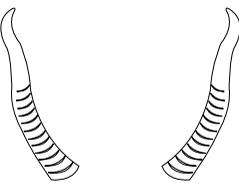
As poaching of saigas is still rampant, rangers are sometimes heavily armed to fight poachers who usually slaughter saigas by the dozens.



It is estimated that half a million saigas were killed between 1990 and 1992 – representing a third of its total population – to produce large quantities of horn powder for export to China.



This young saiga male with pink horns is entering its second year. There used to be one male for 12 to 15 females. Now, there is only one male for 100 females.



In the early 1990s, more than a million saiga antelope (*saiga tatarica*) roamed the steppes of Russia and Kazakhstan. Today, the saiga is on the verge of extinction with less than 50,000 remaining, mostly females as the males have been shot for their horns, a valuable item in Traditional Chinese Medicine (TCM). The collapse of the Soviet Union in 1991 and the end of collective farming led rural communities in Asia to hunt the saiga for its meat, further adding to its declining numbers. In the early 1990s, groups such as WWF also actively encouraged the saiga hunt, promoting its horn as an alternative to the horn of the endangered rhino.

As 95 percent of the saiga population has vanished, the species has been put on the IUCN (The International Union for the Conservation of Nature and Natural Resources) Red List of Threatened Species. The international scientific community has stepped up efforts to provide a sustainable future for the saiga.

Apart from Russia's southern republic of Kalmykia on the western side of the Volga River and the steppes along the Aral Sea in Kazakhstan, a small population (about 750 in 2004) of another sub-species of saiga (*saiga tatarica mongolica*) is found in Mongolia. The Kalmyks, the only inhabitants of Europe whose national religion is Buddhism, consider the saiga to be a sacred animal.

The enclosure is part of a new breeding centre. Saigas born in captivity are released in the steppes. In the meantime, researchers can study saiga reproduction behaviour.



Demand For Horns

Poachers, often youngsters, would ride on motorcycles to chase the saigas across the steppe until the animals are exhausted. They are then slaughtered, one by one. Once disregarded by poachers, saiga meat is now sold illegally at villages in Kalmykia for about US\$1 per kilo. But it is the horns that are in great demand, fueled by China's lax border control. The trafficking of horn powder has accelerated over the years and 1kg of the prized item now costs US\$100. Four pairs of horns are needed to produce 1kg of powder. TCM uses large quantities of the powder to treat flu and hypertension, and the horns are said to have similar medicinal properties as the African pachyderm.

It is estimated that half a million saigas were killed between 1990 and 1992 – representing a third of its total population – to produce large quantities of powder for export to China. Okhotzooptom, Kazakhstan's hunting organisation, revealed that 44 tonnes of saiga horns were illegally exported in 1994 to Singapore, China, Korea, Japan and Europe.

Even more alarming is that the male population was almost wiped out, resulting in a low fertility rate among females and a dramatic plunge in the reproduction rate. Dr Eleanor Milner-Gulland, conservation scientist at Imperial College London and a leading expert on the species, reported in *Nature* magazine, that the saiga reproduction behaviour is greatly affected by poaching. Because of their horns, male saigas are the main victims. Explains Dr Milner-Gulland: "An adult male usually looks after a harem of 12 to 30 females. But during the past mating seasons, we observed, on several occasions, that one male was surrounded by a large number of females. Dominant ones demonstrated aggressive behaviour towards the younger ones, preventing them from mating and therefore, producing a significant drop in fertility." In addition, there are more young male saigas as the older ones with longer horns are preferred by poachers.

Conservation Efforts

On the field, research and conservation programmes have been developing these past few years. In Kalmykia, the Chernye Zemli Biosphere Reserve hosts today's largest saiga population. A Captive Breeding Centre has been built nearby and the ongoing research should result in a better knowledge of the reproductive biology of the species. Says Dr Yuri Arylov, director of the Centre: "We are starting to have good expertise in captive breeding. In a few years, we might be able to reintroduce captive bred animals back into the steppe."

The first saigas born at the Centre were successfully reintroduced into the wild in 2005 wearing radio collars. "They were all able to find their way into a wild herd. Only one male was killed by wolves. But only after he had rounded a herd of 17 females," says Dr Arylov proudly. A visitors centre has been built next to the Breeding Centre and was recently inaugurated by Kalmykia's officials. The aim of the visitors centre is to raise awareness among school children and the local population, and to make the saiga a flagship for the community.

In the surrounding villages, various developmental projects try to improve the living standards of the villagers and turn them away from poaching. Cows are loaned to them to start cattle ranches. These efforts were made possible by increasing international cooperation.



Young saigas are an easy prey for eagles and wolves

Studying Saigas

Through the Darwin Initiative, the British Government has set aside a sum of money to fund further research about the saiga. Aline Kühl, a PhD student from Imperial College London, regularly travels to Kazakhstan and Kalmykia to study the saigas, working under the direction of famous Russian scientist Anna Lushchekina. Kühl studies the saiga during the most important period for the survival of the species – mating season – in order to get close to them. Mating occurs during winter and in the blizzard, small groups of saigas start forming.

Daylight is short during winter and the saigas are shyer than ever. Despite numerous attempts, mating has never been directly observed. Hidden inside her camouflage tent and lying under thick blankets, Kühl spent many days behind her binoculars, trying to sneak on mating couples but with no success. Experts concluded that saigas probably mate at night, away from prying eyes.

Over several years in May, during spring, Kühl was able to approach the herds, and touch and count the newborns that were not yet strong enough to run away. The babies are hidden in the grass for a few hours

Everyday during birth season, Aline Kühl writes down her observations on newborn behaviour. She is based at the headquarters camp in the middle of Chernye Zemli (Black Soil) Biosphere Reserve in Kalmykia.



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Kühl weighing a newborn saiga. Together with her Russian colleagues, she has been studying the huge saiga gathering during birth time. She is now studying the socio-economic aspect of saiga conservation.

In Chernye Zemli Biosphere Reserve, rangers patrol the vast steppes to protect saiga herds. When the saigas start their migration, protecting them becomes a challenge.

by their mothers when they away grazing. This is the time when eagles and wolves can feed very easily in the steppes of Kalmykia. It is also a period of intensive poaching. Fortunately, the rangers of the reserve now have new vehicles and the latest communication tools to help them lead efficient anti-poaching operations.

Thousands of kilometres away, on the other side of the Volga River, the saigas roam the Asian wilderness in Kazakhstan, their second homeland. On the shores of the Aral Sea, Dr Yuri Grachev, a world specialist on the species, leads an expedition to the heart of the former Soviet republic. Saigas spend a great part of the year mainly in the western areas of the country. Dr Grachev tracks the animals close to the Caspian Sea and the city of Astrakhan, amidst the powerful winds of the short grass steppe. The largest saiga population used to live on the Ustyurt Plateau that stretches all the way to Uzbekistan. According to Dr Grachev, who did a count of the saigas in spring, there are several thousands saigas living on the Plateau as they had migrated there from the winter territories of Uzbekistan to give birth.



Denis is a young Kalmykian scientist. The Kalmykia people are the only Buddhist community in Europe.



Stopping Poachers

In the villages along the migration path, it is common to find heaps of saiga bones whitened by the sun and skulls without horns. The great nurseries with tens of thousands of females that were specific to the species no longer exist. Saigas are now scattered in small groups to escape poachers who will even cross borders to hunt them. Four Uzbeks were arrested in April this year by Kazakh guards while they were hunting about 20km away from the border. The poachers were carrying a dozen carcasses, plenty of horns and hunting guns in their vehicle.

Fortunately, times are changing. These days, more poachers are arrested, and more weapons and animal parts confiscated. The driver of a UAZ 469 vehicle carrying 13 freshly-poached saigas and guns, was interpellated by local authorities and may be fined US\$19,000. The Kazakh Government recently equipped patrollers with the necessary means to control illegal hunting. And it has already produced results – the saiga population is growing again on the Plateau.

And there are now more reasons to believe that the saiga repopulation can really happen. For the first time in history, the four different countries which host saigas along their migration route met from 23 – 26 September this year in Almaty, Kazakhstan, to discuss a global strategy to save the animals. Kalmykia, Kazakhstan, Uzbekistan and Turkmenistan have decided to coordinate their actions to eradicate poaching and exchange useful intelligence information to save the species.

The Chinese are also now convinced that a strong and healthy wild population of saiga is essential even though their interest lies mainly in the perspective of their traditional medical practices. Today, the trend is to research for new artificial or natural ingredients. For example, goat horn appears to have similar medicinal properties and could be the solution to save the wild saiga. Chinese specialists seem to be ready to agree on limiting the use of saiga horns in the most severe cases. Another idea that is currently being explored to decrease the pressure on the wild saiga population is to develop captive breeding centres within China to satisfy the huge TCM market.



There's Hope

So there are a few reasons to hope that the saigas can eventually be given a break in their marathon for life even amidst a looming threat to the animals' future – the Ustyurt Plateau, part of the saigas' winter migration route, is known to hold great quantities of natural gas and extraction operations may start very soon.

It may still be a long while before the thick dust clouds appear again over the steppes, indicating the arrival of a great number of saigas. But there's no harm hoping. With a few mild winters and a decrease in poaching action, huge herds may be able to form again, cross rivers and gallop over the hills as they used to do. Prey birds would circle the sky again and wolves would also appear to grab weak saigas or newborns as they have always done in the past. AGEO

HOW TO HELP
www.iccs.org.uk/SaigaAlliance.htm



Jean-Francois Lagrot is a French veterinarian and photojournalist who focuses on wildlife conservation and environmental issues. He has been travelling with his wife and three children to more than 80 countries in the past 20 years, in search of endangered, rare, little known and funny animals. The saigas are among his favourite creatures, which also include the tree kangaroo and takin. Earlier this year, he and his wife led a rhino survey in northern Cameroon, Africa, and discovered that the Western Black Rhino could soon face extinction. Lagrot, who is fascinated by maps and comes from a family of scientists, also produces documentaries for European TV channels.



Most saigas give birth every year to twins and often to triplets. A single offspring is unusual.