Takhi-Post

ITG INTERNATIONAL TAKHI-GROUP

Nr. 10 | November 2019

Feeling the wild

Ranger Oinbayar Lkhachin is testing it in a khulan mock-up once designed to get close to this extremely shy species.

How would it feel if you were a wild animal in the Gobi, with only a skin between you and the desert?

Foto: ®Cyril Ruoso.

Protect the primordial Wild Horse and its habitat.

Dear friends of the Wild Horse

How would it be if you were a wild animal? Say, a primordial Wild Horse or a Wild Ass in the Mongolian Gobi? With only a skin between you and the vast, treeless desert? You'd be at home. Perfectly adapted to almost anything that could come your way. If only there weren't man! You wouldn't be safe from him anywhere. Neither would be your habitat.

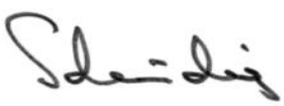
Snug in our padding of culture and technique, it is difficult for us to comprehend just how much we encroach on other life forms. Yet the collapse of their numbers, continuing since the Fifties of the 20th century and ever accelerating, mirroring both the exploding numbers of humans and their ever deeper invasion of nature, speaks for itself. The fact that by now it even affects insects, a foundation of the networks of life, is a really sharp alarm signal.

I am a conservationist not only because of this invasion, but also because to me, wilderness and its life forms constitute a value per se. They are at least as precious and irreplaceable as the greatest cultural or technical achievements of mankind. I would like to preserve them for their own sake. Luckily, today many more people think similarly. But consent alone is not enough. We have to act decisively to protect the last wild spots on the planet from ourselves. And this requires concrete activities, into which committed persons invest much time and energy.

Particularly vulnerable are species that need to roam widely – notably the mega-fauna of Central Asia's last steppes. Nowadays almost all wild forms of equids – Wild Asses, Wild Horses and zebras – are highly endangered. Yet these charismatic species can motivate us to preserve the steppes of Central Asia with their highly specialized life forms as a whole.

That's why we from ITG, together with the Mongolian Republic, have reintroduced the primordial Wild Horse (Takhi) into the Dzungarian Gobi after it was wiped out in the wild. With this exemplary program we also ensure that the entire biosphere reserve Great Gobi B – whose area has been doubled this year! – remains intact nature, even though it is also being used by nomadic herders. Incidentally, in this way we also help preserve their centuries-old lifestyle. Here, wild horses, wild asses, nomads and many other steppe specialists shall continue to feel at home in the future.

It's on an honorary basis that ITG engages. However, of course we do need funds for our initiative, and we are grateful to all who have been supporting it with donations. As our commitment continues, here is another opportunity to help protect a unique piece of precious nature. You'll seize it, won't you?



Dr. Reinhard Schnidrig, President, ITG

This year the Mongolian Parliament decided to double the area of the Great Gobi B Strictly Protected Area to roughly 18'000 km^2. Through this farsighted rule, the park not only offers more future habitat for takhi, but is also amended by key winter ranges of khulan and mountain habitats for Argali wild sheep, Siberian Ibex and snow leopards.

Foto: ® Altansukh Nanjid

"We have to act decisively to protect the last wild spots on the planet from ourselves.""

This year's focal points in review

In the current year a focal activity was on maintenance and upgrading of the park headquarters through urgently needed insulation, rebuilding and renovation work. The most essential aspect was to make utilizable for both rangers and visitors the ground water which had been tapped in 2016 in the proximity of the camp. The required infrastructural adaptations were being synergetically used for upgrading the building so that it becomes better useable in winter and generally more attractive for rangers and touristic or professional visits. These activities consumed exceptionally 46% of the annual budget; in exchange, the preparation of the large mammal census 2020 and the start of some research projects were postponed to next year.
Other key cost drivers were, as usual, gasoline for patrol vehicles, salaries in Mongolia and research funding.

This has been achieved in 2019

The generous support of the Vontobel and Temperatio Foundations, the Jean-Pierre and Sonja Siegfried-Foundation and many private donors enabled us this year to achieve:

- Park extension from about 9'000km² to 18'000km²
- Comprehensive renovation of the park buildings
- Research on optimizing the joint pasture use by wildlife and livestock
- Data collection on the genetic screening of takhi living in the protected area
- Production of an educational book for 8-12 years-old children on the topics of conservation and takhi protection

The park headquarters await you!

Surely the national park house of the Great Gobi B Strictly Protected Area was erected miles from any settlement, out there in the vastness of the Dzungarian Gobi. However, from this year onward it sports modest but essential comfort after a comprehensive upgrade. This is what has been achieved in the current year:

- Frost-proof access to running water from the new well located 500 m away, and installation of a frost-proof sewage system
- Thermal lining of the entire building through insulation, replacement of windows and doors and installation of stoves and a sanitary unit; the previously only partially heated building is now wholly useable in winter
- Installation of a solar system with 10 KW capacity. Excess energy is stored in batteries.
- Total renovation, financed by a grant from the Jean-Pierre and Sonja Siegfried Foundation, of the ranger outposts in the oases Khonin Us and Takhi Us; renewal of exterior walls, roof and interior fitting and repair of doors and windows

The extensive renovation of the park building is a major relief for both rangers and visitors and an excellent investment in the future – not least with regards to the doubling of the protected area, ruled this year, which is expected to lead to additional visits to the headquarters. We thank all donors, benefactors and co-workers who have contributed to this important upgrade. Why don't you test the fancy novelties yourselves? At present there is still capacity for intrepid guests who wish to experience the Gobi in winter. Maybe as a precautionary measure you may still want to bring a cap, a pair of winter gloves and warm boots…

Effectively supervising the Great Gobi B nature reserve requires not only vehicles, gasoline, field glasses and uniforms, but first of all rangers who execute their job with pleasure and enthusiasm. Facilitating their tough life in the desert a little is therefore not only welcome, but also squarely in the interest of the matter. This year the previously only partially heated main building of the park was thermally insulated. Soon, Skype weekly teleconferences with ITG can be held without a cap and anorak, as the building will now become wholly useable in winter. The old panes are replaced by modern insulation windows. The new well house, financed by the Bayan-zurkh Rotary Club, was connected to the park house through a 500 m/ 1500 ft long underground, frost-proof water pipe. It must not freeze even in minus 40° C/F. The sewage system, too (shown here during installation) must be frost-proof. Behind the dredger the annex for the accumulator is visible.

The solar power system was replaced with a significantly more powerful system. The Mongolian company Erchim Electric installed a system with a 10 KW capacity, which powers the water pump and feeds 220V into the headquarters as well as two ranger yurts. Excess energy is stored in batteries. If these are drained, a generator takes over.

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Renovation of oases outposts

With a grant from the Jean-Pierre and Sonja Siegfried Foundation, the outposts in the oases Khonin Us and Takhi Us were also completely overhauled, freshly painted and their interior fitted cozily. Should you fancy an adventure sleepover, the proud rangers will happily take reservations!

Gain and share knowledge

Photo Dalaitseren Sukhbaatar

With financial support from ITG, the doctoral candidate Lena Michler is researching how the joint use of pastures by wildlife and livestock can be optimized. This study shall show how an overuse of the pastures in the protected area through the herds of passing nomads can be avoided. The results will be of high importance for both the nomads and the management of the reserve. Rather surprising is the positive reaction of those herders whose pastures will now be situated inside the reserve, as a result of the park extension ruled this year. Although this regulates their use, it also prevents mining of ore and competition from newly arriving herder families. In future, all herders would like to be involved in the management of the protected area. As part of her study Lena Michler also organized a workshop convening national and international participants to provide data on the carrying capacity of turf grazed by both small livestock herds and wildlife.

Besides protecting the ecosystem, research and knowledge-sharing with the locals are key interests of ITG. In the current year ITG submitted and received a grant from the Swiss Development Corporation (SDC) for producing an educational book for 8 to 12-years old children which is designed to convey knowledge about both the takhi and the meaning of nature conservation. The book will be distributed for free to schools and libraries. To impart the value of wilderness in a very thinly populated country one needs first to share relevant fundamentals. Here, the Swiss teacher Uli Rutz is enchanting his disciples with his ukulele during his community service.

On behalf of and funded by ITG, research assistant Dalaitseren Sukhbaatar collects dung samples from wild horses to allow for genetic screening and determination of hormonal status. This requires allocating each probe to an unequivocally identified takhi – a great challenge in a highly mobile and shy species such as the Wild Horse. The evaluation under the supervision of the reputed ITG research director Petra Kaczensky (University of Veterinary Medicine, Vienna and The Norwegian Institute for Nature Research, Trondheim) will enhance our understanding of genetic diversity of takhi. All free-roaming takhi are descendants of only 13 founder animals which had survived in zoos. In the wild the species had been completely wiped out in the 60s of the 20th century.

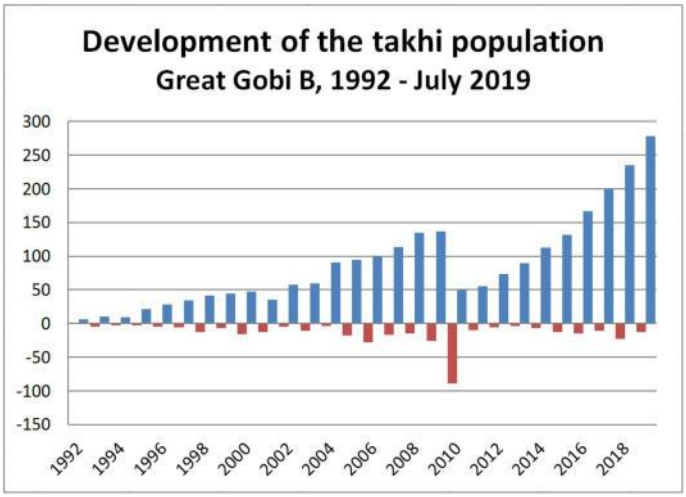
Besides protecting the ecosystem, research and knowledge-sharing with the locals are key interests of ITG.

Photo: © Cyril Ruoso

Learning to be wild:
News from the takhi reintroduction

For 26 years the Mongolian Republic and ITG have been managing the reintroduction of Przewalski horses (mongolian: „takhi") in the Great Gobi Strictly Protected Area in Southwestern Mongolia. It was anything but guaranteed that this project would not fail. After all, the breeding population of this species, which had been completely wiped out in the wild, was descending from only 13 founder animals. And their offspring not only had no experience whatsoever outside a zoo fence, but also were set free in an extreme environment that offers no pardon for any mistake. The exemplary success of the reintroduction shows that even species extinct in the wild may be reintroduced. However, this demands the reversibility of the reasons for their disappearance – e.g. loss of habitat or direct persecution.

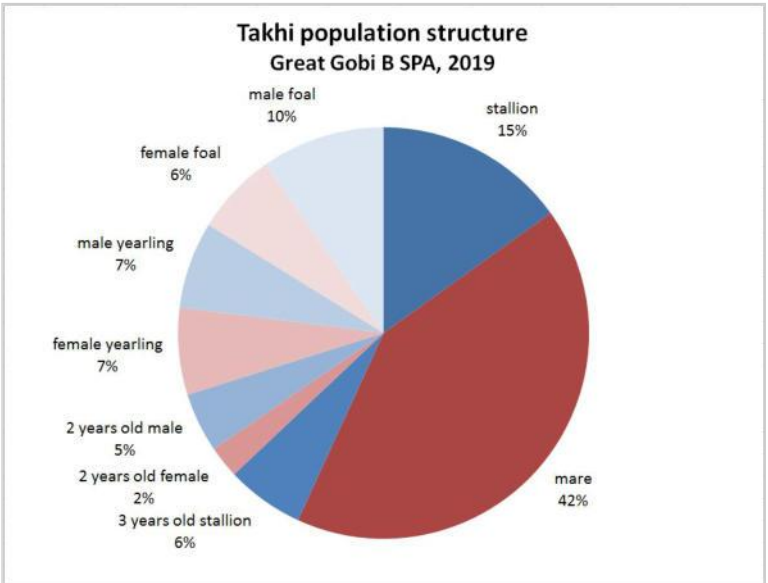
In Mongolia the fact that the local population has been welcoming the reintroduction was and remains a central success factor for the return of a demanding species of the megafauna. Nevertheless, the challenges were enormous. Instinct alone (the genetically programmed ability to react to environmental processes) does not suffice in socially sophisticated animals; their survival also depends on learned know-how and behavior. However, the entire realm of relevant experience is lost when a species is exterminated. This can make a reintroduction almost hopeless. Indeed, initially the reintroduced takhi were behaving like zoo animals; they had no clue about the wild Gobi and had to be fed with hay during winter. The lack of long-term experiences continues to be problematic. But the more the fragile population grows, the more natural their social structure, behavior and competition for resources become, and this will increase the dynamics of spatial use. Whilst the takhi initially hardly moved away from their release sites, in fall 2015 two groups for the first time found their way from the oasis Khonin Us in the east to the oasis Takhi us, 70 km distant in the west. Four years later at least 9% of the wild horses (two harems around the stallions Mogoi and Khaan) are frequenting both water holes and thereby memorize new paths and resources. Two takhi even wandered off eastbound and left the reserve completely. Their migration is being documented by the rangers inasmuch as possible, for such events are very valuable to recognize important corridors for the future connectivity of protected areas.



At 278 individuals (as per end July) the numbers of wild horses this year reached a new record for the fourth time in sequence. Since the catastrophic winter 2009/2010 the net annual change in numbers totaled about 20% each year. If this trend were to continue, the population would double within the next 3 years and crack the one-thousand mark in 2025. However, it continues to be threatened by extremely harsh winters (dzud), infectious diseases and hybridization with domestic horses.

Obituary
Dr. Lkhagvasuren Badamjav (1959-2019)

On August 1st this year Dr. Lkhagvasuren Badamjav, Assistant Professor and Leading Scientist of the Department for Mammal Ecology of the Institute fpr General and Experimental Biology of the Mongolian Academy of Sciences, suddenly and unexpectedly died. He was a member of the scientific council of the international Conference of Migrating Species (CMS) as well as of the International Takhi Group's (ITG) research council. One of the most eminent specialists for native large mammals, he conducted research on Mongolian Gazelle, Saiga antelope, Khulan (Asiatic wild ass) and Przewalski horse (takhi) and engaged for the conservation of these species. He was the first to point out the impairment of mammal migration in Mongolia through fences and other infrastructure. One of his goals was to make the Transmongolian Railway passable to steppe animals. Indeed he managed in negotiations lasting more than 3 years to have the fence lining the railway adapted or removed in defined places with financial support from Switzerland, so that the migration of Khulan through the Gobi and the eastern steppe could resume. For this invaluable achievement alone he deserves our deep respect and gratitude. ITG mourns Dr. Lkhagvasuren and offers our condolences to his wife, his children and relatives. We will always honor the memory of this great supporter of conservation in Mongolia. His oldest son has announced that he plans to step into his father's footsteps and to continue his engagement for preserving the Mongolian nature and fauna.



In 2015 two-thirds of the takhi in the reserve were female because fewer stallions than mares had been airlifted. Today already 42% of the wild horses are male, and the sex ratio will be balanced in future. This will lead to an increase in the number of harems and hence to more competition for the best pastures in this scant region, also used by khulan (Asiatic Wild Ass) and the herds of nomads.

The exemplary success of the reintroduction shows that even species extinct in the wild may be reintroduced.

Tzuut (right), being fed up with his existence as a solitary bachelor in the Takhi Us oasis, conquered a mare! The local chief (left), who was temporarily confined to a wolf-proof acclimatization fence because of the high losses of foals in this region, was not at all amused about the brazen challenge from Tzuut. However, the youngster must have impressed one of his ladies.

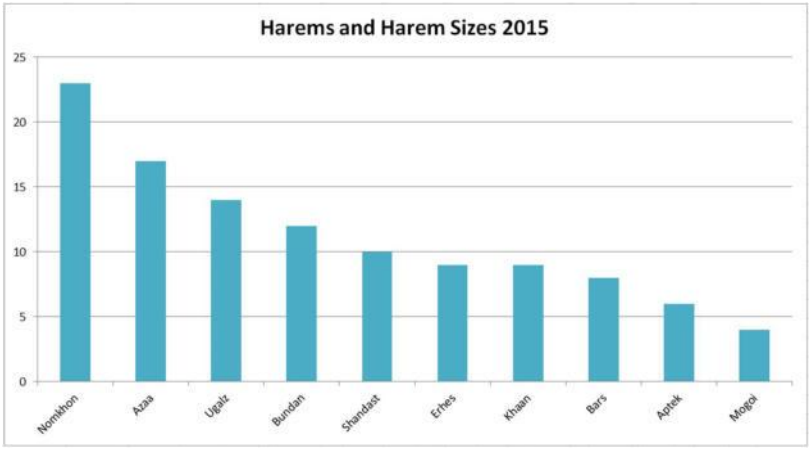
Photo © Cyril Ruoso

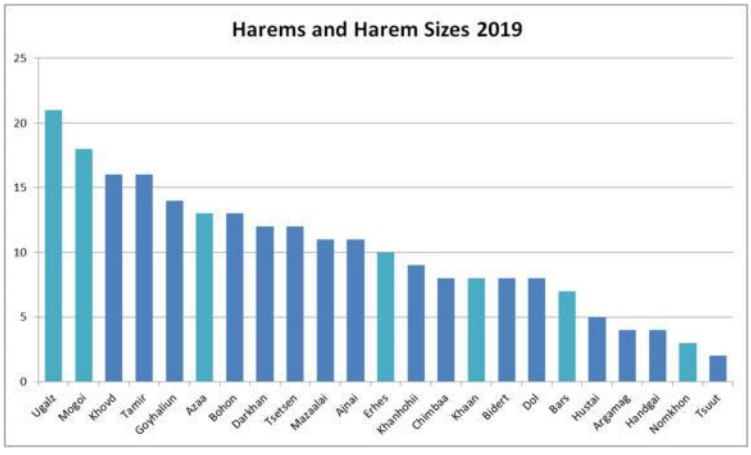
Harem dynamics: Tzuut wins a mare's heart

Last year the harem dynamics increased under the pressure of the bachelors which had been expelled from their groups by the harem stallions. This year 35 young stallions were grazing in changing groups in the region of Khonin Us an 3 near Takhi Us. Yet 15 others conquered their own group by stealing some or all mares from established stallions. One of them is Tzuut, only 4 years old, whose changeful fate loyal readers of the Takhi Post already know from his time as orphaned yearling.

Since the sex ratio will approach a balance in the longer term, increasing pressure from bachelors on established harems must be expected, and consequently a further increase in the number of harems.

Chart below: Harem dynamics in the Great Gobi B Strictly Protected Area. In only 4 years the number of harems has more than doubled. The median size remained roughly constant (9.5 vs. 11 horses per harem). Of the 10 harem stallions of 2015, 7 continue to command a harem. However, Nomkhon, who previously had by far the largest harem, was relegated to the penultimate rank. Only the newcomer Tzuut has an even smaller harem with a single mare. Conversely, Mogoi, previously with the smallest harem, was able to acquire 14 additional wild horses and now controls the second-largest group.





In only 4 years the number of harems has more than doubled.

Species portrait: Thick-tailed Pygmy Jerboa


Photo: © Klaus Rudloff, Berlin[2]

It is incredibly tiny and fragile and seems to consist of only a head with glossy black beady eyes and a strange kangaroo-type tail. With only 6 to 14 g of bodyweight it is one of the smallest mammals[1]. Just how does this mite manage the stunt of holding its ground in the hostile Gobi climate? No worries: it sports a few fancy tricks.

The Thick-tailed Pygmy Jerboa (*Salpingotus crassicauda*) is a rodent from the jerboa family. Yet instead of nibbling on brittle plants of the sandy grass and sage-brush deserts of its home, it eats energy-rich seeds topped by 15-30% of protein in the shape of juicy insects, especially grasshoppers. This way it gins enough energy to store the surplus in fat pads, particularly in the thickened base of its tail. These carry the tiny rodent through the long winter half year, spent in a 6-8 months-long hibernation starting in September. During this time its body temperature drops to 2-3°C (!), and it loses more than half its bodyweight.

In the summer half year the Thick-tailed Pygmy Jerboa escapes the Gobi heat by appearing almost only at night. By day it rests 10-30 cm below ground in a nest chamber with several entrances, which it closes with sand plugs. This way the burrow does not only stay nicely cool – it is also practically invisible from the outside. Each individual lives by itself: it does not fancy groups.

Living on loose sand, clay and fine-grained gravel is a handicap for a small rodent with many predators which needs to flee often. Yet the well-camouflaged little animal is specialized on such soils. It nimbly hops along on two oversized hind feet whose sole is massively enlarged by long hairs. This enables it to stride across its 0.5 ha territory at a speed of about 2 m/s. Moreover, constant erratic changes of direction require fast reaction from any chaser. In contrast to other jerboas, this mite does not even dig shelter burrows. When things get tight, it hides under brush.


Photo: © Klaus Rudloff, Berlin[2]

During reproduction im spring the territory size of males triples to almost 2 ha. They defend their territories aggressively against competitors. Twice a year, females deliver 2-4 offspring which are born after 3-4 weeks of gestation and mature after 9-11 months. When they leave the burrow for the first time, the young form a little train behind their mother; and they return to the shelter in the same sequence. This behaviour disappears after a few days.

As a jerboa, you live dangerously. You are a favourite meal of many middle-sized predators, raptors, owls, snakes and – bedouins. The 35 known species of this family (Dipodidae) live in steppes, semi-deserts and deserts of North Africa, Arabia, Asia Minor, central and east Asia. They form 4 subfamilies, among which the Pygmy Jerboas with 7 species.

Most Jerboas are omnivorous and solitary. They share many ecological traits, but also show impressive specialisations. Some species are persevering sprinters, reaching 30-50 km/h (!), covering 5-10 km per night and sporting home ranges exceeding 25 ha. Others eat mainly insects. The Siberian Jerboa is able to catch moths from the air through precise jumps. Jerboas play important roles in many ecosystems – among which the carrying of pathogens, including those of the plague.

Some of their species are widespread and frequent enough to be considered a pest. Others appear on the IUCN's Red List and occur in very few places world-wide. Habitat loss, direct persecution, traffic and droughts increasingly affect the jerboas. That's a reason for concern. For though it's the large species of animals and plants that impress the large mammal man the most, it's the small and very small that make up for the lion's share of biomass and that have the greatest influence on ecosystems through the way they interact. It is such species, too, for which the Great Gobi B SPA provides protection.

[1] *Michaux JR & Shenbrot GI in Handbook of the Mammals of the World (2017): Vol. 7; 61-84*
[2] *Photo source: kdrudloff(at)web.de, http://www.biolib.cz*

It's the small species that have the greatest influence on ecosystems.

What we need your help for

Conservation work is not always spectacular. However, routine jobs in the background make a project successful. Our examples show how much you can achieve with your contribution. Each donation is valuable and most welcome.

You pay a ranger his daily salary and for the use of his material.

You help to inform persons affected by the park extension decided by parliament in 2019.

You contribute to the maintenance and repair of heavily strained patrol vehicles.

You help finance research on the management of water holes in the reserve.

You enable the ranger patrols for one month.

You help to finance the ranger training for the large mammals census in 2020.

Join the ‚Friends of the Wild Horse'!
Membership for private persons **CHF/USD 50.-**
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ITG works in an honorary capacity.
Each donation is used directly for protecting the primordial Wild Horse.

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