Breitenmoser U. 2002. Feasibility study on cheetah re-introduction in Turkmenistan. Cat News:13-15.

Keywords: 4TM/Acinonyx jubatus/African cheetah/Asiatic cheetah/cheetah/conservation/extinction/ herbivores/management/population/prey/protection/re-introduction/recovery/ release/subspecies

Abstract: The Asiatic cheetah *(Acinonyx jubatus)* persisted in Turkmenistan until the late 1970s, but is considered to be extinct today. Turkmenistan, as a neighbour of Iran with the last Asiatic cheetahs, can play an important role in the conservation of the Asiatic cheetah. The prey base for an re-introduction is totally insufficient and Turkmenistan should give high priority to the protection, the recovery, and the proper management of the herbivore populations. Besides, the release of African cheetahs would be problematic because they are listed as a different subspecies. Any decision regarding a cheetah reintroduction programme in Turkmenistan is premature at the moment.

Feasibility Study on Re-Introduction of Cheetah in Turkmenistan

*by Urs Breitenmoser**

Introduction

The Asiatic cheetah (*Acinonyx jubatus venaticus*) persisted in Turkmenistan until the late 1970s. Atamuradov *et al.* (1999) and Lukarevsky (2001) mention some unconfirmed reports from the 1980s and even in the 1990s for the Ustjurt Plateau in the north of the country, but all authors consider the cheetah to be extinct today.

Soon after the cheetah finally vanished, wildlife biologists and nature conservationists started to discuss possible reintroduction (e.g. Borodin 1984, Atamuradov *et al*. 1999; see also contributions in Cat News 8 and 9, 1988). Turkmenistan was the last of the former Soviet republics where the cheetah existed, and it was especially important for the Asiatic cheetah because the country linked the cheetah habitat in the Central Asian steppe around Lake Aral with the cheetah population in Iran.

Viktor Lukarevsky, a renowned cat specialist and a long-term resident in Turkmenistan, recently revived the initiative in favour of the cheetah in Turkmenistan. He submitted a proposal for a feasibility study to WWF International and to the IUCN Cat Specialist Group. A central point of the proposal was an expedition to the Ustjurt Plateau in the triangle of Turkmenistan, Kazakhstan and Uzbekistan to assess the habitat quality and the prey base for the possible return of the cheetah. I was invited to take part in this expedition, which took place in May 2002. I will briefly summarise the findings, my personal impression, and the recommendations of the Cat Specialist Group regarding the reintroduction of the cheetah in Turkmenistan.

The Areas Visited

We first visited the south-eastern part of Turkmenistan, a steppe area bordering Iran and Afghanistan. This region has two large protected areas, the Maena Chaacha and the Batchys, and was generally described as an area rich in wildlife.

Maena Chaacha reserve (36°47'N/ 60°34'E, area 1 in Fig. 1) is not a fully protected area. It is still used for sheep husbandry, but the stock has declined from 300,000 to 45,000 over the past 10 years. This relieves the area from overgrazing and increases the capacity for wild grazers. A kulan wild ass (*Equus hemionus onager*) reintroduction project is ongoing. Cheetahs were still observed until the mid-1950s, when the border fence to Iran was built. This fence, situated several kilometres inside Turkmenistan, still divides the Maena Chaacha steppe and prevents wildlife migration between the flat lands in Turkmenistan and the foothills of the Kopetdag in Iran. Gazelles (*Gazella subgutturosa*), which would likely be the main prey of cheetah, exist nowadays only outside the fence. The reason for the absence of the gazelle in the main part of Maena Chaacha is said to be poaching, but also the fact that they are cut off from the hills, which are seasonally important when the flats dry out.

Batchys reserve (35°53'N/61°46'E, area 2 in Fig. 1) is a *zapovednik*, a fully protected area with restricted access. The originally huge reserve is now reduced to an area of 877 km^2, but the surroundings of Batchys includes also two *zakazniks* (partly protected areas) and steppe with extensive agricultural use, which can be incorporated into a conservation strategy. The reserve was world-famous for its large populations of kulan, gazelle and urial (*Ovis orientalis arkal*). This former wealth is gone, reduced through poaching by locals and the military, but also trophy hunting by foreign hunters. Atamuradov *et al*. (1999) still reported a population of 7,300 kulan, when, in fact, the population was already reduced to 300-400 animals. Today, the Ministry of Nature Protection, in collaboration with WWF and other NGOs, is making big efforts to regain control and the populations are starting to recover. However, the increase is very slow, probably also as a consequence of the drought of the past years.

The cheetah disappeared from the southeast of Turkmenistan in the 1950s, when large carnivores were still persecuted as pests. The herbivore populations steadily increased and reached their peak in the late 1980s. At that time, the herbivore abundance in the Batchys area obviously exceeded the carrying capacity of the habitat, and the reintroduction of a large predator, such as the cheetah, would have been possible in the light of the local ecological conditions. In the difficult years after Turkmenistan's independence, overharvesting and illegal hunting reduced the herbivore populations to critical levels. Today, the authorities are regaining control, supported by non-governmental conservation organisations. The armed forces in the Batchys area now co-operate with conservationists, and poaching by locals is diminishing. The kulan population is increasing slowly. Trophy hunting inside the reserve has been stopped, but a concept for the sustainable use of the game populations by local and foreign hunters outside the reserve is still lacking.

Ustjurt Plateau with the Gaplangyr reserve (~40°53'N / 56°60'E, area 3 in Fig. 1) was the last resort for the cheetah in Central Asia. We visited the Gaplangyr zapovednik and then the southern part of the Ustjurt Plateau, westwards parallel to the border with Uzbekistan and Kazakhstan. The habitat is steppe, but the dominating landscape features are escarpments and large saltpans. The steppe was used to graze large domestic sheep flocks in Soviet times, but the sheep are gone.

The southern Ustjurt Plateau is the winter range of the saiga antelope (*Saiga tatarica*). The escarpments and the steppe are the living space of urial and gazelle, respectively, and kulan have been reintroduced into the Gaplangyr. However, we did not spot any large mammals during the whole trip, even though the open landscape is easy to view. We found tracks and droppings of urial, gazelle and kulan, but not frequently and rarely fresh. The region is not inhabited and very remote. Nevertheless, tracks of cars and motorcycles, even far away from the few roads, and inside the reserve were abundant. Hunting or poaching seems to be important even in these regions far away from the nearest settlements. Not only residents hunt in this area. An officer of an army post told us that an Arab hunting party, with at least 70 four-wheel drive vehicles, roamed the area in December 2001.

Fig 1. Protected areas in the regions visited in Turkmenistan.

1 Maena Chaacha reserve (about 3,000 km^2)

2 Batchys reserve (877 km^2)

3 Gaplangyr reserve (2828 km^2) in the south-east of the Ustjurt Plateau.

2 and 3 are *zapovedniks* (fully protected areas with restricted access), whereas 1 is a *zakaznik* with limited agricultural use.

Our Ustjurt expedition came to an early end when the team was deported from the Kazakh border by a military patrol in spite of our permits from the Ministry of Nature Protection. But even from this relatively short visit, the verdict was clear: There is no prey base for a reintroduction of the cheetah in the north-west of Turkmenistan.

Conclusions and Recommendations

Turkmenistan can play an important role in the conservation of the Asiatic cheetah. It is a neighbour of Iran, which has the last Asiatic cheetahs. Turkmenistan has the potential habitat to host a cheetah population, and it offers a corridor to the central Asian steppes in the vicinity of Lake Aral, which used to be the home of this fascinating cat. Nevertheless, the prey base for a reintroduction is totally insufficient. For the years to come, Turkmenistan should give high priority to the protection, the recovery, and the proper management of the herbivore populations.

These years can be used for an in-depth discussion of many important and problematical aspects of reintroduction of cheetahs in Central Asia. The reintroduction of any (large) cat is a difficult endeavour – and should be carried according to the IUCN Guidelines for Reintroductions – and in the case of the Asiatic cheetah, where the potential source population itself is Critically Endangered, it is especially delicate. Among others, the following points or requirements must be considered before any detailed planning can start:

1. ***Ecological prerequisites***. Suitable cheetah habitat is available in the north-west as well as in the south-east of Turkmenistan, both within and outside protected areas. The protected areas might be a centre for a population, but any viable population will stretch far beyond the reserves. As a consequence of the considerable decrease in domestic stock, wild herbivores, if properly managed, might expand into these areas. At the moment, the prey base is poor even in the *zapovedniks*.

2. ***Wildlife management and law enforcement***. The Ministry of Nature Protection of Turkmenistan has made a strong commitment regarding wildlife protection. But there can be no doubt that years of hard work for training staff, building infrastructure and public education lie ahead to implement the laws on nature protection. Most of the protected areas in Turkmenistan are remote and consequently difficult to survey. Furthermore, proper wildlife management for the long-term conservation of all wildlife and sustainable harvest of game species outside the protected areas is needed.

3. ***Project background***. Any reintroduction programme needs adequate preparation and monitoring of the released animals. This requires a well-trained team and an adequate infrastructure. A project team can be assembled, but the infrastructure will be a problem. Whereas in the south, in the Maena Chaacha or Batchys area, a certain infrastructure is already in place, in the north, in the Gaplangyr/Usjurt region, nothing is available. A close surveillance of released animals there would be very difficult or very expensive. The two areas differ, among other things, in regard to their distance from the remaining cheetah population in Iran. A reintroduction in the north would have no immediate consequences for the conservation of the cheetah in Iran; any reintroduction in the south must involve consideration of the situation and the conservation strategy in the neighbouring country.

4. ***Availability of cheetahs***. Any reintroduction programme in Turkmenistan must be considered in the context of the conservation of the Asiatic cheetah. Former projects proposed to get animals from Iran or to use African cheetahs. Nowadays, the cheetah population in Iran is too weak to act as a source, and there is only one Asiatic cheetah known to be in captivity.

The release of African cheetahs would be problematic, and controversial. Asiatic cheetahs are listed as a different subspecies. An assessment of the species' taxonomy based on genetic differences is currently under way (S. O'Brien, pers. Com.). Even if the genetic separation turns

out to be minimal, it would still have to be tested whether African cheetahs can adapt to the cold Central Asian winter. It is clear that any proposal to release African cheetahs in Asia would provoke a fundamental dispute within the conservation society. We must however bear in mind that we might face the alternative of losing the cheetah from Asia or supplementing the remaining gene pool with African animals.

Any decision regarding a cheetah reintroduction programme in Turkmenistan is premature at the moment. However, on behalf of the Cat Specialist Group, I propose that all governmental and private institutions involved continue to create the conditions needed for the return of this charismatic creature and integrate the proposal for a reintroduction of the cheetah in Turkmenistan within the wider context of saving the Asiatic cheetah.

Acknowledgements

This invitation offered me the opportunity not only to look into the cheetah project, but also to learn more about Turkmenistan, and to meet many local nature conservation specialists. I am grateful to the Turkmen Ministry of Nature Protection (Vice-Minister Dr Makhdum Kuli Aknuradov) and to WWF International (Dr Hartmut Jungius and Dr Olga Pereladova) for the invitation and support in obtaining the visa; to Dr Viktor Lukarevsky and his team for the professional organisation of the trips in Turkmenistan; and to Dr David Mallon, who provided a lot of baseline information and helped me with the Russian literature in preparing for the journey.

References

Atamuradov H. I., Fet G. N., Fet V., Valdez R. & Feldman W. R. 1999. Biodiversity, genetic diversity, and protected areas in Turkmenistan. Journal of Sustainable Forestry, ½: 73-88.

Borodin A. M. 1984. Red book or the USSR. Lesnaya promyshlennost', Moskva (cheetah pp. 48-49, compiled by A. G. Bannikov).

Lukarevsky V. 2001. Leopard, striped hyena and wolf in Turkmenistan. Signar, Moskva. (In Russian; English edition in preparation.)

---

* Joint Chair, IUCN Cat Specialist Group. <urs.breitenmoser@ivv.unibe.ch>