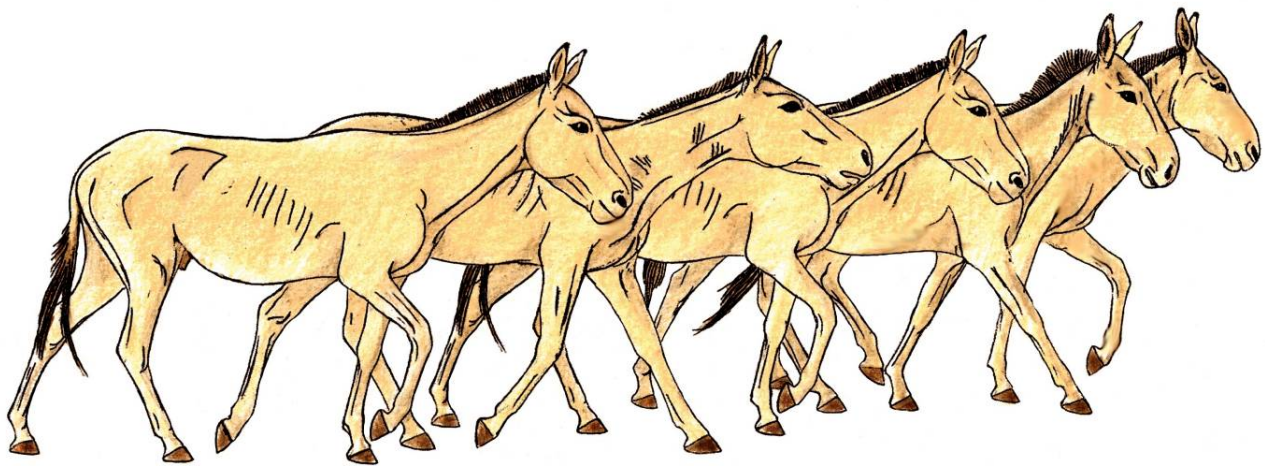


# Landscape level research for the conservation of Asiatic wild ass in Mongolia

Report July 2009



Research Institute of Wildlife Ecology (FIWI)  
and the International Takhi Group  
University of Veterinary Medicine  
Savoyenstrasse 1, A-1160 Vienna, Austria



**vetmeduni**  
vienna



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website: [www.takhi.org](http://www.takhi.org) or alternate site: [www.wildvet.at](http://www.wildvet.at)



*Photo: P. Kaczensky*

**The Mongolian Gobi  
– a unique and still largely intact ecosystem**

# RESEARCH ACTIVITIES IN GREAT GOBI B SPA

PETRA KACZENSKY & CHRIS WALZER

July 2009



*Photo: P. Kaczensky*

Within the framework of:

“Landscape level research for the conservation of Asiatic wild ass in Mongolia” funded by the Austrian Science Foundation (project P18624)

## 1. INTRODUCTION

Mongolia is an important stronghold of the Asiatic wild ass (*Equus hemionus*, khulan in Mongolian) and has a global responsibility to ensure their conservation. At the present time, Mongolia is anticipating the development of a commercialized agricultural sector that could cause a far greater intrusion of human activities into the Gobi environment than current pastoral livestock production. Development of other sectors of the Mongolian economy, especially mining and road construction, could also impact environmental security in general and habitat needs of the khulan and associated wildlife in particular. Thus the impact of habitat fragmentation and the presence of people and their livestock on wild ungulates has become a key research focus in Mongolia (Ito et al. 2005, Kaczensky et al. 2006).

For our research project “Landscape level research for the conservation of Asiatic wild ass in Mongolia” funded by the Austrian Science Foundation (project P18624) we selected three focal areas: Great Gobi B Strictly Protected Area (SPA), Great Gobi A SPA and the SE Gobi. The three areas vary in respect to habitat productivity and the intensity of human land use.

This summer's focus was on collaring wild asses in Great Gobi B SPA with high temporal resolution GPS collars. In Great Gobi B SPA we also continue our research activities around the re-introduced Przewalski's horse population (*Equus ferus przewalskii*) in part funded by a previous FWF project (project P14992). Further focus was on modelling wild ass survey data and understanding fission-fusion dynamics.

## 2. COLLARING WILD ASSES WITH GPS / STORE-ON-BOARD COLLARS

To deepen our understanding of small-scale movements and time budget relative to various habitat variables we deployed 10 GPS / store-on-board (SOB) collars on wild asses in 2007 and retrieved the units in 2008 (see reports 2007 & 2008). To our great frustration only 1 out of the 10 collars had performed as expected (Fig. 1; Kaczensky et al. 2009 submitted). The other collars had significant software problems and had deleted or corrupted the stored GPS locations (Kaczensky and Walzer 2009 submitted).

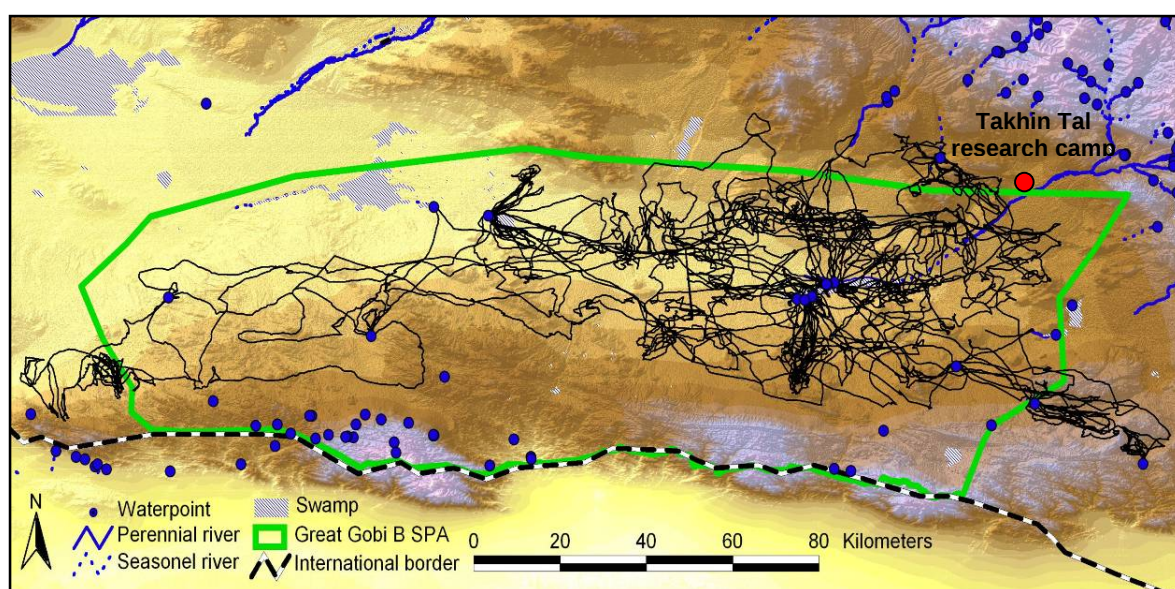


Fig. 1: Movements of a female wild ass monitored by a GPS SOB collar with 15min intervals from July 2007 until July 2008.

This summer we deployed 7 collars with an updated software configuration (FIWI, SOB) and 7 collars produced by a commercial company (Vectronic Aerospace GmbH, Berlin, Germany). All collars were again designed to collect and store GPS position every 15 minutes over a 12 months period. To allow collar retrieval, we equipped all collars with pre-programmed drop-offs (CR-2a, Telonics, USA) which were programmed to open on the 20th July 2010. Previous data has shown that most khulans move to the eastern part of the Great Gobi B SPA in June/July making retrieval somewhat simpler.

To capture wild asses we used the previously described chase method with our specially adapted jeep (roll-over bar, double shock absorbers and reinforced springs), that has proven the most efficient method to dart Asiatic wild asses in open terrain (Walzer et al. 2006; Fig. 2). Within 5 days we captured and radiocollared 8 mares and 6 stallions between the two water points *Chonin Us* and *Toodog Us* in the eastern half of the Great Gobi B SPA (Tab. 1, Fig. 3 & 4).



Photo: P. Graf

Fig. 2: Darting wild asses from jeep in Great Gobi B SPA in July 2009.

Table 1: Wild asses captured in Great Gobi B SPA in July 2009

| #  | Date     | Time  | XCO      | YCO      | Sex    | Age  | Collar brand      | VHF frequency | Break away | Comments                           |
|----|----------|-------|----------|----------|--------|------|-------------------|---------------|------------|------------------------------------|
| 1  | 20.07.09 | 11:30 | 93.14302 | 45.39721 | male   | 5-6  | FIWI - 6          | 150.540       | 20.07.10   | single, many bite marks            |
| 2  | 20.07.09 | 12:35 | 92.98132 | 45.38997 | female | 5-6  | FIWI - 3          | 150.420       | 20.07.10   | with yearling                      |
| 3  | 20.07.09 | 14:50 | 93.24042 | 45.42294 | male   | 3    | FIWI - 4          | 150.460       | 20.07.10   | together with 2 others             |
| 4  | 21.07.09 | 11:30 | 93.44603 | 45.24129 | female | 8    | FIWI - 1          | 150.340       | 20.07.10   | with foal, in a group of 20        |
| 5  | 21.07.09 | 13:05 | 93.39861 | 45.25412 | male   | 7    | Vectronics - 6447 | 150.250       | 20.07.10   | in a group of 6-7                  |
| 6  | 21.07.09 | 15:40 | 93.41131 | 45.24893 | female | 15   | Vectronics - 6446 | 150.798       | 20.07.10   | with yearling, in a group of 5     |
| 7  | 21.07.09 | 17:30 | 93.39598 | 45.34372 | female | 4    | Vectronics - 7020 | 151.700       | 20.07.10   | in a group of 200                  |
| 8  | 22.07.09 | 12:00 | 93.54962 | 45.35881 | female | 15   | FIWI - 2          | 150.380       | 20.07.10   | with yearling, only those two      |
| 9  | 22.07.09 | 13:15 | 93.46478 | 45.34112 | male   | 15   | Vectronics - 6441 | 151.250       | 20.07.10   | single                             |
| 10 | 22.07.09 | 16:20 | 93.45066 | 45.25359 | male   | 12   | Vectronics - 4958 | 151.800       | 20.07.10   | in a group of 3                    |
| 11 | 23.07.09 | 12:20 | 93.40840 | 45.22712 | female | 8-9  | FIWI - 5          | 150.500       | 20.07.10   | with yearling, in a group of 5-6,  |
| 12 | 23.07.09 | 13:45 | 93.34038 | 45.25498 | female | 2-3  | Vectronics - 7376 | 151.850       | 20.07.10   | seems to have been the lead animal |
| 13 | 24.07.09 | 13:50 | 93.42906 | 45.26435 | female | 9-10 | Vectronics - 6284 | 151.750       | 20.07.10   | in a group of 3                    |
| 14 | 24.07.09 | 15:00 | 93.31252 | 45.30680 | male   | 12   | FIWI - 7          | 150.620       | 20.07.10   | in a group of 10                   |
|    |          |       |          |          |        |      |                   |               |            | single                             |

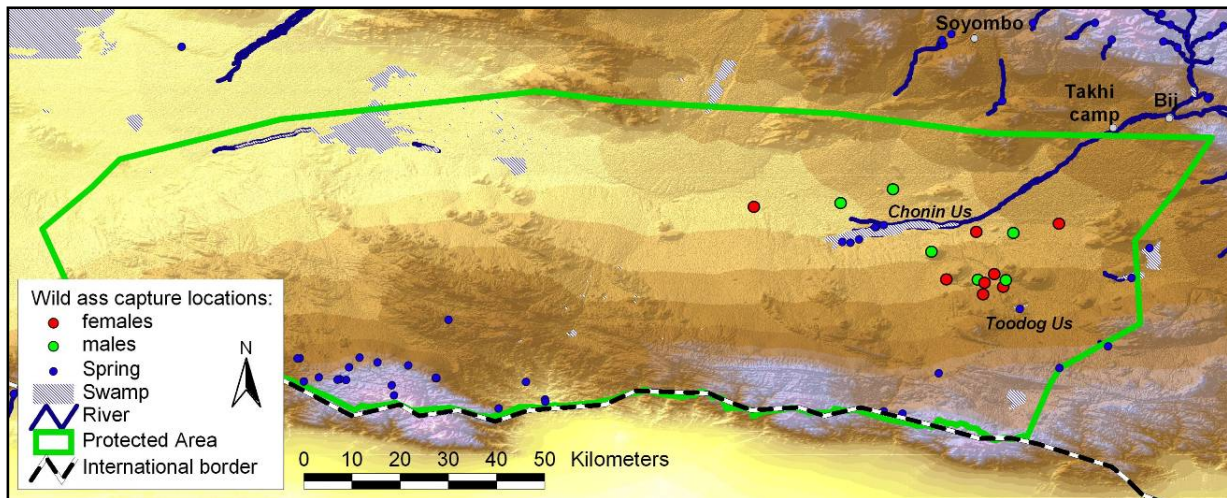


Fig. 3: Map with wild ass capture locations in July 2009.



Fig. 4: A) Wild ass with FIWI GPS SOB collar, B) Wild ass with Vectronic Aerospace GPS SOB Collar, C) Waking up minutes after the iv administration of the antidote.

### 3. A MODEL TO SIMULATE WILD ASS COUNTS IN GREAT GOBI B SPA

In May 2009 Petra Kaczensky went to the Institute of Biology, University of Bergen, Norway for 2 weeks to continue work with Stefanie Kramer-Schadt. Stefanie programmed a simulation model for counting wild asses in the Great Gobi B SPA. The program allows the import of the actual landscape features with a 100m resolution (slope, visibility based on the topography (viewshade), bush versus grass steppe; Fig. 5). The simulated ass population to be counted can be varied in size, the degree of clustering, the maximum herd size, and the probability of detecting a herd in relation to the perpendicular distance from the transect line. Transects may be imported as actual track driven in the field or parallel transect lines and visibility of herds may be reduced in the bush steppe. In addition, herds may be allowed to move from one observation day to the next based on the distribution of distances covered within 24 hours by radio-collared animals.

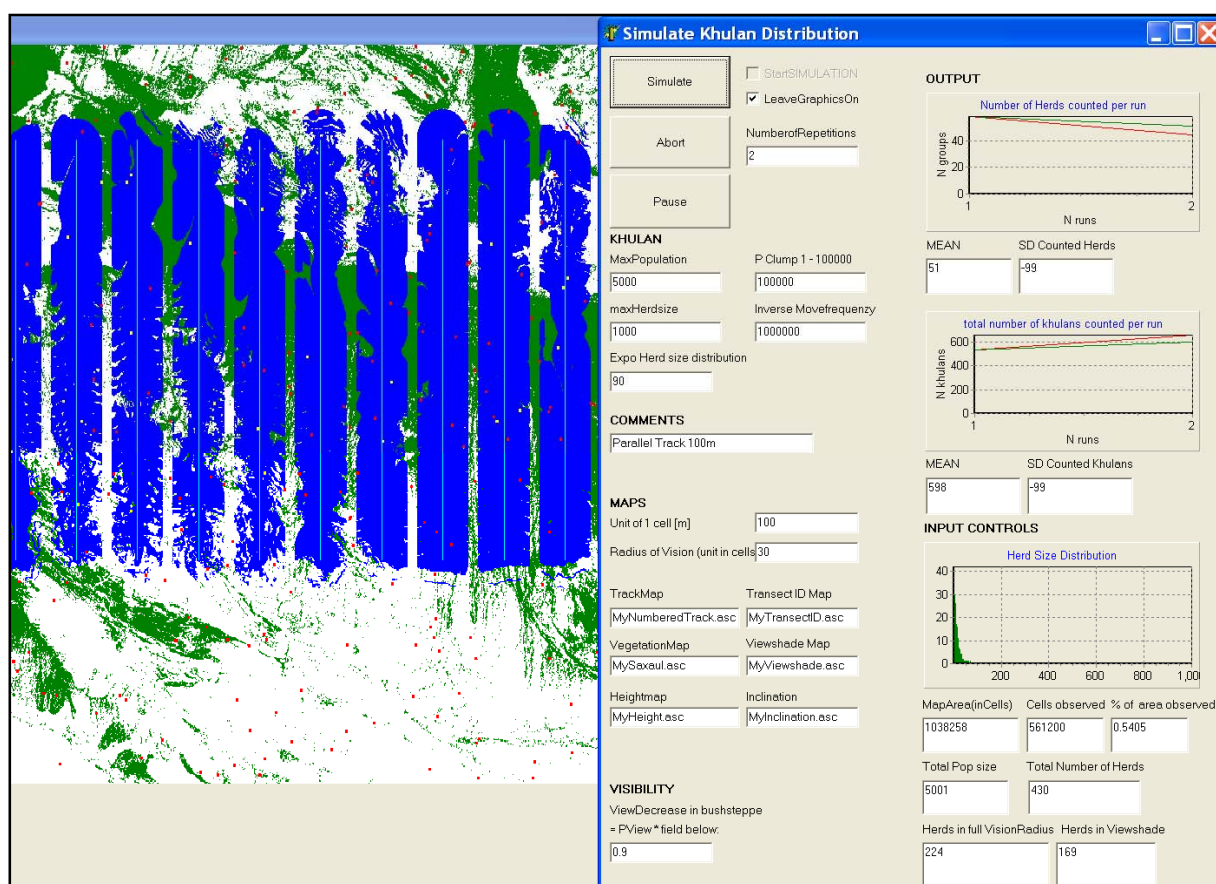


Fig. 5: Screenshot of the graphic and parameter page in the simulation model for counting wild ass in the Great Gobi B SPA by Stefanie Kramer-Schadt.

For each run (“survey”) the model records the group size, the perpendicular distance to the transect line, and the transect ID for each group counted. The parameters of each “survey” can be fed directly into program DISTANCE (<http://www.ruwpa.st-and.ac.uk/distance/>). The program also records for each simulated “survey” the actual population number, the actual number of herds, and the number of herds visible from the transect line (within 5 km and within view). With this new model we hope to get a better understanding for the most likely population size of the wild ass population in the Great Gobi B SPA by comparing model scenarios with real survey data from the last 6 years (Fig. 6).

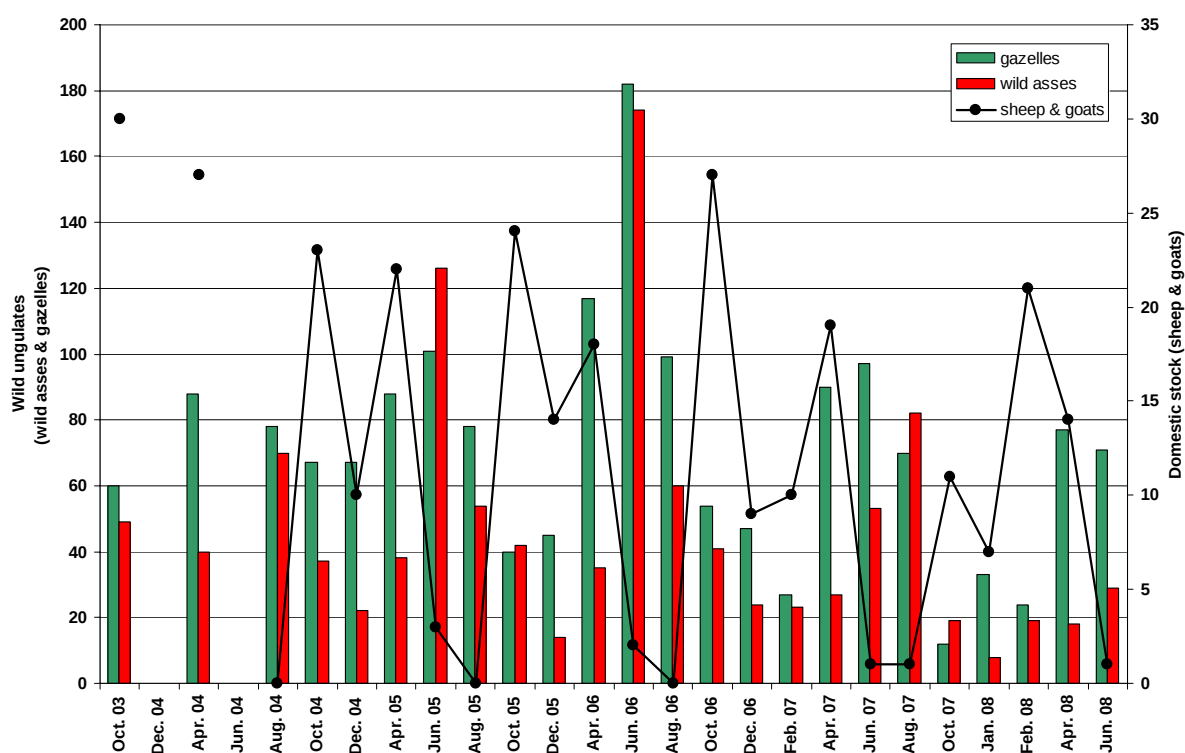


Fig. 6: Number of wild ass and gazelle herds encountered during 24 all park counts between October 2003 and June 2008.

#### 4. EXPLORING KNOWLEDGE DISSEMINATION AS A SELECTIVE FORCE FOR AGGREGATION: PRELIMINARY RESULTS FROM MODELLING WILD ASIATIC ASSES

Joanna Bryson, from the department of Artificial Models of Natural Intelligence, University of Bath, United Kingdom is interested in the mechanisms explaining fission-fusion societies and thus became interested in our work on Asiatic wild asses of the Gobi.

Aggregation is a costly strategy for any species, because individuals must compete for resources such as food, shelter and mating opportunities. For reasons ranging from increased vigilance to cooperative mobbing of aggressors, living in a group can provide benefits as well as costs. The question is whether we now understand all the costs and benefits of aggregation. In the present work we have determined new potential costs as well as benefits. We have done this through examining available data and simulating hypotheses on the social behaviour of Asiatic wild asses *Equus hemionus*. The present work stems from two research questions:

1. We (Kaczensky and colleagues) are looking for a mechanism that could explain the exceptional ability of Asiatic asses to exploit unexpected resource bonanzas in the form of transient oases caused by rainfall.
2. We (Bryson and colleagues) are also looking for a separate selective pressure to explain the two different scales of aggregation seen in species with fission-fusion social structure.

A fission-fusion (FF) society is characterised by more than one level or size of aggregation. A party is a relatively small group which tends to travel together. A community or troop can also be defined, but in some species it is not clear that the entire community ever aggregates at the same time. Parties may converge (fuse) and large parties may split (fission), or individuals may swap between parties. Wild Asiatic asses appear to exhibit FF with flexible party composition.

#### 5. PRZEWALSKI'S HORSE POPULATION STRUCTURE

The Przewalski's horse population in and around Takhin Tal suffered the loss of 12 P-horses (5 adult mares, 2 adult stallions and 5 foals from 2008) due to the harsh winter conditions. However, these losses were already compensated for by the birth of 25 foals of which 22 were still alive by mid July 2009. Another 4-6 foals are expected to be born later this year. As of July 2009 a total of 144 P-horses, organized in 12 harem groups and several bachelor groups, roam the park (Tab. 2). With the population growing and the horses becoming more shy, individual identification especially of bachelor stallions and assignment of foals to the correct mares is becoming increasingly difficult.

| Name                                             | Sex      | ZB-Nr. | Birthdate | Age | Origine         | Dam  | Sire        | group        | Name                                       | Sex      | ZB-Nr. | Birthdate | Age | Origine           | Dam  | Sire | group    |
|--------------------------------------------------|----------|--------|-----------|-----|-----------------|------|-------------|--------------|--------------------------------------------|----------|--------|-----------|-----|-------------------|------|------|----------|
| <b>Zagal group (9 adults, 4 foals)</b>           |          |        |           |     |                 |      |             |              | <b>Khuchit group (10 adults, 1 foal)</b>   |          |        |           |     |                   |      |      |          |
| Zagal                                            | stallion | 3720   | 10.05.02  | 7   | Gobi B          | 3035 | 2866        | Zagal        | Khuchit                                    | stallion | 3320   | 16.06.99  | 10  | Langenberg        | 2254 | 1374 | Khuchit  |
| Khokhoo                                          | mare     | 2984   | 19.11.96  | 12  | Langenberg      | 1359 | 1374        | Zagal        | Misheel                                    | mare     | 3084   | 28.05.97  | 12  | Tachin Tal        | 1977 | 1159 | Khuchit  |
| Soir                                             | mare     | 3045   | 31.03.97  | 12  | Langenberg      | 2018 | 1374        | Zagal        | Erden                                      | mare     | 3048   | 12.02.98  | 11  | Rottendamm        | 1633 | 1429 | Khuchit  |
| Dorothee                                         | mare     | 3230   | 06.06.99  | 10  | Tachin Tal      | 3035 | 2503        | Zagal        | Maral                                      | mare     | 3387   | 23.05.00  | 9   | Tachin Tal        | 3038 | 2363 | Khuchit  |
| Sormuus                                          | mare     | 4393   | 13.06.04  | 5   | Gobi B          | 3383 | 3066        | Zagal        | Kherlen                                    | mare     | 3391   | 26.05.00  | 9   | Tachin Tal        | 3035 | 2363 | Khuchit  |
| Khatan                                           | mare     | 4751   | 21.05.06  | 3   | Gobi B          | 3230 | 3069        | Zagal        | Saran                                      | mare     | 3823   | 09.04.03  | 6   | Tachin Tal        | 2645 | 2363 | Khuchit  |
| Bambi                                            | mare     | 5020   | 03.06.07  | 2   | Gobi B          | 3045 | 3069        | Zagal        | Tumen                                      | mare     | 4822   | 30.06.06  | 3   | Gobi B            | 2748 | 3069 | Khuchit  |
| Simba                                            | stallion | 5048   | 20.06.07  | 2   | Gobi B          | 2984 | 3069        | Zagal        | Erhsaran                                   | mare     | 5017   | 03.06.07  | 2   | Gobi B            | 3084 | 3166 | Khuchit  |
| Sonor                                            | stallion | 5131   | 10.05.08  | 1   | Gobi B          | 4393 | 3069        | Zagal        | Ariuka                                     | mare     | 5087   | 08.07.07  | 2   | Gobi B            | 3803 | 3166 | Khuchit  |
| Dorothee's foal                                  | mare     |        | 15.05.09  | 0   | Gobi B          | 3230 | 3720        | Zagal        | Solid                                      | mare     | 5160   | 01.06.08  | 1   | Gobi B            | 3823 | 3166 | Khuchit  |
| Sormuus's foal                                   | mare     |        | 15.05.09  | 0   | Gobi B          | 4393 | 3720        | Zagal        | Misheel's foal                             | ?        |        | 26.05.09  | 0   | Gobi B            | 3084 | 3320 | Khuchit  |
| Soir's foal                                      | stallion |        | 20.05.09  | 0   | Gobi B          | 3045 | 3720        | Zagal        |                                            |          |        |           |     |                   |      |      |          |
| Khokhoo's foal                                   | ?        |        | 03.07.09  | 0   | Gobi B          | 2984 | 3720        | Zagal        |                                            |          |        |           |     |                   |      |      |          |
| <b>Tayan / Zandan group (11 adults, 5 foals)</b> |          |        |           |     |                 |      |             |              | <b>Jonon? Group (4 adults, 1 foal)</b>     |          |        |           |     |                   |      |      |          |
| Tayan                                            | stallion | 3066   | 24.04.97  | 12  | Tierpark Berlin | 1431 | 2041        | Tayan/Zandan | Jonon?                                     | stallion | 4392   | 13.06.04  | 5   | Gobi B            | 3387 | 2911 | Jonon?   |
| Zandan                                           | stallion | 3166   | 28.05.98  | 11  | Tachin Tal      | 2398 | 1818        | Tayan/Zandan | Sogoo                                      | mare     | 2586   | 01.12.92  | 16  | Australien, Dubbo | 974  | 787  | Jonon?   |
| Imj                                              | mare     | 2748   | 02.08.94  | 15  | Schwerin        | 1436 | 1236        | Tayan/Zandan | Sonja                                      | mare     | 3415   | 13.06.00  | 9   | Salzburg          | 2017 | 1433 | Jonon?   |
| Mongon                                           | mare     | 3273   | 06.05.99  | 10  | Winterthur      | 2483 | 1742        | Tayan/Zandan | Mogoi                                      | stallion | 4961   | 11.05.07  | 2   | Tachin Tal        | 2586 | 2363 | Jonon?   |
| Orkhon                                           | mare     | 3430   | 15.07.00  | 9   | Tachin Tal      | 2645 | 2363        | Tayan/Zandan | Sogoo's foal                               | ?        |        | 05.07.09  | 0   | Gobi B            | 2586 | 3441 | Jonon?   |
| Kheren                                           | mare     | 3803   | 28.07.02  | 7   | Gobi B          | 2712 | 2866        | Tayan/Zandan | <b>Hubsugul group (18 adults, 3 foals)</b> |          |        |           |     |                   |      |      |          |
| Harz                                             | mare     | 4313   | 02.05.04  | 5   | Gobi B          | 3045 | 3069        | Tayan/Zandan | Hubsugul                                   | stallion | 3253   | 21.05.97  | 12  | Langenberg        | 1320 | 1374 | Hubsugul |
| Bumnan                                           | mare     | 4503   | 29.04.05  | 4   | Gobi B          | 2748 | 3069        | Tayan/Zandan | Bettes                                     | mare     | 3047   | 15.04.97  | 12  | Ahus (D)/WPL      | 1987 | 1118 | Hubsugul |
| Hirs                                             | stallion | 5169   | 12.06.08  | 1   | Gobi B          | 3375 | 3066        | Tayan/Zandan | Zur                                        | mare     | 3301   | 06.06.99  | 10  | Köln (D)/WPL      | 1022 | 1852 | Hubsugul |
| Samar                                            | mare     | 5170   | 14.06.08  | 1   | Gobi B          | 3803 | 3066        | Tayan/Zandan | Shandas                                    | mare     | 3312   | 11.06.99  | 10  | Ahus (D)/WPL      | 2948 | 1852 | Hubsugul |
| Harz's foal                                      | ?        |        | 09.05.09  | 0   | Gobi B          | 4313 | 3066 / 3166 | Tayan/Zandan | Nergui                                     | mare     | 3708   | 26.04.02  | 7   | WPL               | 201  |      |          |

Ranger monitoring of P-horse groups showed that all groups together covered 2,808 km<sup>2</sup> from January - December 2008 and 2,691 km<sup>2</sup> from January - July 2009 (Fig. 7). Because the Bij river has hardly been flowing beyond the village of Bij in 2009, all P-horse groups grazed rather far away from the Takhin Tal camp. A stallion group discovered a new water point south of Soyombo village (N of the SPA).

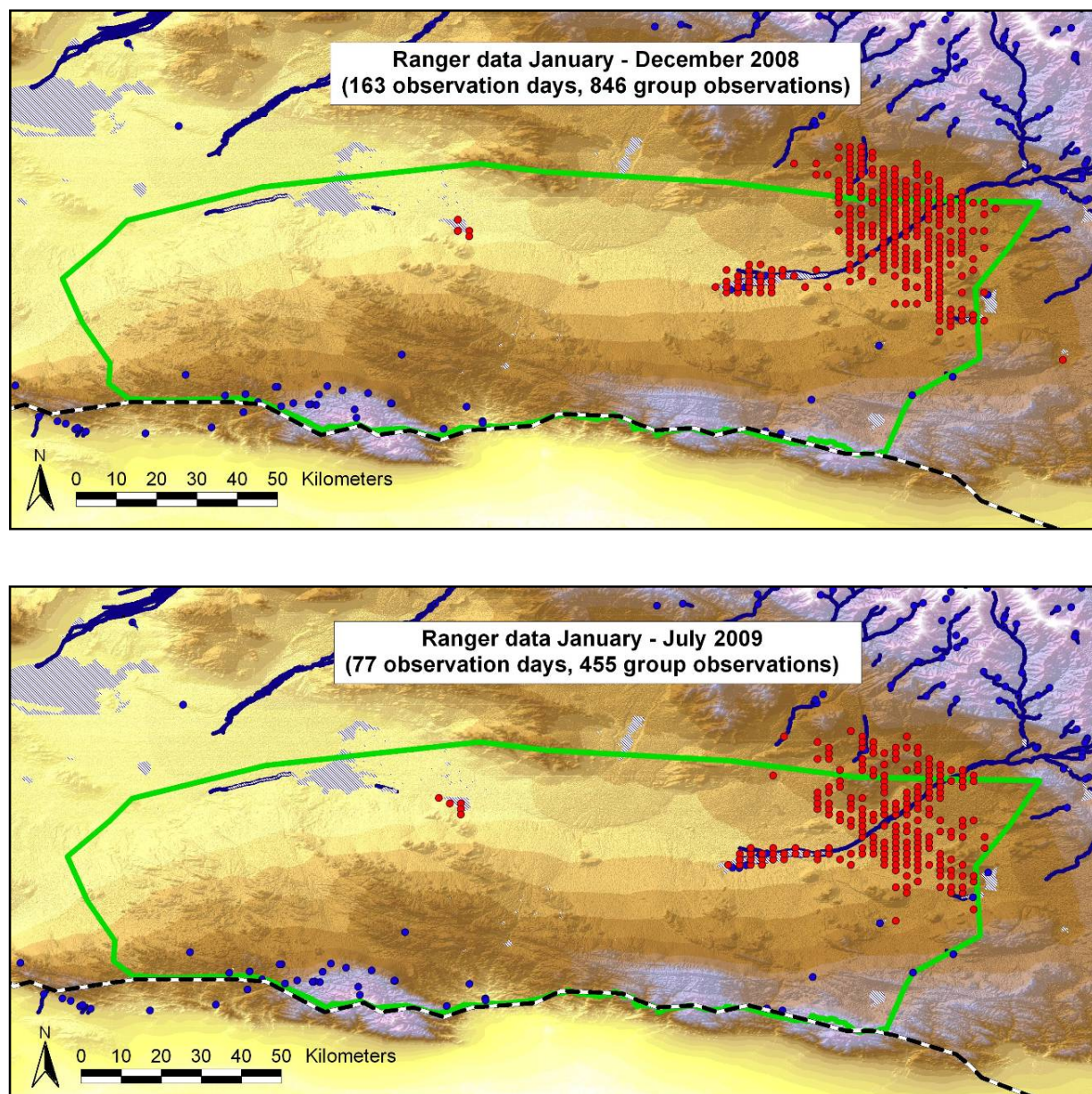


Fig. 7: P-horse locations based on ranger monitoring 2008 and 2009.

## 6. WEATHER CONDITION

The winter of 2008/2009 was rather long and cold in Takhin Tal (Fig. 8). In addition, a more or less continuous snow layer covered the Gobi from December until February. Average annual temperature was 2°C (July 2007-July 2008). The beginning of July brought some rain and the Gobi pastures were in moderate to good condition upon our arrival on 19 July.

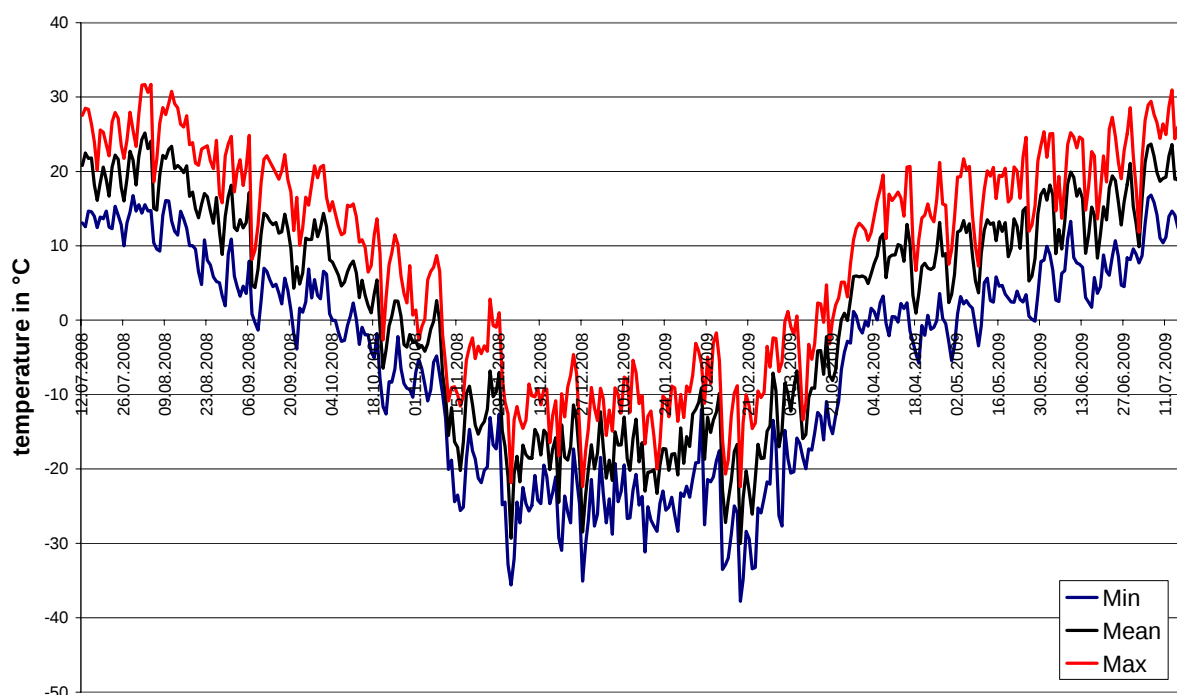


Fig. 8: Average daily temperatures in Takhin Tal from 12 July 2008 until 11 July 2009 (Hobo datalogger, Hoskin, Canada).

## 7. MISCELLANEOUS

### 7.1 North American Veterinary conference in Orlando Fl. USA (17-21 January 2009)

This spring Chris Walzer was invited to the North American Veterinary conference in Orlando Florida, USA to present several talks about the Przewalski's horse reintroduction and the wild ass research. This conference is probably the largest gathering of veterinarians in the world.

Walzer, C. *et al.* Conservation: Capture and satellite collaring of the Asiatic wild ass.

Walzer, C. *et al.* Importance of a transdisciplinary approach to Asiatic wild ass conservation.

Walzer, C. *et al.* Veterinary considerations in the reintroduction of the Przewalski's horse to Mongolia.

### 7.2 Zoos and Aquariums Committing to Conservation, Houston, TX, USA (23-26 January 2009)

Subsequent to the meeting in Orlando, Chris travelled to the Zoos and Aquariums Committing to Conservation conference in Houston, Texas. Here he presented a talk on behalf of the entire ITG team dealing with the revised and updated goals of the ITG.

Excerpt of the talk:

Walzer, C., P. Kaczensky, O. Ganbaatar, and C. Stauffer. Beyond success - The next 50 years for the Przewalski's horse in the Gobi region of Mongolia.

There is no consensus on when a reintroduction program is deemed successful. Clearly viewing the self-sustainable re-establishment of a population as a successful end-point is at best a short-term approach, constrained by time (today and now). Comprehensive interdisciplinary monitoring and research was and is the foundation for management strategies and decisions in this project. However, a self-sustaining financial base in conjunction with dedicated training and empowerment of local scientists and residents constitute essential prerequisites for the project's future. Defining success and thereby inferring an end-point can easily lead to complacency compromising species persistence. As others have stated the ultimate project objective must be a constantly re-evaluated state of population persistence without intervention.

### 7.3. Society for Conservation Biology (SCB) annual meeting in Beijing, China 11-17 July 2009

O. Ganbaatar, N. Enksaikhan, P. Kaczensky and C. Walzer attended the SCB meeting and gave talks about the research activities with Przewalski's horses and Asiatic wild asses. The meeting proved very productive as most colleagues working with Przewalski's horses and other large ungulates in Central Asia were present (Fig. 9 & 10).



**Petra Kaczensky**, Ralph Kuehn, Badamjav Lhagvasuren, Stephanie Pietsch, Weikang Yang, and Chris Walzer. Connectivity of the Asiatic wild ass population in the Mongolian Gobi.

**Chris Walzer**, Oyunsaikhan Ganbataar, and Petra Kaczensky. Living on the edge - Przewalski's horse Re-introduction into the Mongolian Gobi.

**Oyunsaikhan Ganbataar**, Namtar Enkhsaikhan, Namjid Altansukh, Petra Kaczensky, and Chris Walzer. Monitoring re-introduced Przewalski's horse in the Mongolian Gobi.



Fig. 9: A) O. Ganbaatar giving his talk on monitoring re-introduced P-horses, B) N. Enksaikhan in the plenary room.



Fig. 10: P-horse experts at the SCB meeting in Beijing. Front left to right: **N. Bandi**- Hustain Nuruu NP, Mongolia; **P. Kaczensky** – University of Veterinary Medicine Vienna, Austria; **L. Boyd** - Washburn University, USA; **B. Munkhtuya** - Association pour le cheval de Przewalski TAKH, France & Mongolia; **O. Ganbaatar** – Great Gobi B SPA administration, Mongolia; back left to right: **N. Enkhsaikhan**, International Takhi Group, Mongolia; **Q. Cao** – Xinjiang Research Center for Breeding Przewalski's horse, China; **B. Lhagvasuren**, Mongolian Academy of Science; **P. Moehlman** – IUCN Equid Specialist Group; **T.Y. Ito** - Tottori University, Japan; **S. Monfort** - Smithsonian's National Zoo, USA; **W. Zimmermann** – Cologne Zoo, Germany; **C. Walzer** - University of Veterinary Medicine Vienna, Austria; **P. Leimgruber** – Smithsonian Institution, USA; **M. Zukosky** - Eastern Washington University, USA; **D. Hu** – Beijing Forestry University China.

The post-conference workshop on Przewalski's horses in Urumqi & Kalameili, China 18-21 July was cancelled due to the unrest in the Xinjiang Uyghur Autonomous Region of China. We hope that our colleagues in Xinjiang are safe and that the meeting can be re-scheduled at a later time. At the SCB meeting, the Chinese, Mongolian and international research community clearly identified the need for a closer cross-border cooperation concerning wildlife conservation and research, with a special focus on wild equids.

## 8. RECENT PUBLICATIONS

### Late 2008 / early 2009

- Kaczensky, P., V. Dresley, D. Vetter, H. Otgonbayar, A.C. Souris, and C. Walzer. *Submitted 2009*. Water use of Asiatic wild asses in the Mongolian Gobi. Exploration into the Biological Resources of Mongolia (Halle/Saale, Germany).
- Kaczensky, P., and C. Walzer. *Submitted 2009*. Experiences with ARGOS, GPS/ARGOS and GPS SOB collars in Mongolia. *Mammalia*.
- Kaczensky, P., O. Ganbaatar, H. von Wehrden, N. Enksaikhan, D. Lkhagvasuren, and C. Walzer. 2007 (2009). Przewalski horse re-introduction in the Great Gobi B SPA - from species to ecosystem conservation. *Mongolian Journal of Biological Sciences*, 5(1-2):13-18.
- Kaczensky, P., O. Ganbaatar, H. von Wehrden and C. Walzer. 2008. Resource selection by sympatric wild equids in the Mongolian Gobi. *Journal of Applied Ecology*, 45:1662-1769. [included in the Virtual Issue: Applied Ecology in Asia, available at: <http://www.journalofappliedecology.org/view/0/virtualissueapr09.html>]
- Kaczensky, P., N. Enkhsaikhan, O. Ganbaatar and C. Walzer. 2008. The Great Gobi B Strictly Protected Area in Mongolia – refuge or sink for wolves *Canis lupus* in the Gobi? *Wildlife Biology*, 14(4): 444-456.
- Kaczensky, P. and C. Walzer . 2008. Der Asiatischer Wildesel - bedrohter Überlebenskünstler in der Wüste Gobi. *Zeitschrift des Kölner Zoos*, 51(3): 147- 163. (in German, available at: [http://www.zoo-koeln.de/fileadmin/images/aktuelles/49744\\_147-163\\_Kaczensky\\_Walzer.pdf](http://www.zoo-koeln.de/fileadmin/images/aktuelles/49744_147-163_Kaczensky_Walzer.pdf)]
- Kaczensky, P., O. Ganbataar, H. Von Wehrden and C. Walzer. 2008. Przewalski's horses (*Equus ferus przewalskii*) and Asiatic wild asses (*Equus hemionus*): similar species, same habitat - same use? *Proceedings of the International Equine Science meeting 2008, Regensburg, Germany*: 26.
- Lhagvasuren, D., D. Iderbat, R. Samija and C. Walzer. 2008. Small mammal study in the vicinity of the great Gobi B zone SPA. 82nd Annual meeting of the German Society of mammalogy, Vienna, Austria, 73: 24.
- Painer, J., P. Kaczensky, O. Ganbataar, K. Huber and C. Walzer. 2009. Comparative parasitological examination on sympatric equids in the Greater Gobi "B" strictly protected area. *Proceedings of the international conference on diseases of zoo and wild animals 2009, Hilvarenbeek, The Netherlands*, 44: 122-127.
- Walzer, C., P. Kaczensky, O. Ganbataar and C. Stauffer. 2008. Przewalski's horses, satellites and wild asses. *Proceedings of the International Equine Science meeting 2008, Regensburg, Germany*: 14.
- Walzer, C., P. Kaczensky, O. Ganbataar, J. Lengger, N. Enkhsaikhan and D. Lkhagvasuren. 2008 (2006). Capture and anaesthesia of wild Mongolian equids - the Przewalski's horse (*E. ferus przewalskii*) and the Khulan (*E. hemionus*). *Mongolian Journal of Biological Sciences* 4(1): 19-28.

Walzer, C., P. Kaczensky, D. Enkhbileg, G. Dovchindorj and Y. Adiya. 2008. Through the eye of the dessert to capture and collar wildbactrian camels (*Camelus ferus*). Proceedings American Association of Zoo Veterinarians, Los Angeles, USA: 90-94.

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<http://www.youtube.com/watch?v=ScvJqyx0tUc>

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