

## Takhi's (*Equus przewalskii* Polj., 1883) Home Range and Water Point Use

Oyunsaikhan Ganbaatar

Takhin Tal, Great Gobi National Park Part B, e-mail: takhi@t-online.de

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### Introduction

The takhi herd of the Takhi Research and Adaptation Center along Bijin Gol (Bij River basin) has been under constant supervision of researchers i.e. in a semi-wild condition from 1992-1997. During this period, veterinary aspects, protection from causes of mortality and animal husbandry matters were of main concern. The first herd was released to the wild from the adaptation enclosure in 1997. Although some aspects of takhi biology and ecology have been researched, water and pastureland use have not been a main research area. This MSc focuses on the importance and significance of water and pasture for reintroduction of takhi, and on research comparing takhi demands with that of khulan (*Equus hemionus*, Asian wild ass) and black-tailed gazelles (*Procapra subguturosa*) in "Great Gobi B". This is of importance since the takhi population has been expanding since 1999 and because of the possibility to release takhi into other parts of the park (Takhi Us, Baitag, Yolhony Gobi) – we therefore need to know about the use of water sources by takhi and to study the dependence of other hoofed animals on this limited resource. The research was conducted from 1999-2002.

On 6 June 1992 the first 5 takhis (2 stallions and 3 mares) arrived in Takhin Tal, Mongolia (Fig 1). On 22 September of that same year a mare named "Bij" gave birth to a female foal who named "Uugan" - the first reintroduced foal born on Mongolian soil. Ten years have passed since that time and the takhi have now acclimatized and many more foals have been born. During previous years but with the exception of 1994 and 2001, more takhi were flown in from zoos and national parks from different European countries.

### Study area - The Great Gobi National Park (GGNP)

Research was conducted in Bij bag of Bugat

soum and Altan Soyombo bag of Tonkhil soum of Gobi-Altai aimak (province). Some research work was also carried out on the territories of Barlag bag of Altai soum of Khovd aimak. GGNP is divided into two parts indicated as "A" and "B". Part "A" consists of 4.419 million ha. and part "B" consists of 881,000 ha. The study area belongs to part "B" of GGNP. The highest point is at 3100 m a.s.l. and the lowest is at 1000 m a.s.l. The harsh climate of the region is characterized by dry, cool summers and cold, windy winters. The average annual temperature is 2-4°C, average temperature in January is -16°C with minimum temperature around -40°C, average temperature in July is +18°C with maximum temperature of around +40°C. Annual precipitation averages 44.5-100mm of which most falls as rain. One of the climatic peculiarities is high wind speeds, especially in spring, summer and autumn, due to large differences in day and night temperatures.

The boundaries of the research area had been defined before research began. It included the takhi reintroduction centers, i.e. territories with total size of 1600 sq.km, including Bijin Gol, Gashuun Us, Gun Tamga, Khairkhan Bulag, Toodog Us, Khoni Us, Shiiriin Us and the valleys bordering the Bijin Gol. In some cases the takhi left the pre-defined research area and we had to follow them to get information outside the study area.

The research region is located in the eastern part of the national park where there is an absence of herdsmen. However during spring and autumn herdsmen use the park and move to water sources located in the study area. There are 8 springs and water sources in the research regions, which are especially important for the hoofed animals inhabiting the eastern part of the national park. These water sources are located comparatively close to each other, which creates suitable conditions for feeding of wild animals. Most of the springs have a constant water supply, but freeze in winter.