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Y. Dash, A. Szaniawski, G.S. Child, P. Hunkeler. Observations on some large mammals of the Transaltai, Djungarian and Shargin Gobi, Mongolia. *Revue d'Écologie*, 1977, 4, pp.587-597. hal-03530326

HAL Id: hal-03530326

<https://hal.science/hal-03530326v1>

Submitted on 17 Jan 2022

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OBSERVATIONS ON SOME LARGE MAMMALS OF THE TRANSALTAI, DJUNGARIAN AND SHARGIN GOBI, MONGOLIA

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Over the past 20 years, several expeditions have been organized to the Gobi region (See for instance Bannikov, 1954). A detailed bibliography is included in Dobchin, 1970. Another, up to 1969, and a list of animal sightings, particularly of *Equus przewalskii* and *Camelus bactrianus*, have been published by Tsevegmid and Dashdorj (1974).

During 1972, Dash visited the region and prepared a preliminary report for the Government on the possibility and desirability of establishing protected areas in the Gobi region. Dash again visited the area in 1974, together with Szaniawski and scientists from the USSR. A note on this expedition was published by Bannikov (1975/1976). In 1974 and 1975, Szaniawski took part in two further expeditions; during the former he was accompanied by Dash and on the latter by Buindelger, another Wildlife Officer of the Department of Wildlife Management. Observations made during these four expeditions are included in the present article.

In the latter part of May and the beginning of June 1976, the four authors took part in a two week expedition to the Gobi region organized in connection with the visit of an international mission which was sent to Mongolia at the invitation of Government to discuss plans for the establishment of protected areas in the region and to assist in the preparation of a programme of action to implement the proposals.

The purpose of this paper is to communicate the efforts being made by the Mongolian authorities to protect the fauna and flora

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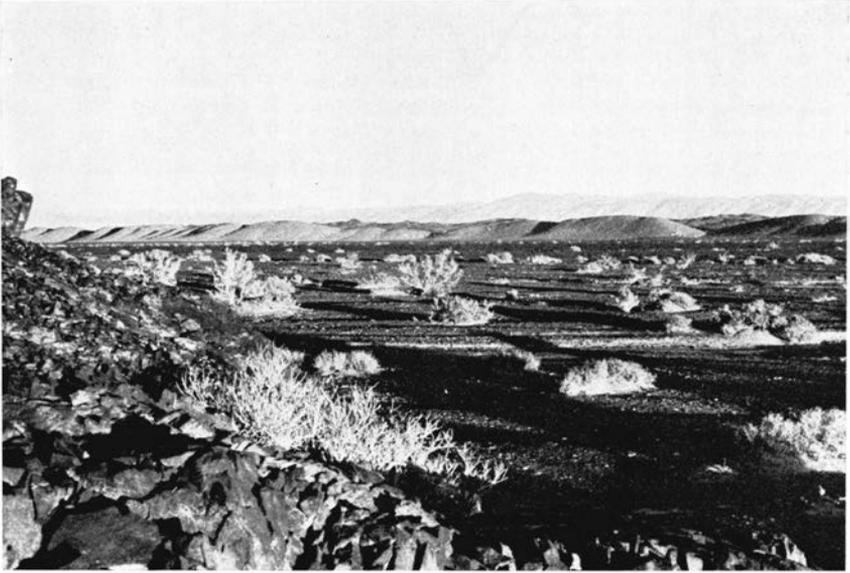


Figure 1. — *Ephedra* in dry river bed, Transaltai, Gobi.



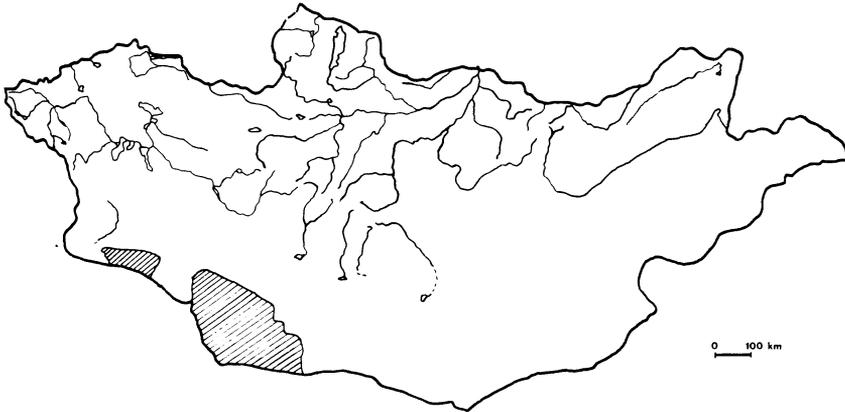
Figure 2. — Reeds in oasis, Transaltai, Gobi.

of the Gobi region and to record significant observations made recently in the area. It is not intended to discuss findings in detail, nor to compare them with other published work. Our reason for this is that it is anticipated that, in association with the establishment and management of protected areas in the Gobi, a programme of scientific research will be initiated, with international assistance, and that this will result in the gathering of more comprehensive information on the fauna of the area than the scattered observations made during the relatively short expeditions organized hitherto.

The expedition's itinerary is given in Annex I.

DESCRIPTION OF AREA

The Gobi region under consideration lies in the south-western part of the Mongolian People's Republic, adjacent to its international boundary with the People's Republic of China (see Map 1).



Map 1. — Mongolian People's Republic, with the indication of the planned Transaltai Gobi National Park and Djungarian Gobi Wildlife Reserve.

The elevation of most of the area is above 1,000 m and consists of undulating plains which are broken by ridges and mountain ranges. The highest peaks of the latter approach 3,000 m altitude. Mean annual precipitation for the more northerly parts of the area lie between 100 mm and 200 mm, but the major part of it receives under 100 mm p.a. Another important factor is that there is considerable variation, both spatial and temporal, in the distribution of precipitation over the region and of course a significant proportion of it occurs as snow.

Mean annual temperatures range from a maximum of the order of 25°C to a minimum of — 15°C, with the absolute maxima

and minima exceeding these figures considerably. In common with many desert areas, the Gobi experiences strong winds at times.

Large tracts of the area are rocky or strewn with stones which are often strikingly coloured and polished by wind-blown sand. Alkali flats are encountered in some localities, but there are surprisingly few sand dune areas and those that occur are of limited extent. There are extensive areas which are almost devoid of vegetation. The most widely distributed plant of the region is the Saksaul bush, *Haloxyton ammodendron*. It is the dominant plant over vast areas of the plains and extends into broken country. Along dry water courses (Mongolian = Saylor), which have experienced a flash flood within the previous ten years or so, vigorous stands of bushes of *Tamarix spp.* occur, whilst in mountain canyons and valleys *Ephedra przewalskii* often characterises the vegetation. This latter plant is also commonly associated with saksaul. In several localities, particularly on the lower slopes and wide valleys of rolling hills, wild onion, *Allium spp.*, are abundant. These are frequently associated with grasses to form extensive areas of short green pasture.

Stands of a poplar tree, *Populus diversifolia*, are found at many of the oases and at the larger ones, a willow, *Salix ledebouriana*, occurs. Conspicuous yellow-stemmed bushes of *Caragana spp.* are common in many localities and these, together with other legumes, such as *Amniopipthanthus mongolicus*, appear to be much sought after as browse species by the larger ungulates of the region.

A successful coloniser of the sand dune areas is the spiny *Nitraria sphaerocarpa*, which, in addition to contributing to the stabilization of dunes, is also a palatable species.

OBSERVATIONS ON LARGE MAMMALS

Panthera uncia, Schreber, 1778, Snow Leopard

During the 1976 expedition tracks were seen at Shar Khulsny Khafsal. Four specimens were encountered in caves on the western slopes of the Atas mountains at Myltsin Nourou in 1975. These consisted of a female and three cubs. Although in most situations in Mongolia snow leopard occurs in mountains supporting populations of ibex, in this case no signs of ibex were found, though wild ass spoor was plentiful in the vicinity. Around the caves the remains of wild ass, Tolai hare (*Lepus tolai*) and Rock partridge (*Alectoris graeca*) were found.

In 1974 snow leopard tracks were seen at Segs Tsagan Bogd, Edergiin Nourou and on the Sheviet Ulan Ula ridges.

Canis lupus, Linneaus, 1758, Wolf

Tracks and droppings have been seen near practically all waterpoints in the Transaltai Gobi. During the 1976 expedition, one wolf was sighted at Shar Khuls oasis and a pair was seen at Takhilgiin Us oasis.

Ursus pruinosus, Blyth, 1854, Gobi bear

Spoor was seen at Shar Khuls oasis in 1974, 1975 and 1976. Droppings and tracks were found at Seg Tsagan Bogd and Toros Bulag in 1975.

Equus przewalskii, Poljakov, 1881, Przewalski's or wild horse

Neither tracks nor sightings have been reported since 1968 (Dobchin, 1970 ; Tsevegmid and Dashdorj, 1974). In recent years regular disturbance by herds of domestic stock at waterholes in the Djungarian Gobi has contributed to the wild horse's decline. After travelling in the area, examining the problems and discussing the situation with local inhabitants, we are of the opinion that this species is certainly extinct in the wild.

Equus hemionus, Pallas, 1755, Asiatic Wild Ass

This animal is regularly seen in northern and southern parts of the Transaltai Gobi. It is not very numerous but fairly frequent, mainly in the neighbourhood of waterpoints and in canyons where its food is more abundant. In the mountainous parts, numerous conspicuous paths used by the wild ass are frequently encountered. It occurs as a solitary animal or in groups of three to five, sometimes up to eight individuals. The ass is more abundant in the Djungarian Gobi, where large groups of up to 30-40 animals may be seen. A herd of more than 300 animals was recorded at Khonin Usny Gobi in 1974. It was interesting to observe that, like their African relative, the zebra, groups of wild ass invariably attempted to cross in front of the vehicle when it was travelling parallel to their line of flight at close quarters.

Camelus bactrianus, Przewalski, 1883, Wild Bactrian Camel

This species is restricted to the Transaltai Gobi. It is often found in valleys and canyons where the vegetation is more abundant, but it also visits the waterholes in the adjacent plains (Shar Khuls, Khavtag Shand, Maikhan Bulag, Zambilch, Barun and Sun Scharga, Takhilgnii Us). The wild camel occurs mainly in the northern and southern parts of the Transaltai Gobi, but regularly used paths are found in the central Cynhrin Holo area. It can be solitary or occur in groups of up to more than 30 animals throughout the year. During the 1976 expedition, a herd of 18, of which 6 were young, was recorded in the Oni Oundur Nourou canyon, and a herd of 34 with 5 young of the year was observed

near Maikhan Bulag. A domestic camel was attached to this latter group but was unable to keep up with the herd when it ran off. This animal was shot and found to be a young male about 3 years old. It was emaciated, possibly diseased and in very poor condition.

It would appear, from information accumulated during the four expeditions mentioned above, that there are four areas in the Transaltai Gobi preferred by the wild camels. These are :

- (i) The north-western area including Takhilgiin Us, Maikhan Bulag, Har Hairhany Nuruu and Oni Oundur Nourou.
- (ii) A central zone covering Barun and Sun Scharga, Tsagan Burgas and Schar Khuls Bulag.
- (iii) A southern concentration including Ubur Myltyts, Havtagai Shant and Zambilch.
- (iv) The south-eastern area situated to the south and east of the Segs Tsagan Bogd massif.

Numerous paths across the desert join these watering and grazing areas, but the pattern of wild camel movements has yet to be elucidated.

With regard to food habits, although no stomach content or dung analyses have been carried out, observations on browsed plants indicate that wild camels commonly utilize *Haloxylon ammodendron*, *Salsola arbuscula*, *Caragana spp*, *Reamuria soongarica*, *Zygophyllum xantoxyllon*, *Nitraria sphaerocarpa*, *Ephedra przewalskii*, *Populus diversifolia*, *Eleagnus sp.* and *Clematis sp.*

On the basis of observations made to date, it is not possible to give an accurate assessment of the size of the wild camel population of the area. Counts made from vehicles during expeditions are extremely difficult to extrapolate in such a large area with very varied relief and habitat types. The only aerial census attempted to date, by Buindelger and Szaniawski in 1975, was unfortunately hampered by severe storms, although this technique probably holds most promise for the future.

However, having traversed the area and evaluated the data available, we consider that it can be stated that the wild camel population of the Transaltai Gobi probably lies between 400 and 700 heads.

The 1976 expedition was told by local informants that immature domestic male camels occasionally join wild herds but that they usually return after a time. They are certainly physically weaker than their wild counterparts and it would be virtually impossible for domestic males to mate with wild females as they

are apparently attacked and driven off by wild males when they mature. However, wild males sometimes visit domestic herds and mate with domestic females. In the 1976 season, five hybrids were born to domestic females around Gobi Altai Somon, out of a total of about 300 births. The hybrids are said to be more difficult to handle, have shorter hair and longer legs, though the females are noted for yielding more milk. Their shorter hair length, of course, results in low wool production. The hybrids are reported to breed with domestic animals.

A speed of more than 65 km/h was recorded when following a group of three wild camels during 1976.

Capra sibirica, Pallas, 1776, Ibex

This species is rare in the Gobi region in general, but it is locally common in Seg Tsagan Bogd and Edergiin Nourou.

Ovis ammon, Linneaus, 1758, Argali sheep

The argali is present in Seg Tsagan Bogd and in the Atas massif. It is common in the Edergiin Nourou ridges.

Gazella subgutturosa, Gueldenstaedt, 1780, Goitred or Black tailed gazelle.

This gazelle is scattered and occurs sporadically throughout the southern part of the Transaltai Gobi. It is more numerous in the northern part but usually occurs singly or in small groups. It is very abundant locally in the Djungarian Gobi (about 500 were seen in 1976), where it often occurs in groups of up to 30-40 individuals. The species is, however, completely absent from large areas of the region.

During the 1976 expedition, the black-tailed gazelle was seen mainly in foothills where green grasses and wild onion were abundant. When disturbed they were invariably observed to run towards the plains. They were often found 60-70 km from the nearest waterpoint. At the end of May, several solitary females were seen. It seemed likely that these were fawning, but time did not allow for a careful search for young. In Hallun Somon, where a pair is kept in captivity, the female gave birth to twins in the last days of May. The main fawning season is said to be first half of June.

Saiga tatarica mongolica, Bannikov, 1946, Mongolian Saiga antelope

This subspecies is now reduced to about 200 individuals in the wild and confined to the Shargin Gobi. Four individuals were seen in this area in 1976. A captive group of seven animals (four females and three males) is kept in a large enclosure in Hallun Somon and apparently breeds well.

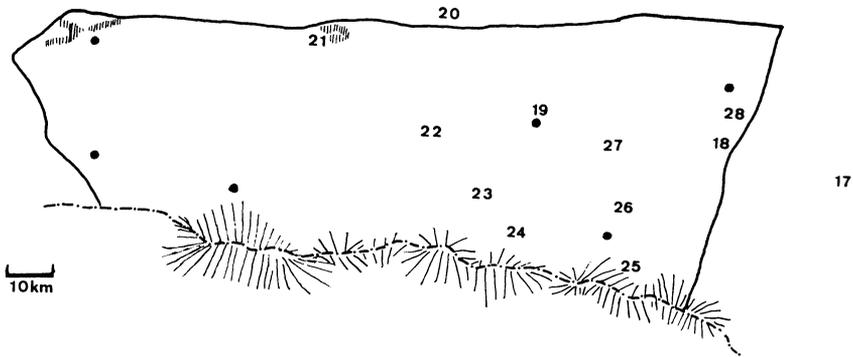
PROSPECTS FOR CONSERVATION

In order to protect representative samples of the Central Asian desert and semi-desert ecosystems, together with their unique flora and fauna, the Government of the Mongolian People's Republic decided in 1975 to establish protected areas in the Transaltai and Djungarian Gobi areas. The Mongolian authorities subsequently contacted international organizations with a view to securing assistance from international sources in this endeavour. The 1976 mission was invited to Mongolia as a result of these contacts. It should be noted that the habitats in a large proportion of the areas proposed for protection are still undisturbed and that the remainder is only minimally affected by the activities of man. With the exception of the wild horse *Equus przewalskii*, there are satisfactory populations of the indigenous large mammals still thriving in these areas. Measures have already been taken, or are planned by the Mongolian Government, to exclude human activities from what will become the Transaltai Gobi National Park (Map. 2) and to strictly limit them in what will



Map 2. — Planned Transaltai Gobi National Park.

become the Djungarian Gobi Wildlife Reserve (Map. 3). Domestic stock will continue to be trekked through this area twice a year to and from their winter pastures near the border with China, but



Map 3. — Planned Djungarian Gobi Wildlife Reserve.

they will be confined to agreed routes. Detailed negotiations have taken place with representatives of the local inhabitants with a view to explaining to them the importance of the Park and the Reserve and gaining acceptance of their establishment. The Government is currently taking action to legally and physically establish the Park and the Reserve. In conjunction with this, a programme of international assistance is being developed to help with planning and management of the areas and the institution of an ecological research centre is planned.

There are thus extremely good prospects for the launching of a 3,800,00 ha National Park and 900,000 ha Reserve which will protect a very large and well-preserved sample of arid and semi-arid desert, a fragile biotope which has been irreparably damaged by man in many other parts of the world.

This initiative of the Mongolian People's Republic is taken in the context of its overall longer-term objective, to establish a coordinated national system of parks and reserves designed to preserve representative samples of the ecosystems occurring within its territory.

SUMMARY

This paper describes the efforts being made by the Mongolian authorities to protect the Fauna and Flora of the Gobi region and records significant observations made during a series of expeditions to this region organized from 1972 to 1976, particularly on *Panthera unica*, *Canis lupus*, *Ursus pruinosus*, *Equus przewalskii*, *Equus hemionus*, *Camelus bactrianus*, *Capra sibirica*, *Ovis ammon*, *Gazella subgutturosa* and *Saiga tatarica mongolica*.

RESUME

Résultats des missions préliminaires à l'établissement d'un Parc National de 3 800 000 ha et d'une Réserve de 900 000 ha en République Populaire de Mongolie. La faune des grands mammifères de la région est encore riche et des renseignements biologiques sont donnés sur plusieurs espèces. Le cheval de Przewalski est malheureusement disparu à l'état sauvage.

ACKNOWLEDGEMENTS

We are grateful for the excellent support which the Mongolian authorities gave to this expedition, which was very efficiently organized by the Department of Wildlife Management, Ministry of Forests and Timber Industries. The assistance of O. Dordjara, Park Biologists, Mrs Z. Sabov, UNDP, Ulan Bator, and Dr. H. Reichardt, FAO, Rome, also contributed to the success of the expedition.

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Annex I

ITINERARY

N.B. : Numbers in parenthesis after place names refer to Maps 2 and 3.

- 22.5.76 Ulan Bator (by air) - Bayan Khongor - Bayan Undoor
- 23.5.76 Bayan Undoor - Khiaryn Goon (1) (Northern boundary of proposed Transaltai Gobi National Park) - Schar Khuls (oasis) (2)
- 24.5.76 Exploration of oasis on foot. Schar Khuls - Schar Khylsney Khafsal (canyon) (3) - Zamblikh (oasis) (4) - Khar Ula I (5)
- 25.5.76 Khar Ula I - Toron Khafsal (canyon) (6) - Barun Scharga (oasis) (7) Exploration of oasis on foot. - Khar Ula II (8) - Khar Sairini Hundi (dry river bed) (10) - Zagat Okh Sai (11) - Elist Ula (12)
- 26.5.76 Elist Ula - Baga Ula (east of On Undriin Ula) (13) - Maikhan Bulag (waterhole) (14). Explored area. - Takhilgrin Us (waterhole) (15)
- 27.5.76 Exploration of area on foot. Takhilgrin Us - Sheviet Ulan Ula (north-west boundary of proposed National Park) (16) - Bayan Obo (Somon centre and proposed site for National Park centre)
- 28.5.76 At Bayan Obo
- 29.5.76 Bayan Obo - Urtin Bulag - Takhun Bulag

- 30.5.76 Exploration of mountains on foot. Takhun Bulag - Holon Hunduk (17) - Goon Tamag Bulag (eastern boundary of proposed Djungarian Gobi Wildlife Reserve) (18) - Khonin Us (waterhole) (19) - Haldzan Numuu foothills (20) - Takhin Us (waterhole) (21). Exploration of area.
- 31.5.76 Takhin Us - Hudgiin Serten Ula (22) - Ich Schogor (23) - Khuh Undrin Ula (24) - Takhin Shar Nuru (25) - Oschin Ulan Ula (26) - Tangadin Khiar (27) - Gaschun Bulag (north-east boundary of Wildlife Reserve) (28) - Bugat somon
- 1.6.76 Bugat somon - Tugrig somon - Shargin Gobi - Khalun somon
- 2.6.76 Khalun somon - Burkhan Buda Ula (Game Reserve)
- 3.6.76 Exploration of area on foot. Burkhan Buda Ula - Khalun somon - Gobi Altai city.
- 4.6.76 Gobi Altai city (by air) - Ulan Bator

ADDENDUM

The legal status of the Great Gobi National Park, comprising the Transaltai Gobi National Park and the Djungarian Gobi Wildlife Reserve, has now been established by Decree 283/1976 of the Presidium of the Great People's Khural of the Mongolian People's Republic.