

# THE SNOW LEOPARD, *Panthera uncia*, IN MONGOLIA

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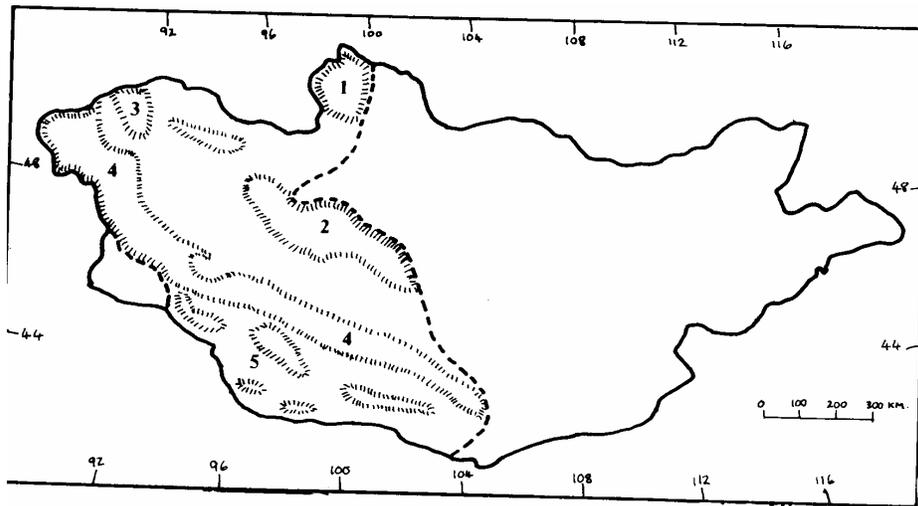
## INTRODUCTION

In the International Pedigree Book of Snow leopards 3, Blomqvist & Sten noted (1982) that no information had been received on the snow leopard in Mongolia. The present paper sets out to repair that omission by summarising the information in print on snow leopard in Mongolia and giving a brief account of its distribution in the country. This is essentially a review paper and it is hoped that more precise data may be obtained from fieldwork carried out in the future by Mongolian zoologists.

The author worked in Mongolia for two years, 1975--1977, and during that time

collected information on all the mammals of Mongolia. Information on the snow leopard was obtained from colleagues at the State University of Mongolia; from zoologists and hunters; from herdsmen and local informants from all parts of the country and from three journeys made by the author: to the eastern Gobi Altai; the Khangai mountains, and a 2000 km journey through the western Altai.

In this paper, the term "Mongolia" refers to the territory of the Mongolian People's Republic (MPR).



Mongolia. The heavy dotted line shows the approximate limits of snow leopard distribution in the country. The main mountain ranges lying within that area are shown.

1. Khovsgol 2. Khangai 3. KharkhyralTurgen Uul 4. Altai S. Transaltai Gobi.

## DISTRIBUTION

Several early travellers mentioned the presence of snow leopard in the mountains of Mongolia, including Carruthers (1913) who reported that it was found in the Altai and on Turgen Uul, but he did not find it in the Tannu ala range along the border with the *USSR*. The first detailed account was provided by Bannikov (1954) in his major work *on* the mammals of Mongolia. He considered that it was rare overall and gave the following distribution. Transaltai Gobi: common in the mountains; Altai mountains: found along the whole range, east to approximately 105 DE, but in small numbers and in some places not occurring every year. Within the Altai it was most common in the Kharkhyra massif (which adjoins Turgen Uul, in the north-west of Mongolia) and around the headwaters of the Bulgan river. In the Khangai mountains and the mountains of western Khbvsgbl it occurred only as an extreme rarity.

*Of* authors writing since Bannikov *on* snow leopard in Mongolia, Stubbe & Chotolchu (1968) described it as *one* of the rare carnivores of the MPR; Dulamtseren (1970) said it was rare and *few* in number; Dawaa, Nicht & Schunzel (1971) said it was a rare species.

The current distribution of the snow leopard in Mongolia closely follows that given by Bannikov (1954). In the Transaltai Gobi it cannot now be considered as common, but it is present on most of the mountain massifs. Dash et al. (1977) reported finding a female with three cubs there in 1975. It *occurs* along the Mongolian and Gobi Altai mountains, where it is most common in the higher, western part of the range. It is still extremely rare in Khbvsgbl and Khangai, and reports *from* these two areas are very *few* and far between. Indeed, given the recent reports of its disappearance *from* the Sayan mountains and Lake Baikal area, its current status in Khbvsgol is open to question. A map showing the distribution of the snow leopard in Mongolia is given in Figure 1; in this I have followed Dulamtseren (1970) in restricting the snow leopard to western KhbvsgOl, though some authors, e.g. Heptner & Sludskij (1980) showed its probable range as covering the whole of the KhOvsgbl region.

Dash et al. (1977) observed that snow leopard in Mongolia were usually found in places where ibex (*Capra ibex*) also occurred, and Bannikov said that ibex formed the main prey of the snow leopard, a statement supported by all the local zoologists and hunters I spoke



to. In Mongolia snow leopard have also been recorded as preying on the following species: kulan (*Equus h. kulan*), goitred gazelle (*Gazella subgutturosa*), argali (*Ovis ammon*), Tolai hare (*Lepus capensis tolai*), Altai snowcock (*Tetraogallus altaicus*) and partridge (*Alectoris chukar*) (Bannikov 1954, Dash et al. 1977). No doubt they also prey on marmots (*Marmota bobak*) which are common in the mountains of Mongolia in summer, and perhaps on other small rodents.

All my informants were unanimous in believing that the snow leopard was very rare in Mongolia. It is seen very infrequently, but tracks and droppings are found regularly in places and there is evidently a stable population in several parts of the MPR. No attempt at a census of the snow leopard population in Mongolia has been carried out and any attempt to estimate their number would be pure guesswork.

In neighbouring areas of the Soviet Union its distribution appears to follow a similar pattern; that is, of rare occurrence within a wide area of distribution. Ognev (1962), Novikov (1962) and Stroganov (1969) all agreed that snow leopard were rare in the Russian Altai and Sayan mountains; Andriuskevicius (1980) and Braden (1982) referred to its disappearance from, or reduced numbers in the Sayans and Lake Baikal area. It seems likely that in Mongolia and Siberia, at the northern edge of its range, the snow leopard has never

been very numerous. However, Grumm Grzhimailo (1914) who also reported on the rarity of snow leopard in the Altai and Sayans, said that formerly it seems not to have been particularly rare in the Sayans. He attributed its decline since then to natural, and not human factors. It is important to establish if this is in fact the case especially if any reintroductions of snow leopard to this area are considered.



Picture 2. Snow leopard habitat from Mongolia, Altai Mnts., Gobi-Altai Province. Photo: D.P. Mallon

Since field data on this species are so sparse, any conclusions drawn about population changes must be tentative. Nevertheless there is evidence to show that a reduction in the numbers of snow leopard in Mongolia has taken place this century. The annual totals of snow leopard skins obtained for export declined up to 1944 (see below). As hunting was widespread then, and during this period firearms became more powerful and more effective, and there was also an increase in the human population, there is no reason to suppose that a reduction in the amount of hunting was responsible for the smaller totals of skins obtained. In fact, uncontrolled hunting has caused a decline in the population of many species of mammal in Mongolia this century (Stubbe et al. 1968, Shagdarsuren 1966, Zevegmid et al. 1973). These species include the ibex, the major prey of the snow leopard in Mongolia, and its decline may well have led to a parallel decline in the numbers of the snow leopard. Strict laws now protect most species, and some have increased once more. An increase in the human population and an associated rise in the numbers of domestic animals resulted in more pressure on the land and more competition for grazing between wild and domestic herbivores, but this increase has not so far been heavy in the mountains of Mongolia. It has, however, been more marked in the Transaltai Gobi, one of the snow leopard's strongholds in the country, where there has been a deliberate policy of resettlement since the 1940's. Overall, the human population density is very low; in 1970 the average for the whole country was 0,79 inhabitants/km<sup>2</sup>, and the figure for the western areas was even lower.

### **HUNTING**

The snow leopard is known in Mongolia as "irbis" or "irvis" and is familiar to all Mongols through tales and hearsay and through its attacks on livestock. These attacks are very infrequent however, and though regarded in general as a pest, it is by no means as feared or detested as much as the ubiquitous wolf (*Canis lupus*) which preys constantly on the domestic herds. As a result, it is killed only very rarely following an attack on livestock.

Snow leopard have always been hunted in

Mongolia for their fur, but as Bannikov remarked, it has little commercial significance, owing to its rarity. He quoted figures for the number of snow leopard skins obtained in Mongolia in the first part of the century: 80 in 1908; 40 in 1927; about 20 annually from 1929-1932; 10 in 1933; 40 in 1934, then 15-25 annually up to 1944. There are no figures for recent years but the totals are certainly low and the figure of 40-50 killed annually given by Hibbert (1968) must be considered an overestimate. Snow leopard hunting is still permitted in Mongolia, between 16 October and 28 February; they are caught by spring traps left near carrion (Stubbe 1965) or shot by hunters who come across them by chance while hunting ibex. A recent report in *Oryx* (Anonymous 1982) said that foreign hunters would be allowed to hunt snow leopard. This is potentially an alarming development, since such a move could result in a marked increase in the tempo of snow leopard hunting in Mongolia, which has

not ratified CITES and which is now the only country to permit hunting of this species. In practice, most hunters are likely to come from countries which have ratified CITES and so the transport back of any skins or trophies would be illegal, and this may be sufficient to deter most potential hunters undertaking an expensive hunting trip.

### **CONSERVATION**

The government of Mongolia places great importance on the conservation of its wildlife and it earns valuable hard currency from the sale to foreigners of licences to shoot game, especially argali and ibex. Both exist in good numbers and are said to be increasing in several parts of their range, and hunting is now strictly controlled so as preserve their numbers; thus good stocks of prey animals exist and are being conserved. Many species are completely protected and others which may be hunted are subject to laws regulating close seasons, size of bag, etc. and this combination of complete protection and controlled hunting has stopped and in some cases reversed, the decline in numbers of many animals. There are reports of increased populations of wild ass and goitred gazelle, which form part of the diet of snow

leopard in the Transaltai Gobi, and it seems clear that sufficient stocks of prey animals to support a snow leopard population will exist for the foreseeable future.

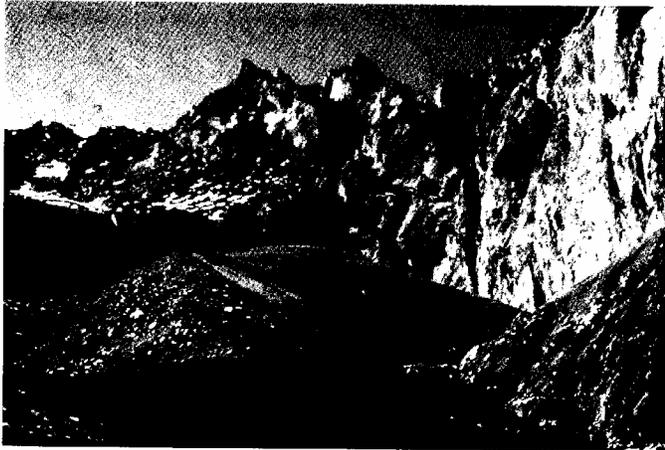
There are seven reserves where all shooting is forbidden, including the Khokh Serkh reserve in the Altai, which was set up to conserve ibex and argali; Dziecolowski et 31. (1980) conformed the presence of snow leopard in this reserve. In the Transaltai Gobi the recently established Great Gobi Reserve covers 4,5 million hectares and includes several massifs where snow leopard occur, and now offers protection both to snow leopards and their prey species. A pair of snow leopards are kept at a small zoo in Khaliun district of Gobi Altai province and it was hoped that they would breed. (Later on a third animal joined the pair and altogether three animals were therefore kept in this zoo. These three snow leopards were purchased by the zoos in Zurich and Helsinki in 1980 and arrived to Europe on 13. December 1980. Upon arrival they were all examined and found to be three males. One male is presently located in Zoo Zurich,

"Galdan, Zurich 11", while two males, "Ulan, Helsinki 43" and "Bator, Helsinki 44" arrived to Helsinki Zoo. "Ulan" is still kept in Helsinki and has bred there in 1982 with a captive-bred female, while "Bator" was transferred to Oklahoma City Zoo in 1981 to provide the captive US-population with new genes. So far this male has not bred in the USA while the Zurich-male has mated with one female in 1984. Also the Helsinki-male has mated in 1984 for the second time. Editor's note).

## CONCLUSION

From all the available evidence, it seems that snow leopard have never been common in Mongolia; they are now rare, but distributed widely in the mountains of western Mongolia. Some reduction in their numbers has taken place this century, and there has been a similar, perhaps more serious decline in the population in neighbouring areas of the Soviet Union.

There are several positive factors favouring the snow leopard in Mongolia today: a very



Picture 5. Ibex and snow leopard habitat in Gobi-Altai Mnts., Mongolia.  
Photo: D.P. Matton

low human population density results in less pressure on the land than in most other parts of Asia; there are several wildlife reserves; good prey stocks exist and are protected by a government which has a broad commitment to wildlife conservation. In short, the snow leopard population in Mongolia, though low, should have a secure future, but is threatened by the lack of a ban on hunting, despite the acknowledged rarity of snow leopards and the small amount of harm done by them to domestic animals.

The conservation of the snow leopard population in Mongolia is of particular importance in view of its decline in large parts of its world range, where an expanding human population, rising numbers of livestock, development activity and illegal shooting are threatening the snow leopard, its prey and its habitat. Therefore we can only ask the government of Mongolia to consider, as a matter of urgency, granting the snow leopard the legal protection it clearly needs to assure its continued survival there.

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Picture 6. The typical dry hills in the Altai Mnts., where the snow leopard occurs. Photo: D.P. Mallon

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