

OCCURRENCE OF SNOW LEOPARDS IN THE SOVIET UNION

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The snow leopard range in the Soviet Union extends north and northwest, in mountainous Central Asia, Kazhakstan, and in some areas of southern Siberia. These areas consist of the Pamir mountain ranges, Darvazsky, Peter the Great, and Gissarsky mountains and, together with the last one, a side range of the Baisuntau mountains.

The snow leopard range also includes the mountains of Tien Shan, Zalassky, Alajsky, Zeravshansky, Turkestansky, Kuralijsky, Fergansky, ^XChatkalsky, Pskemsky, Ugamsky, Talasky, Karatay, Kirgizky, Terskey-Alatau, Kungey-Alatau, Zailsky-Alatau, Ketmem, and even Dzungarsky-Alatau, Tarbagatai, and Saur. In the Altai, the snow leopard dispersal is irregular and only the southern parts have permanent populations. In other areas of the Altai, in the Zuisik mountains and around the Buhtarm, the snow leopard is transient. Earlier, the species was found in the Sayans and in the Pribaykal mountains, though individuals are no longer found there. Snow leopards have also disappeared from the Karatau mountains and have become very rare in the western Tien Shan as well as in the southwestern Pamir-Alai regions. The snow leopard ranges today consist mainly of alpine meadows, dismal passes, rocks, and snow covered mountain peaks in altitudes of about 3000 meters. Individuals have also been reported on the side ranges of the Dsunkarsky and Sailsisky Alatau, and in the lower rocky mountains at altitudes of 600 to 1500 meters.

Snow leopards have no permanent nests where they return daily. Females keep temporary nests only at time of birth and while caring for cubs until the age of

1 1/2 to 2 months. Snow leopards use the same permanent tracts in moving about. Each individual holds its own territory which it scent marks frequently. The trapping of snow leopards is done on these routes.

Hunting has been going on for centuries, until about 1970. During the years 1953-1968, a total of 425 individuals were caught from the Tadzhikistan alone. In the first ten years, about 37.5 pelts were obtained yearly, whereas in the last five years, the amount of pelts per year has been reduced to less than half the former amount.

Even though hunting snow leopards is now banned, their numbers are continually decreasing. Lately, live catching for zoos has been quite widespread and has already received some criticism. During 1963-1967, about 64 animals were live caught and from 1936 to 1969, a total of nearly 400 individuals were caught for zoos in the Soviet Union and in foreign countries. The method of catching is usually the same: traps that fasten tightly around the animal's paw. This causes foot injuries, tears, and damage and breaking of canine teeth.

Another reason for the snow leopard becoming increasingly rare is its slow rate of reproduction. An individual is not sexually mature before the age of 3-4 years. The observations in captivity have revealed that the gestation period in snow leopards lasts about three months and five days. In the wilderness, the newborn cubs are found in May, June, and even in July. Thus the mating season sets in February, March, and April.

The male courts the female for about a week, after which time she rejects him and the pair separates. At this time, both the mountains and the valleys are snow covered. Snow is scarce, however, on the southern slopes. Temperatures stay at about 10 to 15°C below zero. During the day, these rise to about 0°C and higher. Towards the end of March, the night frosts lessen and during the day

the sun radiates warmth into the valleys and passes. The pregnant females bask in the sun and, close to the time of parturation, they make nests in rock clefts and caves. Cubs are born blind and helpless. Litter sizes consist of from one to five individuals. The increase of human activity in the environment and the decrease of prey cannot help but influence the litter sizes. Lately, observations have revealed the average litters to be one to two cubs rather than three to four. At the time that the nest is abandoned, cubs are at most three to four months of age and are about half the size of their dam. They hunt with the dam through the autumn. At the age of 1 1/2 years, the cubs are fullgrown.

The female nurses cubs for three to four months, though she begins to feed them meat in the den at 1 1/2 to 2 months of age. At this time, one can find leftover bones, hairs, and feathers by the nest entrance.

The availability of prey for the snow leopard is uncertain and variable. One factor influencing availability is the abundance of local fauna which sustains the prey. The main prey species of the snow leopard in the Soviet Union are: Siberian ibex (*Capra i. sibirica*), bharal (*Pseudois nayaur*), wild goat (*Capra aegagrus*), goral (*Nemorhaedus goral*), Siberian roe deer (*Capreolus c. pygargus*), wild boar (*Sus scrofa*), argali (*Ovis ammon*), marmots (*Marmota*), as well as other rodents and pheasants and snow cocks.

Individuals most often caught are females and young. Occasionally snow leopards will attack domestic animals such as sheep, goats, mules, foals, calves, and dogs.

It is very difficult to determine the exact number of snow leopards in the Soviet Union. The species is very rare in the eastern Pamir, in the western Tien Shan mountains, and in the Altai, Saur, and Tarbagatai as well.

The species appears more numerous in the western Pamir and in large parts of the Tien Shan's western and inner mountains, and in the Pamir-Alai high mountain ranges. The number of individuals in the Soviet Union is estimated at about 1000, of which over 500 are in Kirgizhia, 200 in Tadzhikistan, and about 50 in Utzbekehistan. Snow leopards of the Kirgizhia are usually found in the inner mountains of Tien Shan. During 1936-1970, over 400 individuals were caught in this area. Snow leopards are commonly found in remote, inaccessible areas where human interference is minimal: in areas such as Tien Shan's inner and northern parts, western Pamir and Pamir-Alai's high mountain regions, though here, the number of snow leopard individuals seems to have decreased lately.

The hunting of snow leopards is totally prohibited and reserves have been founded for protection of the species.

The area of Alma-Ata National Park is 86,600 hectares, the greatest part of which consists of mountains: Zailjy Alatau (71,700 ha.). The highest mountain peak, Pik Talgar, reaches up to 5000 meters. Here, snow leopards stay for long periods of time in the higher altitudes. The State National Park, Aksu-Azabagli (73,000 ha.) is one of the oldest parks. It is located in the western parts of Talasky Alatau in the region of the high side ranges. The altitude is about 3000 meters.

The Issik-Kulja National Park has been enlarged. It now totals 702,000 hectares. In addition, the park is connected to a 510,000 hectare guarded hunting ground. The highest mountains reach 5000 meters. These are snow covered. In the lower altitudes, there are the alpine and subalpine zones where only a few snow leopards have been found. The growing human population, especially in the Issik-Kulja coastal areas, and the increasing tourism disturb the fauna of the park. In addition, there is some poaching.

The State National Park Sari - Tseleksky is 20,000 hectares and is located in the southern slopes of the Tsat Kalsky mountain range. The highest zone is partially covered with permanent snow; deeply sloping narrow passes break up the area. The highest peaks reach an altitude of 4200 meters.

Tsatkalsky, a State National Park, is divided into two parts: Baskielsaisky and Maidantalsky, which together make up an area of 47,500 hectares. Snow leopards are found mainly in the Maidantalsky areas. The paucity of roads makes the area inaccessible to humans.

The Altai State National Park was founded in 1932. There, snow leopards used to be common, but nowadays, they are found only in Chulishmansk, on the plateau and in the side range of Sayans. The Altai reserve is the north-eastern most area in the Soviet Union where snow leopards are protected in their natural habitat.

The snow leopard populations in the above mentioned reserves are quite stable. Licenced live catching of snow leopards, for zoos, is done mainly in Kirgizhia.