

NATURE PRESERVES OF THE SOVIET UNION

Kathleen Braden

Seattle Pacific University, Seattle, Washington 98119, USA

As participants in the Fourth International Snow leopard Symposium examine objectives for the future of this animal, we recognize the value both of improving the captive stock and preserving a wild population. We might envision a world in which snow leopard populations can only be assured through management in specially designated preserves throughout the

Asian mountain systems. Nature preserves of the USSR include eight examples of areas that in all probability contain snow leopard populations, either as permanent residents or seasonal visitors. Information is presented in

this paper about these preserves along with some comments of their organization and suggested contacts for non-Soviets who are interested in learning more about their operation.

OBJECTIVES

Preserved lands in the territory of the USSR date back to Tsarist times, but most have been created since the 1920's. The oldest preserve in snow leopard areas is the Aksu-Dzhabaglyy of the Kazakh SSR, which was originally incorporated in 1926 (Table I).

Under the new 1977 constitution and under the laws of the fifteen individual union republics (abbreviated as SSR, or Soviet Socialist Republic) which make up the USSR, reserved lands are defined as areas excluded from economic utilization in order to serve the needs of scientific research in addition to cultural and educational purposes. The main scientific tasks for the reserved lands are:

Table 1. CENTRAL ASIAN MOUNTAIN RESERVE

RESERVE	YEAR		UNION REP.	SNOW
	FIRST CREA TED(1)	SIZE(ha.)(2)		LEOP ARDS?(3)
Altay	1932	863861	RSFSR	yes
Aksu-Dzhabaglyy	1926	75000	KazSSR	yes
Alma-Atinskiy	1931	71700	KazSSR	yes
Besh-Aral	1979	?	KirSSR	?
Chatkalskiy	1947	34800	UzbSSR	yes
Issyk-kul'skiy	1948	781600	KirSSR	yes
Kitab Geol. Res.	?	?	UzbSSR	?
Miraki	1976	?	UzbSSR	?
Nuratinskiy	1975	?	UzbSSR	?
Ramit	1959	16100	TadSSR	yes
Sary-Chelekskiy (Biosphere Res)	1960	23868	KirSSR	yes
Zaaminskiy (4)	1960	10500	UzbSSR	yes

Total 1877429 (5)

Notes: (1) source: Fischer

(2) sources: Fischer, Bannikov; for comparison, Denali National Park in Alaska is 1.6 million hectares (ha.), Yellowstone is 898349 ha.

(3) Determined by author from articles published in USSR (Braden, 1982)

(4) national park in Turkestanskiy Mountains overlapping Zaaminskiy Reserve is 32300 ha.

(5) Total USSR zapovednik land is 10.7 million hectares in 1981; therefore Central Asian mountain preserves represent 17.5 % of total national preserves (Fischer)

- develop methods for recording populations of various animals
- determine the consequences of using land adjacent to the reserves
- study population fluctuations of wildlife
- study the ecology of plants and animals
- restore populations of rare and vanishing plants and animals.

This emphasis on reserved lands as "outdoor laboratories" is a function which makes them unique among national land preservation systems, according to Soviet academicians (Bannikov 1974, Isakov et al. 1980). Because the snow leopard is listed as an endangered animal in the Soviet Red Book, it is accorded protection in all lands it inhabits and is designated as an object of study in certain reserved lands.

ORGANIZATION AND ADMINISTRATION

The Soviets have a rather elaborate classification scheme for reserved lands, including both permanent spatial and temporal reserves (land set aside for specific prohibitions for a designated time period and then returned to ordinary utilization).

Zapovedniki is the Russian term for a unit of reserved land that is withdrawn from economic use, including interference by tourism, on a supposedly permanent basis. For purposes of this paper, the terms "zapovednik" and "preserve" will be used as synonymous. Of the 107 preserves in the USSR at the end of the 1970's, 12 are determined by this author to be in areas which may hold snow leopard populations, based on the probable range of this animal in the USSR (Braden 1982). Of these twelve preserves, eight have been definitely cited in Soviet articles as containing snow leopards (Table I). A second category of reserved lands which may be of interest to snow leopard researchers is the National Park, a relatively new classification, with only seven established in the USSR.

National Parks are zapovedniki which are modified to allow for limited tourism. One in the Turkestanian Mountains of the Uzbek SSR is partly overlapping with the Zaaminskiy Preserve, and may therefore contain a snow leopard population. The Issyk-kul'skiy Preserve of the Kirgiz SSR may be designated as having National Park status due to heavy pressure of tourism.

Finally, the Soviets have a category of reserved lands called Biosphere Reserves, in accordance with the United Nations program. Of the six biosphere reserves in the USSR, one probably contains snow leopards: the SaryChelekskiy Preserve of the Kirgiz SSR. While many other minor categories of reserved lands exist in the Soviet system, these three (preserves, national parks, biosphere reserves) are apparently of most relevancy to the snow leopard.

The preserves of the USSR with probable snow leopard populations are located in the following union republics: Russian (RSFSR), Kazakh, Kirgiz, and Uzbek. The Tadzhik SSR, which contains the Pamir Range, may have as large or larger a snow leopard population than other union republics, but limited preserve space has been designated there. The remoteness of the Pamirs may help them to function as a defacto preserve. In total, these preserves make up 1.5 % of the Central Asian land area, if one does not consider the steppe areas of the Kazakh SSR or the desert areas of the Uzbek SSR. The Altay preserve takes up 3 % of Altay Krai in the RSFSR.

Jurisdiction for preserve management is also fragmented. Table 2 presents agencies with direct responsibility for the zapovedniki, national parks, or biosphere reserves, but the reader is cautioned that this is a partial list only. Decision-making on management in the preserves occurs in many overlapping layers. For example, Glavpriroda has the main administrative power, but the USSR Academy of Sciences (AN SSSR) and the union republic level Academies of Science have rights regarding scientific research in the preserves. The State Hydrometeorological Service oversees the collection of some information in the preserves in to yearly volumes called letopis prirody (nature registers), which are issued in summary form every five years. Fischer reports that these volumes contain data on flora, fauna, hydrology, and other climate phenomena in the preserves.

MANAGEMENT ISSUES

Several issues regarding zapovednik management have been noted in Soviet articles, and these issues may have an impact on snow leopard populations in the areas. First, the splitting of administrative responsibilities as

noted above make for fragmented decision-making about the preserves. Second, the very objective itself of scientific research on the preserves may at times prohibit complete withdrawal of these lands from interference by man. While the objectives of the zapovedniki in particular call for prohibition of tourism, in the case of at least the Issyk-kul'skiy preserve, it appears that recreational use of the area has been in conflict with the goal of non-interference. Third, the determination of the size of the preserve, particularly the need for a surrounding buffer zone, has been a task which

Soviet geographers have given special attention. The largest reserve in snow leopard territory is the Altay. The Issyk-kul'skiy is also quite substantial, but as seen in Table I, the others are relatively small in area. However, determination of necessary size depends on future studies relative to the territorial requirements of snow leopards and the condition of the lands adjacent to the preserves. Fourth, western authors have been critical (Fischer 1971, Pryde 1971) of the fluctuations in size and status of preserves in the USSR. Some preserves have been disbanded for a time or diminished in size.

Table 2. MANAGEMENT AGENCIES FOR SOVIET PRESERVES

Under Ministry of Agriculture, All-Union level

(1) GLA VPRIRODA (Main Administration for Nature Conservation, Reserves, Forests, and Game Management) USSR Ministry of Agriculture, Moscow, USSR

(2) All-Union Research Institute for Nature Conservation and Reserves, Znamenskoye-Sadki 142790, P.O. Vilar, Moscow Region

Contact persons: V.E. Flint, L.A. Gavva, V.V. Krinitskiy

Other All-Union Agencies

(1) GOSKOMGIDROMET (USSR State Committee for Hydrometeorology and Control of the Natural Environment), 12 Pavlik Morozov Street, Moscow 123376, USSR

Contact person: Y.A. Starikov

(2) ANSSSR (USSR Academy of Sciences)

Institute of Geography, Staromonetnyi per. 29, Moscow, Zh-17, USSR

Contact person: Y.A. Isakov

Institute of Zoology, AN SSSR, Moscow, USSR. Contact: E. Matyushkin

Union-Republic level Agencies

(1) GLAVOKHOTA (Main Administration for Game Management and Nature Reserves of the RSFSR) Moscow, USSR

(2) TsNIL GLAVOKHOTA (Central Laboratory for Game Management and Nature Reserves). Losiniistrovskaya lesnaya baza RSFSR, Moscow N-347, USSR

Contact person: A.K. Fedosenko

(3) Laboratory for Rare and Vanishing Animals, Institute of Zoology, Kazakh Academy of Sciences, Alma-Ata 32, KazakhSSR. Contact person: A.F. Kovshar'

(4) Tien-Shan High Mountain Physical Geography Research Station, Kirgiz Academy of Sciences, Pokrovka, KirgizSSR. Contact: E. Koshkarev

(5) The Pavlovskiy Institute of Zoology and Parasitology, Tadzhik Academy of Sciences, Dushanbe TadzhikSSR. Contact: L.A. Abdusalyamov

(6) Institute of Zoology, Uzbek Academy of Sciences, Tashkent, UzbekSSR.

Contact: G.S. Sultanov

Notes: Some of the above addresses and names of contacts were derived from personal correspondence with the author; others are taken from published articles. The author apologizes in advance for any misunderstood affiliations of scholars and institutes.

However, the most recent trend has been the enlargement of the total reserved lands system in the USSR, apparent evidence of the serious commitment of the Soviet government to conservation strategy.

Despite these difficulties, the Soviet preserve system deserves to be noted by those of us outside the USSR as an excellent vehicle for both preservation of snow leopard populations and study of this animal in the wild. This author urges maximum contact between Soviet scientists and administrators and their non-Soviet counterparts to insure that the objectives and potential of the preserve system be realized to the benefit of the snow leopard.

REFERENCES

- BANNIKOV, A.G.: *Po zapovedllikam SOI'etskogo Soyuzu, "Mysl", Moscow, 1974.*
- BRADEN, KE.: *The geographic distribution of snow leopards in the USSR. Int. Ped. Book of Snow leo. pards 3:25-39,1982.*
- fISCHER, D.: *Nature reserl'es of the &JI'iet Unioll: An illJenrory. Sol'iet Geography: Rel'iew and trans. lation. 22 (8):500-522, 1981.*
- ISAKOV, Yu. A. and V. V. KRINITSKY: *Sistema osoho okhranyaemykh prirodnykh territoriy I' Sovetskom Soyuze, yee stUktura i perspektivy razvitiya. Izvestiya Akademii Nauk SSSR, seriya geograficheskaya 3:46-52,1980.*
- PRYDE, P.: *Recent trends in preserwd natural areas ill the USSR. Em'ironment. ConserI'. 4 (3): 172-/77,1977.*