

Snow Leopard Conservation Grants Program

PROJECT TITLE

Assessing the Snow Leopard Population in the Sailugemsky and Chuisky Ranges and Addressing Threats to its Survival

INTRODUCTION

A. Snow leopard threat or research issue to be addressed

Dr. Rodney Jackson and the later Mingma Norbu Sherpa have told us there is almost no data on Russian snow leopards. The last breeding habitat of the snow leopard in Russia is in the Altai-Sayan ecoregion (Poyarkov and co-authors, 1999; Kashkarev, 2001; Poyarkov, Lukarevsky in press); much of which is a UNESCO World Heritage Site. One of the largest and most concentrated grouping of snow leopards is situated near the Argut River Valley, in the area of the proposed Sailugemsky Zapovednik. The Sailugemsky population is the northernmost population of the world's snow leopard gene pool, and is therefore particularly significant for the survival and restoration of snow leopard populations. This snow leopard population is in decline from threats, such as poaching and tourism.

How will your proposal address the above issue

This proposed project will verify the presence of the cats and assess the status of the population. Results of the research will provide data about the Russian snow leopard population in general, and about the Sailugemsky population in particular. By clearly establishing the existence and extent of the Sailugemsky snow leopard population, the proposal will demonstrate a compelling need for a new zapovednik to protect that population forever.

The proposed program will establish permanent monitoring of the Sailugemsky Russian snow leopard population. Employees of the Altaisky Zapovednik and other local individuals will be trained in research techniques and data collection.

The program will identify threats to the survival of these snow leopards, including the poaching of snow leopards and their prey, destruction of habitat, tourism, and competition between snow leopards and livestock. Interactions with local people and the research data will enable the teams to understand with more precision the various human threats to snow leopards and assess ways to remediate those situations. An educational campaign will focus on the benefits of protecting the snow leopard, and local people will be involved directly in the preservation effort in positions such as research assistants, wranglers, and teachers.

A three-year action plan will be developed to insure long-term protection of the snow leopard population in this area.

BACKGROUND INFORMATION:

A. Prior research on this topic

In 1998-99 WWF-RU determined that the remote Shapshal range near the Altai/Tuva border contained a migration and genetic pool corridor that connected the western and eastern segments of the Russian snow leopard population. Under extreme threat from poachers and unregulated

nature management, the number of snow leopards in the Shapshal sharply decreased. An estimated two tenths of inventoried population remained in 2001 (Lukarevsky, Poyarkov in press; Kashkarev, 2001), with the overwhelming majority of snow leopards killed by inhabitants of adjacent villages. In 2006, research sponsored by the Altai Conservancy and Altai Foundation determined that the snow leopard population of the Shapshal range has been almost annihilated (Lukarevsky, 2006). Each time, local specialists were involved in the surveys (V. Trigubovich, V. Yantiev, V. Trulayev). A map of snow leopard habitat as identified in the studies done by E. Kashkarov is included in this proposal.

B. Prior conservation action directed at this issue

Since 1999, and for the last four years with the support of Altai Foundation, local anti-poaching teams have patrolled the Sailugemsky and Chuisky Ranges and the Argut River Valley. Beginning in 2003 that activity was done in conjunction with Altaiskiy Zapovednik, where positions were created for 10 anti-poaching rangers. These rangers have been trained in field research techniques that enable them to record data about the snow leopard and prey species. To improve biodiversity analysis and management, in 2003 a GIS Center was created at the Altai Foundation office in Birdsk, specifically to summarize environmental data collected over many years (field data stored in journals, photos, databases, etc.) about the Altaiskiy Zapovednik and the surrounding region. Dr. William Hegman designed the GIS program and provided on-site installation and training.

C. Study or activity site

Sailugemsky and Chuisky Ranges, Altai Republic, Russia

PROJECT DESIGN AND METHODOLOGY:

A. Specific aims

1. To assess the status and estimate the size of the snow leopard population, its habitat, and its prey species in the Sailugemsky and Chuisky Ranges.
2. To identify and address the significant threats to Russian snow leopards, in general, and to this population in particular.
3. To begin permanent and consistent science-based monitoring of this snow leopard population.
4. To contribute to a Russian snow leopard GIS and information data base.
5. To engage the local population in conserving the Russian snow leopard population.

C. Methods

Vladimir Trulayev, trained by Dr. Viktor Lukarevsky, will train 12 local Altai rangers in the use of various census tools, to establish reliable population estimates and counts. Criteria for selection include 5 years of in-field experience in Russian wilderness, preferably in the Altai. Training will consist of a week in the classroom focusing on topics such as the biology of snow leopards, their habitats and lifestyle, effective tracking methods, data collection techniques, and currently known threats. This will be followed by in-field training, which will be ongoing throughout the study.

Research teams will conduct two three-week studies in the Sailugemsky and Chuisky Ranges from February through April. Existing data shows that during these months the highest density of snow leopard signs are observed, and because it is their breeding season, the probability of snow leopard sightings is most likely. Tracking both the snow leopards and poachers is aided by

the snow cover, and teams can travel deeper into the wilderness because the rivers are frozen. Areas of study will be chosen on the basis of earlier data (sighting of snow leopard sign, identification of access routes for poachers, etc.) The intent is to study a quarter of the area under this proposed program, and in following three years, study the remaining three quarters.

The study will adapt the use of the SLIMS method, developed by specialists from ISLT, to survey the Russian snow leopard. 15 routes will be established, covering about 250 km. On this territory in different biotopes, 15-20 transects (duration 500-1500 m) will be identified, which will include the winter and summer habitats of the snow leopard. Transects will cover the identified areas in the Sailugemsky and Chuisky Ranges, with the hope that by dividing the program into two field studies, the likelihood of surprising poachers will increase.

Data will also be collected through the use of 12 non-invasive remote camera traps (TMs and CamTrakker Rangers), purchased through a grant by the Norcross Foundation, and local anti-poaching and field assistants will be trained in the use of this equipment to determine reliable population estimates. Technique will follow that has been developed by Dr. Rodney Jackson and Jerry Roe in their Handbook: Roe and possibly also Jackson will participate in the field work and provide training. The use of camera traps is new to this area, so experimentation with the equipment will be included. Cold is potentially an issue, and tests will be undertaken (moving some to sunny areas for periods of warmth, insulating some, solar panels, etc.) to prolong the battery life of the cameras.

Alexei Trigubovich, trained by Dr. William Hegman in 2003, will develop a GIS compatible data base specific to the Russian snow leopard.

Anti-poaching research and efforts are part of the field study. For future use, close attention will be paid to current investigation of the success of deployment of surveillance cameras in cabins frequented by poachers. In addition, a survey will be administered to the local population to help identify significant threats to the snow leopard population.

C. Analysis

The methodology will be checked by Dr. Rodney Jackson and Jerry Roe. Analysis of the data will be carried out using of GIS technology (ESRI ArcMap, ArcView), purchased and set up with funding from the Altai Conservancy, which also funded on-site training of Altai Foundation personnel by Middlebury professor William Hegman. This data will lay the framework for an action plan for the conservation of the Russian snow leopard. This plan will be developed based on the analysis of the threats to the species and the findings of the expedition.

OTHER PROJECT COMPONENTS

A. Local professional development planned

12 local Altai rangers will be trained in the use of various census tools, to establish reliable population estimates and counts and a growing data-base. Workshops for local teachers will be offered to educate them about the Russian snow leopard and its protection.

B. Involvement of local people

Local people will be directly involved in conservation efforts, perhaps offering small incentives to encourage their assistance recording signs of poachers. Instruction and assistance will be provided for the construction of buildings for livestock to protect it from threats from snow

leopards. The Telengit Association has been an integral part of the design of the Sailugemsky Zapovednik, and this proposed program will involve meetings with its leadership and members to discuss snow leopard conservation.

C. Education/public information

An educational campaign, including environmental camps for children, competitions focused on environmental learning, and presentations depicting the snow leopard and reasons for its protection will be designed and implemented to reduce motivation for the hunting of snow leopards and their prey species. The proposal includes the creation of a local organization “Snow Leopard Friends,” to involve young generations. This will work in conjunction with schools and youth organizations, as well as the Altai Foundation summer environmental camps for children.

POST PROJECT FOLLOW-UP

A. Dissemination of results

As a result of this project, the international scientific community will have access to the results of regular and reliable monitoring of the Russian snow leopard population in the Sailugemsky region. Results will be submitted for publication on Internet sites, including the Snow Leopard Network, in various journals such as the Russian Conservation News and others. In local Siberian and Russian media, articles will focus on educating the importance of protecting the snow leopard and illustrate the benefits of that protection. Schoolchildren and University students will be exposed to the research conclusions through environmental summer camps and classroom instruction.

Habitat mapping will show the snow leopard area, threats, and rate of population decline or increase.

B. Possible post project actions

The results will help complete the proposal for the Sailugemsky Zapovednik, which will permanently protect Russian snow leopard habitat and its biodiversity. Monitoring will be sustained in future years by nature protection agencies such as Altaisky Zapovednik, Katunsky Zapovednik, and the hunting service.

C. Evaluation

Over time, the expectation of the proposal is to see a reduction in poaching, measured by the results from more systematic anti-poaching expeditions and an increase of local participation in ongoing census work, conservation efforts, and interaction between communities and conservation organizations.

We plan to ask our long-time colleague and friend E. Kashkarov to check our findings.

The conclusion of the proposed program will include a written evaluation of the effort. Assessment of the camera trapping will focus on the performance of the cameras and the results of the experiments performed in the field, and recommendations will be made to adapt the program for subsequent studies.

A long-term action plan will be developed for sustained monitoring of this area, and will include an evaluation section with the following questions: Has this program led to better protection of the Russian snow leopard? Has the monitoring improved and, if so, how has it improved? Have the attitudes and dedication of the rangers improved? Has the program had a local impact?

Annual surveys will be given to a cross-section of the population, including the Telengit Association, anti-poaching rangers, nature protection agency administration, to determine perception of the program's effectiveness and suggested improvements.

TIMETABLE

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Prepare for the field work | | | | | | | | | | | | |
| Special educational field seminar for locals | | | | | | | | | | | | |
| Field work | | | | | | | | | | | | |
| Data analysis | | | | | | | | | | | | |
| Creating GIS-data | | | | | | | | | | | | |
| Work with locals, environmental education | | | | | | | | | | | | |
| Dissemination of results | | | | | | | | | | | | |

BUDGET

| Itemized Expenses (in US\$) | Total Needed | Total ISLT Request |
|---|---------------------|---------------------------|
| Administrative: Internet, long-distance calls, leasing premises for work. | 500 | 500 |
| Scientific Equipment: GPS "e-Trex Summit" - 4 pc., radio sets Midland GXT 400 -4 pc.; Maps of the region, scales 1:25000 or 1:50000 - 4 pc. | 1200 | 1200 |
| Other: accumulators and batteries for photo and video cameras; paper A4, A1, cartridges for office equipment, digital carriers (mini DV, CD, DVD, photo film); backpacks - 4, tents - 2, sleeping bags - 4; Medicines; Kitchen stock. | 1600 | 1200 |
| Transportation | 1200 | 700 |
| Stipend for team members for living expenses (20 days for 4 people at \$15/day = amount needed) | 1200 | 800 |
| Processing of data | 1800 | 700 |

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|--|--------------|-------------|
| Report production and results dissemination | 500 | 200 |
| Education/Awareness raising activities, Development of lay-outs and publishing printed materials (booklets, brochures); Ecological education activities. | 3500 | - |
| Contingency | - | 500 |
| Total in US Dollars: | 11500 | 4800 |

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Jackson, R. M., Roe, J.D., Wangchuk, R., Hunter. D.O. 2006. Estimating Snow Leopard Population Abundance Using Photography and Capture–Recapture Techniques. Wildlife Society Bulletin 34(3):772–781

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Zinchenko J.K., 1995. The Snow Leopard in Northeast Kazakhstan. "Irbis", the bulletin of club "Irbis ", N 1 (1).

CURRICULUM VITAE OF PRINCIPAL PERSONNEL

1. Vyacheslav Trigubovich (PI)

EDUCATION

1998 Masters degree from Novosibirsk State University
Thesis based on field observation in the Altai Mountains of populations of native Mountain sheep *ovis ammon ammon*

PROFESSIONAL EXPERIENCE

2003-present Executive Director, Altaisky Zapovednik
2003-present Founder and President, Altai Foundation
2002-2003 Deputy Director for Development, Altaisky Zapovednik
2002-present Founding Director, Altai Conservancy
2000-2002 Chief of anti-poaching team, Altaisky Zapovednik
1998-2000 Director of subproject of the GEF Trust Fund
1996-2000 Board member of national organization of the Druzhina Student Movement
1995-2003 Director, Siberian Interregional Center Zapovedniki (SICZ)
1993-1999 Inspector and anti-poaching ranger, Altaisky Zapovednik

2. Vladimir Trulyayev (Co-PI)

EDUCATION

2006 Currently working on PhD
2006 Trained in field research techniques by Dr. Viktor Lukarevsky
1994 Masters of Forestry, St. Petersburg Academy for Forestry

PROFESSIONAL EXPERIENCE

2004-present Deputy of the Director, Altaisky Zapovednik
1998-2004 Head of Patrolling Services, Altaisky Zapovednik
1994-1998 Ranger, Altaisky Zapovednik

3. Dr. Rodney Jackson (Technical Advisor)

Rodney Jackson, Snow Leopard Conservancy's Founder-Director, is the leading expert on wild snow leopards and their high-mountain habitat. Recipient of the 1981 Rolex Award for Enterprise, his pioneering radio-tracking study of these big cats in the remote mountains of the Nepalese Himalaya led to the cover story in the June 1986 National Geographic. He prepared the snow leopard section of the IUCN-World Conservation Union's Status Survey and Conservation

Action Plan for Cats, which serves as the definitive document on the needs and opportunities for preservation of the earth's remaining wild cats. He currently sits on the IUCN's Cat Specialist Core Group.

Rodney formerly served as Conservation Director for the International Snow Leopard Trust, leading the standardization of snow leopard field survey methods across the twelve snow leopard host countries. This methodology is referred to as the Snow Leopard Information Management System (SLIMS). Working with partner agencies, he has trained biologists in these survey methods in nature reserves in China, Pakistan, Mongolia, Nepal, Bhutan, and India. Rodney was instrumental in developing the in-country Snow Leopard Conservationist program for the Snow Leopard Trust, along with its Natural Partnerships Program, which involves zoos in conserving snow leopards in the wild.

The Snow Leopard Conservancy has grown out of Rodney's twenty years' experience gained in working closely with rural herders and farmers whose lives are directly impacted when snow leopards prey upon their livestock.

His work has been funded by the National Geographic Society, Smithsonian Institution, U.S. Fish and Wildlife Service, U.S. Agency for International Development, Wildlife Conservation Society, WWF, and others. His publications include the section on snow leopards and clouded leopards for the Encyclopedia of Mammals; the Proceedings of the 8th International Snow Leopard Symposium, co-edited with A. Ahmad and published in 1997 by the International Snow Leopard Trust, Seattle and WWF-Pakistan; "Cats Up Close: Snow Leopards," in Great Cats: Majestic Creatures of the Wild, Rodale Press, 1991; and popular articles for International Wildlife, Animal Kingdom, and Geo (France and Germany).

4. Jerry Roe (Technical Advisor)

Jerry Roe is a wildlife ecologist, cofounder of Nomad Ecological Consulting, and an associate wildlife biologist with the Snow Leopard conservancy. He holds a B.S. in conservation biology and is an M.S. candidate in Ecology, Conservation and Organismal Biology at San Jose State University in California. His interests include population ecology of snow leopards, noninvasive monitoring techniques, predator-prey relationships, and carnivore ecology. His master's thesis is focused on the individual identification of snow leopards using distinct pelage patterns. He is a member of The Wildlife Society.

Dr. Viktor Lukarevsky

Please note that Dr. Victor Lukarevsky, cited in the grant application, is no longer available during the timeline of this program.

LETTER OF ENDORSEMENT AND PERMITS

No letters of endorsement or permits are required.

Kosh-Agach region
Natural habitat of snow leopard

