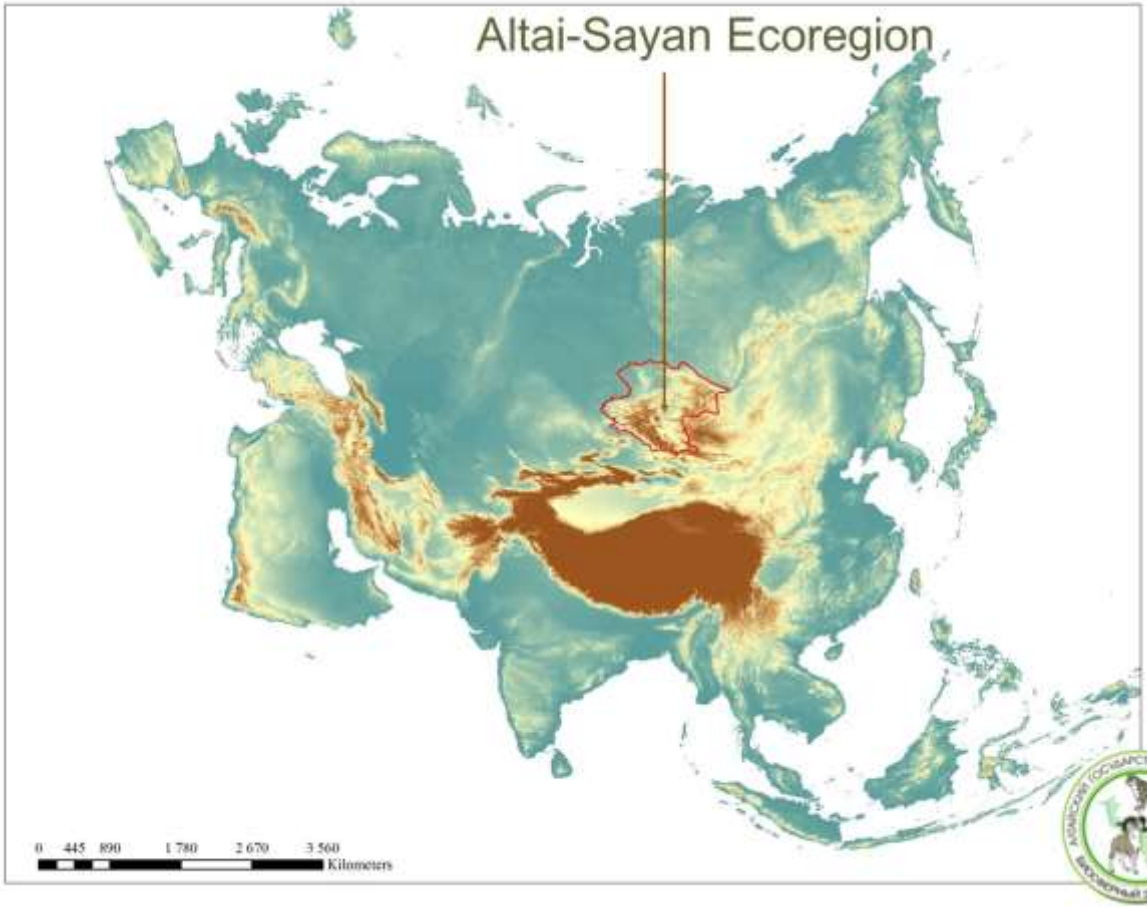
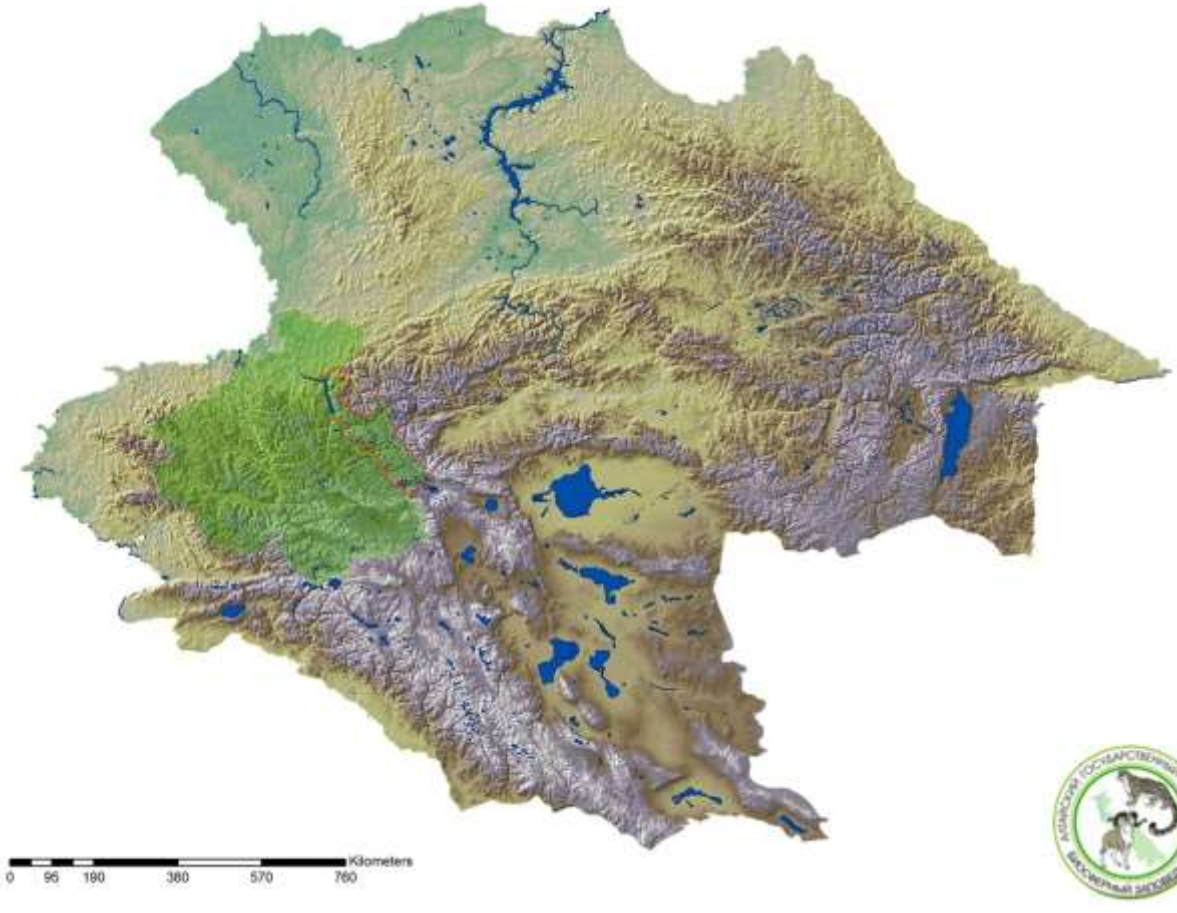
Role of Altaisky Federal Nature Reserve in Argali and Snow leopard conservation in the Russia-Mongolia transboundary zone

S.V. Spitsyn. Altaisky Federal Nature Reserve

Brief information about Altaisky Federal Nature Reserve:

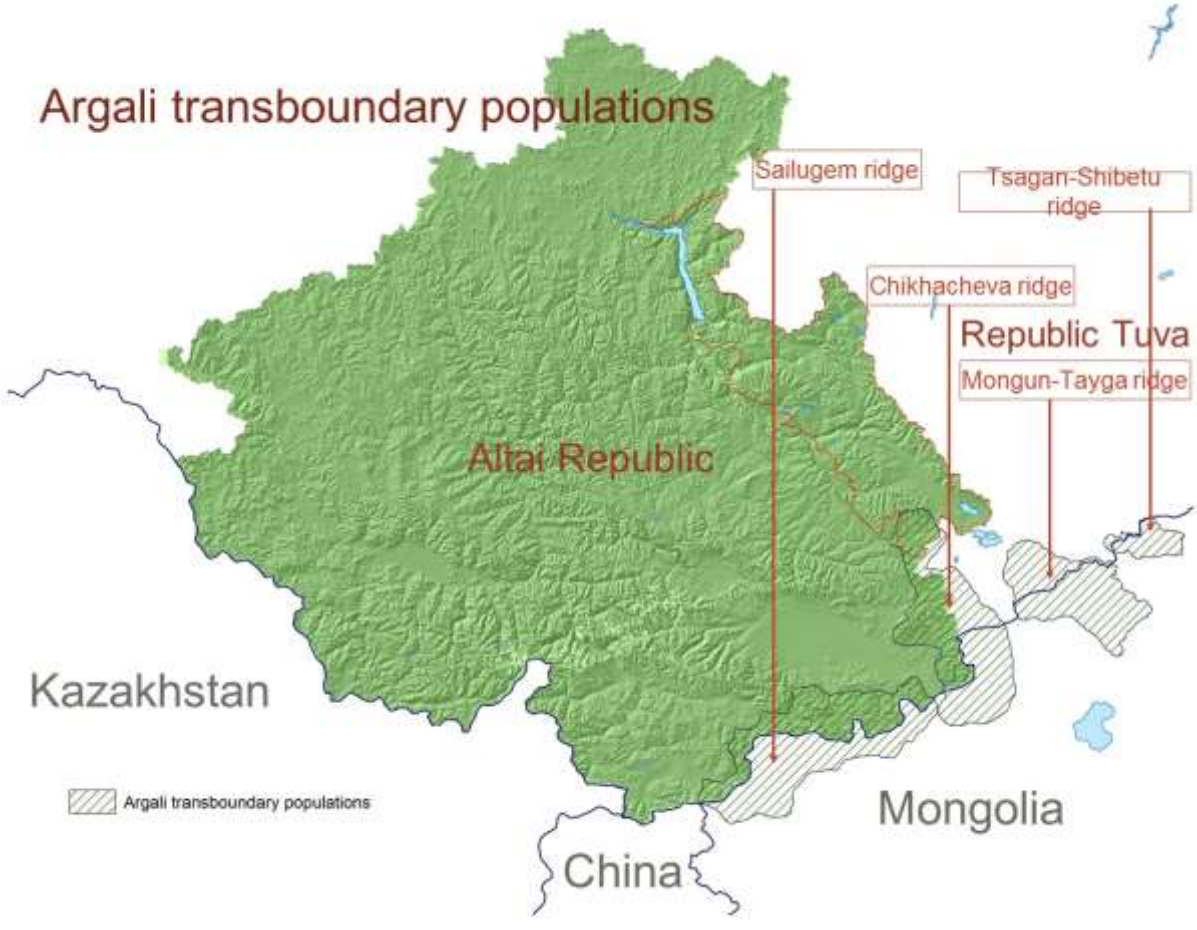
- Established in 1932.
- Situated in Russia in Altai Republic.
- Total area: 871,206 hectares including Lake Teletskoye (surface area of 11,410 hectares).
- In 2009, the Reserve was awarded Biosphere status.


Altai-Sayan Ecoregion
0 445 890 1 780 2 670 3 560
Kilometers


Kilometers
0
95
190
380
570
760

Altaisky Nature Reserve
Khakasia Republic
Tuva Republic
Altai Republic
Kazakhstan
Mongolia
China
TUROCHAK
SHEBALINO
ONGUDAY
ULAGAN
KOSH-AGACH

Participation of Altaisky Federal Nature Reserve in the conservation of transboundary populations of Argali


Argali transboundary populations
Sailugem ridge
Tsagan-Shibetu ridge
Chikhacheva ridge
Republic Tuva
Mongun-Tayga ridge
Altai Republic
Kazakhstan
Argali transboundary populations
Mongolia
China

Monitoring transboundary argali populations

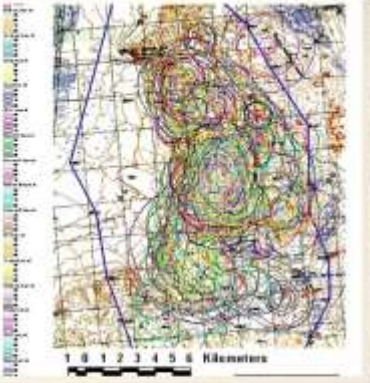
1986 r. Beginning of contemporary argali research in Altaisky Reserve

1989 r. Overwintering of argali in Altaisky Reserve is documented.

1991 r. Work began in Tuva Republic in the region adjoining Kosh-Agach District. Argali reproduction in Altaisky Reserve is documented.

1998 r. Evaluation of argali population in Russian part of the species' range is completed. Altaisky Reserve staff conduct a population survey on Chikhachev Ridge as part of a WWF project.

2003 r. First experience working with Mongolian specialists and colleagues from Ubsunurskaya Basin Nature Reserve.

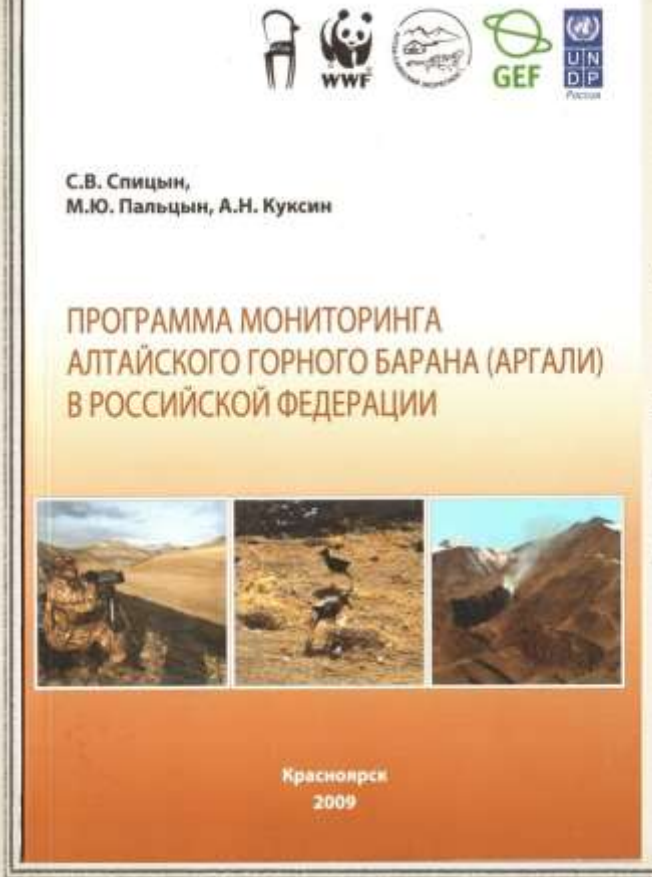


2005 r. Joint American-Mongolian-Russian radio-collaring project for argali near the Mandakh foothills in Mongolia. Project leaders worked with R. Reading on the US side and Amgalanbataar on the Mongolian side.

This work was continued in partnership with Ubsunurskaya Basin Reserve staff in Uvs Aimak, Mongolia.

- 2007 r. Regular surveys of transboundary argali populations on both sides of the Russia-Mongolia border. Primary implementers on the Russian side are Altaisky and Ubsunurskaya Basin Reserves.

- 2014 r. Staff of the recently created Sailyugemsky National Park join the argali population surveys. On each side of the range, each protected area was responsible for specific areas: Ubsunurskaya Basin Reserve (Tsagan-Shibetu, Mongun-Taiga ridges and the eastern slope of Chikhachev), Altaisky Reserve (western slope of Chikhachev), Sailyugemsky National Park (Ukok Plateau and Sailyugem ridge). Protected areas staff and WWF-Mongolia staff participate in Mongolian surveys.



Primary approaches

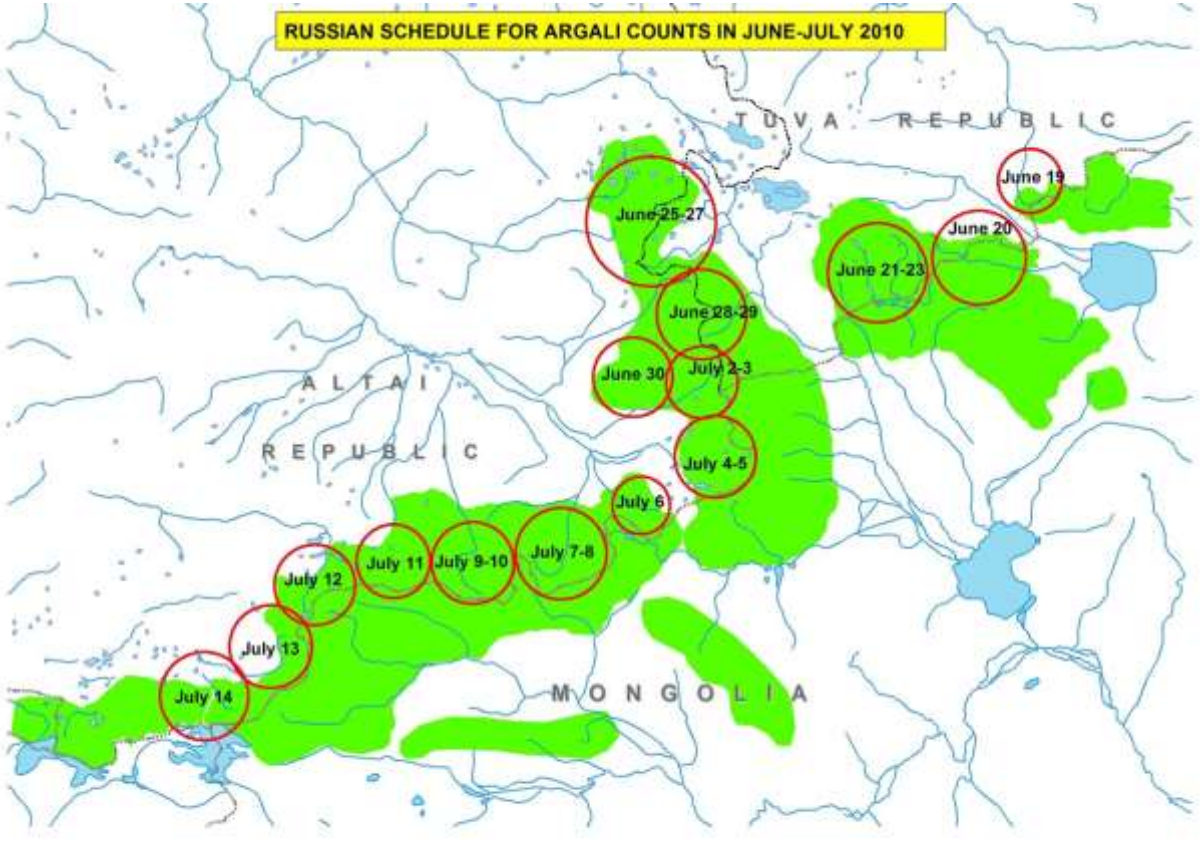
Survey method: visual along transects

Surveys are conducted simultaneously on both sides of the border in all parts of the habitat range.

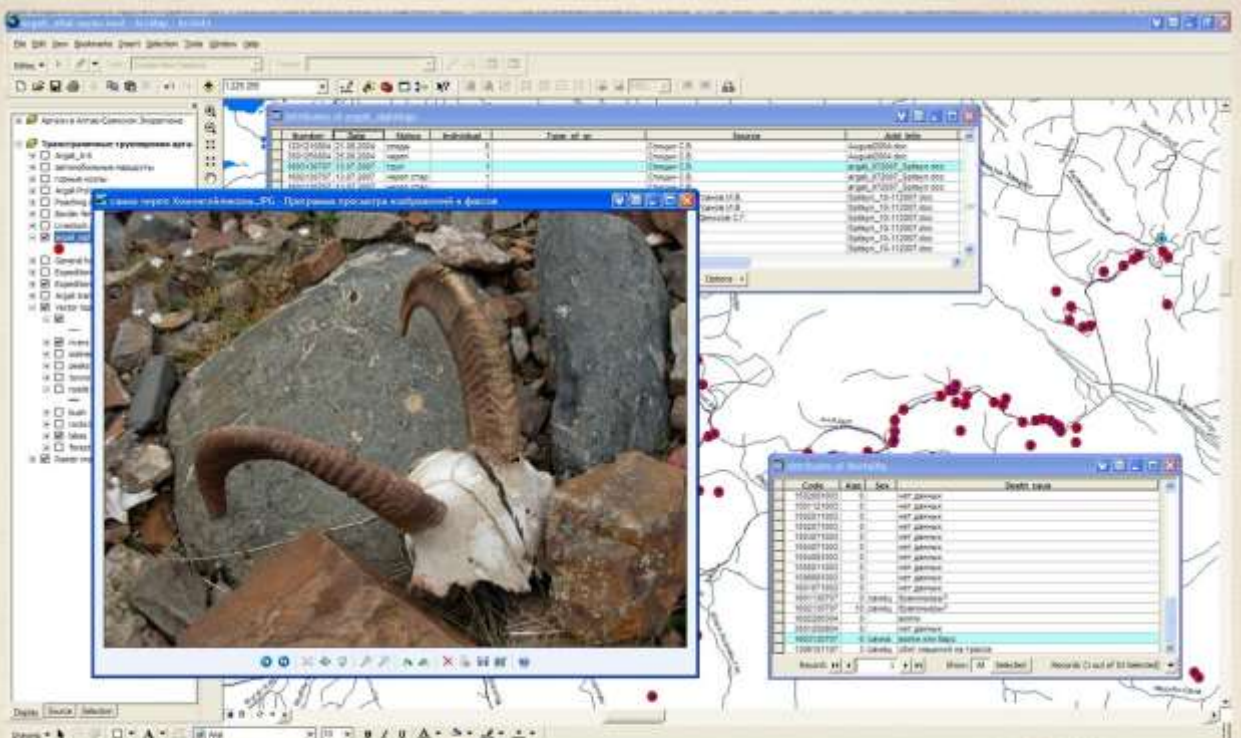
Parallel collection of survey data regarding livestock pasturing, poaching, and other anthropogenic impacts on the population.

Data collection on negative environmental factors influencing the population.

All data is recorded in a GIS database.



The simultaneous nature of surveying on both sides of the border is critical to receiving accurate results. Prior to the start of work, both sides agree on the survey schedule.



Access to various GIS databases for argali in an ArcGIS 9.3 environment.

СОХРАНЕНИЕ АЛТАЙСКОГО ГОРНОГО БАРАНА В ТРАНСГРАНИЧНОЙ ЗОНЕ РОССИИ И МОНГОЛИИ

Красноярск
2011

Altaisky Reserve staff participate actively in developing a national and intergovernmental conservation strategy for argali mountain sheep in the Russia-Mongolia transboundary zone, and the justification for creating a federal protected area on Sailyugem Ridge for argali conservation.

Sailyugem National Park was established in 2010 and began active operations in 2013.

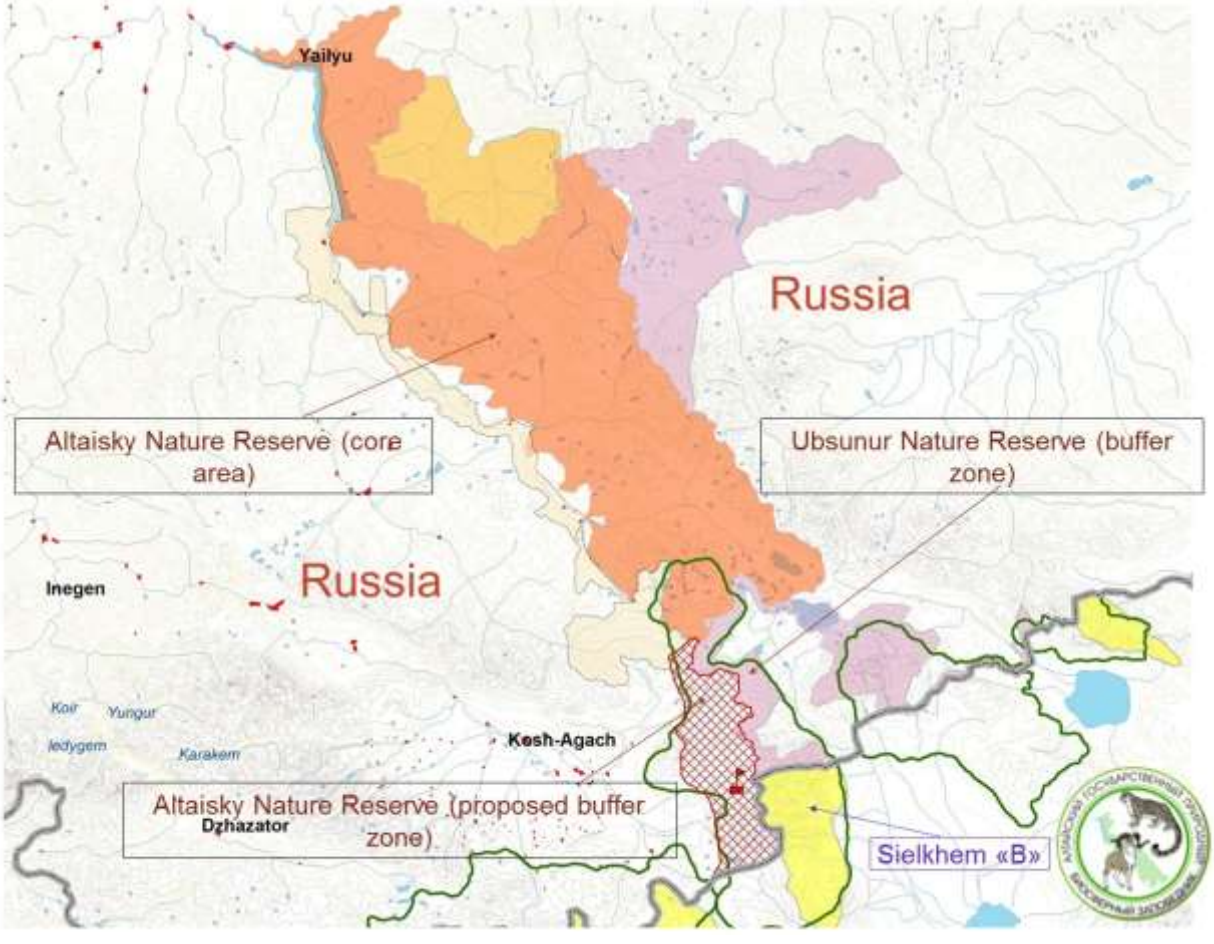
Some of Altaisky Reserve's practical argali research and conservation projects

- Altaisky Reserve's capacity to conserve the argali population is quite restricted by the absence of enforcement staffing across the majority of Chikhachev Ridge. Staff have enforcement authority over just 15% of the argali's range on Chikhachev on the Altaian-Russian side (the area with Altaisky Reserve).

- Other nature enforcement agencies have neither the human or financial resources to monitor this area.

- Poaching by local residents is high and almost totally unrestricted.

- There is a good solution to this problem – establish a buffer zone along the border with Altaisky Reserve on Chikhachev Ridge on the Altai Republic side. This could be an important step for the de facto establishment of a transboundary (transnational) protected area. Doing so would achieve full protection of the argali population on Chikhachev Ridge.


Yailyu
Russia
Altaisky Nature Reserve (core area)
Ubsunur Nature Reserve (buffer zone)
Russia
Inegen
Koir
Yungur
Iedygem
Karakem
Kosh-Agach
Altaisky Nature Reserve (proposed buffer zone)
Dzhazator
Sielkhem «B»

Participation of Altaisky Reserve in snow leopard conservation

Decrease of conflict between herders and snow leopards in Tuva Republic on Tsagan-Shibetu Ridge in 2007.

Joint project with Altaisky and Ubsunurskaya Basin Reserves and the local herder community.

- Field work in the early 2000s to study snow leopard habitat in Tuva on Tsagan-Shibetu Ridge revealed serious conflicts between local herders and resident snow leopards in that area due to felid attacks on livestock.

- The main reason for the attacks on livestock is a catastrophic reduction in the snow leopard's ungulate prey base due to significant levels of poaching and also easy access to an alternative food source – livestock.


Where the snow leopards enter the shelter

When snow leopards attack livestock in pasture, the losses are usually small: 1-2 animals.

When a snow leopard accesses a shelter corral, however, the losses are severe – 50 or even 80 animals. Some animals were killed immediately and the remainder died from their wounds not long thereafter.

Such losses enrage herders and prompt them to seek revenge.

Snow leopard trap.
In a shelter corral, a snow leopard can go from hunter to prey and meet its end!

Inside the corral, at first the snow leopard killed livestock thanks to its predator's instinct, but then in self-defense from the panicked animals milling about in terror in tight quarters. And it is not easy to leave the shelter in this situation, with livestock knocking him over in an attempt to avoid attack. Herders can house up to 300-400 or even more small-horned livestock in some shelter corrals.

Hearing noise in the shelter, herders try to eliminate escape routes for the snow leopard. In order to do this, all they have to do is close the ventilation opening on the roof. At that point, the herders attack the cat with all manner of improvised weapons. Sometimes, several cats per year died in this part of the range!

Problem:

- Snow leopard attacks on livestock corrals inflicts significant damage on herders who then exact revenge on snow leopards.
- Snow leopards on Tsagan-Shibetu Ridge have experienced significant losses at the hands of herders in corrals.
- The conflict was endless.

Possible solutions:

- Increase the wild ungulate population – snow leopard prey base. There is no quick solution and no guarantee that the attacks would cease.

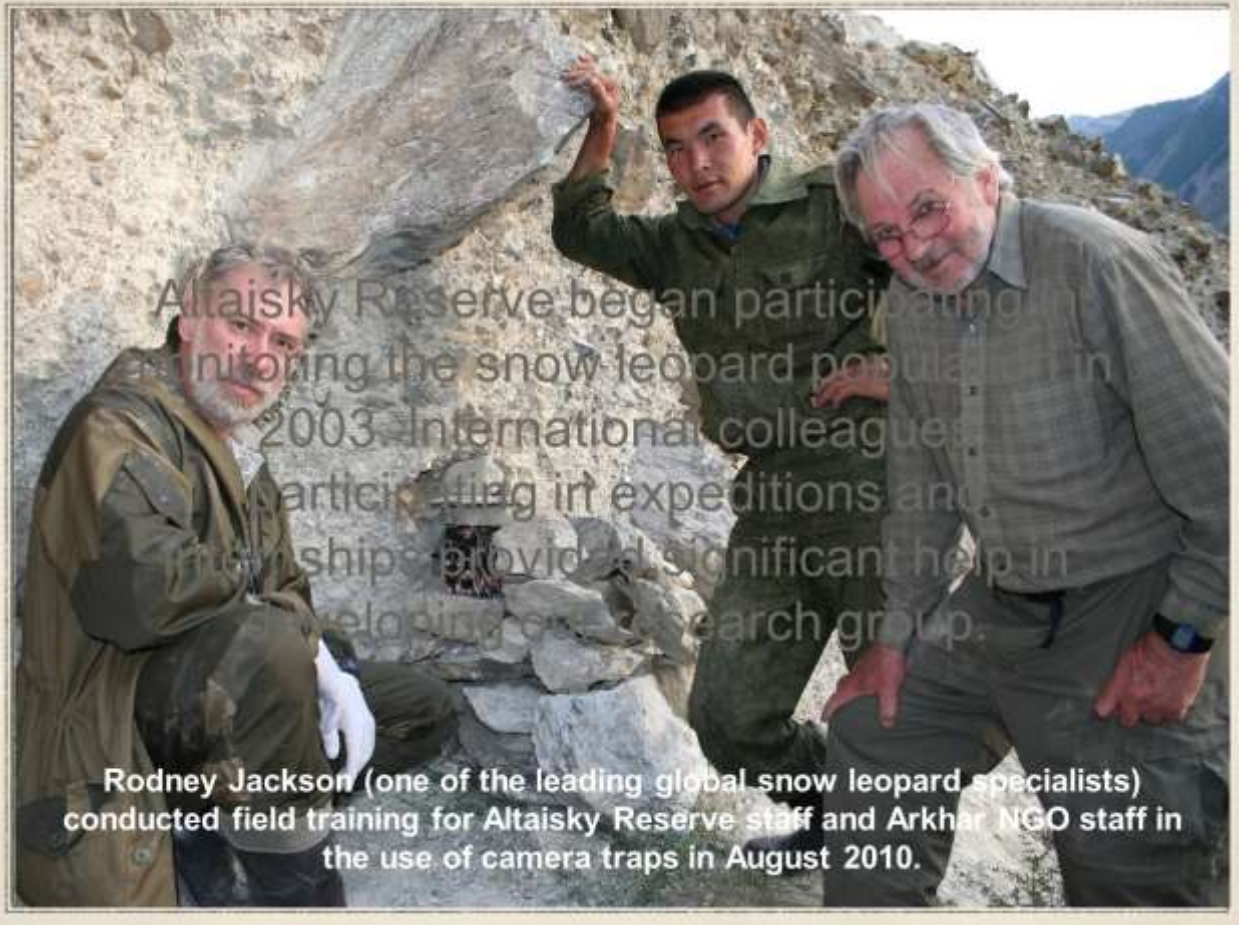
- Block snow leopard access to the shelter corrals without reducing air circulation inside the shelter for livestock. Easily and inexpensively accomplished.

In 2007-2008 as part of the joint UNDP-GEF, WWF, and Altaisky and Ubsunurskaya Basin Reserves, as well as Art Community Organization (Tuva), and Arkhar NGO (Altai), more than 70 herders in western Tuva were trained in covering ventilation openings in shelter corrals with metal fencing in order to reduce snow leopard-herder conflicts caused by decreased livestock losses by snow leopard attacks.

More than 40 corrals were protected in this fashion in Mongun-Taiginsky, Bai-Taiginsky, and Erzinsky Districts.

Long-term tracking of snow leopard attacks on domestic livestock in the pilot territory in western Tuva did not reveal a single case of a snow leopard accessing a shelter corral nor the killing of any snow leopards by herders.


Monitoring of
transboundary snow
leopard populations



Rodney Jackson (one of the leading global snow leopard specialists) conducted field training for Altaisky Reserve staff and Arkhar NGO staff in the use of camera traps in August 2010.

Participants in 3 Russian-Mongolian expeditions in Argut.
Altai Republic, November 2010.

Participants in 4 Russian-Mongolian expeditions on Tsagan-Shibetu Ridge, Mongolia, May 2011.

Students-alpinists

Expanding the circle of participants

Environmental education

Foreign volunteers

Expanding the circle of participants

Co-financing work

Russian volunteers

Expanding the circle of participants

Co-financing work

Environmental education

The staff of the Federal and regional protected areas of RA

Expanding the circle of participants

After 2012, training regional research teams began to proceed more quickly. Newly experienced Altaisky and Ubsunurskaya Basin Reserve staff began sharing their expertise with staff from other federal and regional protected areas.

In order to expand the circle of people trained in primary data collection, seminars to train mountain climbers and other volunteers were organized. Participants also included foreign volunteers, regional and federal protected areas staff. Research stretched across the majority of snow leopard habitat.

Trainee categories	Number trained	Number of seminars
Foreign volunteers	18	4
Russian volunteers	42	5
Altaisky Reserve staff	8	4
Katunsky Reserve staff	3	3
Sailyugemsky National Park staff	15	2
Belukha Nature Park staff	2	1
Ak-Cholushpa Nature Park staff	4	2
Students-alpinists	8	1
Local people	6	2

In August 2011, a group of volunteers from the United States, Spain and England (students, teachers, and graduate students) helped Altaisky Reserve to conduct snow leopard and argali surveys in Altai Republic.

Russian-American expedition to Argut in October 2012. One of the primary goals of this trip was to assess the route for potential foreign tourism to acquaint visitors with snow leopard ecology, work with camera traps, and deploy anti-poaching devices.

2nd international volunteer camp on Chikhachev Ridge in August 2013. Volunteers from the United States and Belgium participated.

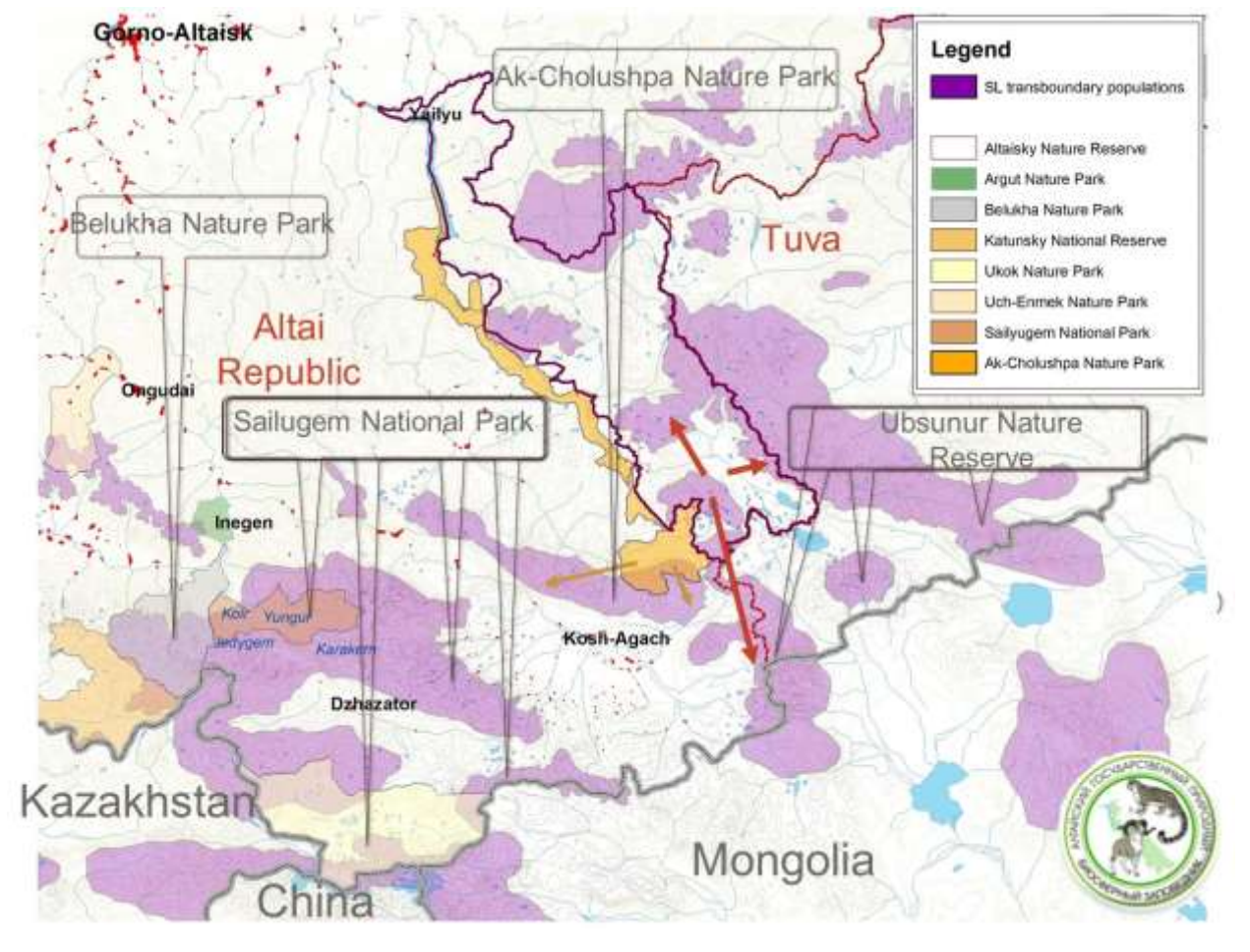
Student training – mountain climbers at a base camp on Chikhachev Ridge in summer 2013. Goal: increase number of people trained in primary data collection on snow leopards. Partners: Federation of Alpinism and Climbing of Altai Republic, Siberian institutions of higher learning.

Field training for Altai protected areas staff in summer 2014 on Chikhachev Ridge. 13 people from Katunsky Federal Reserve, Sailyugemsky National Park, and Ak-Cholushpa Regional Nature Park participated.

Field training for Altai region protected areas staff in summer 2015 on Chikhachev Ridge. 7 people participated from Altaisky and Katunsky Reserves, Belukha Regional Nature Park, and a volunteer from Novosibirsk.

August 2016 – 3 expeditions with Russian volunteers

September 2017 – 5 expeditions with Russian volunteers


Gorno-Altaisk
Ak-Cholushpa Nature Park
Yailyu
Belukha Nature Park
Tuva
Altai
Republic
Ongudai
Sailugem National Park
Ubsunur Nature
Reserve
Inegen
Kosh-Agach
Dzhazator
Kazakhstan
Mongolia
China
Legend
SL transboundary populations
Altaisky Nature Reserve
Argut Nature Park
Belukha Nature Park
Katunsky National Reserve
Ukok Nature Park
Uch-Enmek Nature Park
Sailyugem National Park
Ak-Cholushpa Nature Park

Several practical results stemming from the participation of Altaisky Reserve in snow leopard research and conservation projects

Altaisky Reserve staff participated actively in monitoring transboundary populations. They evaluated the populations of key groupings in Altai Republic and assessed secondary snow leopard habitats.

Altaisky Reserve staff participated actively in development of the Russian national snow leopard conservation strategy

Altaisky Reserve collaborated actively with Mongolian colleagues within the framework of the transboundary snow leopard monitoring program.


Work with local indigenous communities
to prevent snow leopard poaching
and population monitoring

Problem

The main threat to snow leopards is wire snare-poaching. This hunting method has reached a threatening level.

Animals are snared across the entire habitat. Snow leopards often fall victim to traps set for other animals (wolf, Eurasian lynx, musk deer).

The greatly isolated human population here is in a difficult socio-economic situation and that is the main reason for their poaching activity.

Our approach to solving this problem:

Organize regular preventative patrols to eliminate all snares in the region.

Organize anti-poaching patrols by an operational team to fight poaching.

Implement economic mechanisms to stimulate and engage local residents to share and improve snow leopard habitat (nature tourism, engaging residents in snow leopard monitoring, paying for protection, horse rentals, guide services).

Mergen Markov, a resident of the village of Kurkure (aka, Argut) used to be a snow leopard hunter. We were able to bring him over to our side, offering him work in snow leopard monitoring using camera traps. Now he actively works to eliminate poacher's snares from the landscape. December 2014.

Patrol in Argut in December 2014. Vasily Knyazev and Evgeniy Rakin, staff from Altaisky and Katunsky Reserves, are satisfied: they succeeded in removing freshly laid snares.

No animals suffered!

Now Mergen Markov “hunts” for snow leopards using camera traps.

Along the trail into Argut, Vladislav Igispaev (resident of Kurkure) and Vasily Knyazev, enforcement ranger for Altaisky Reserve.

We have developed a special textbook for training local residents in monitoring and snow leopard identification. Camera trap training occurs in the field.

Photo: V. Igispaev studies the particulars of snow leopard pugmarks.

In 2013-2014, two local hunters began working on the project in Argut.
Today, 4 local community members are participating in monitoring work.

In 2016, the project was handed over to Sailyugemsky National Park for continuation.

The Argut subpopulation of snow leopards is increasing: in 2012, there were 2 known cats and as of 2015-2016 there were 15 known cats.


We have transferred this successful technique of engaging local residents in camera trapping work in the Altai region to a different region. Residents of Saralan are now participating in monitoring work on Kuraisky Ridge.

Participation of Altaisky Reserve in environmental legislative work

Musk deer poaching has reached [illegible] across all of [illegible]. In terms of profitability, the [illegible] market for the species is comparable to illegal drugs. If measures are not taken, there were be a catastrophic reduction in musk deer populations over the next 10-15 years.

Musk deer poaching using snare traps also presents a significant threat to [illegible] leopards. These predators often fall prey to snares, especially younger individuals.

Dealing with this threat is complex. In addition to trying to stop the poachers, it is also critical to eliminate the stimulus – high demand for musk oil.

One conservation measure currently in effect is the species' listing in the Red Book, resulting in a complete ban for hunting and trading in musk deer derivatives. It is also important not to overlook jobs creation for local residents.

Meeting of the Commission for Reissuing the Altai Republic Red Book
At the initiative of staff from Altaisky Reserve and Sailyugemsky National Park,
it was decided to include musk deer in the Altai Republic's Red Book beginning in 2017.

Given the limitations of its landscape, Altaisky Reserve cannot play a significant direct role in protecting such rare species as the snow leopard and argali sheep as a result of its geographic location and natural conditions.

Despite that, as an organization with Biosphere status, Altaisky Reserve can have significant influence on processes related to the protection and study of these species in the Altai-Sayan Ecoregion: shaping public opinion, participating in monitoring, and protecting adjacent territory.

This role is increasing and we are hopeful that we can realize the Reserve administration's plans to expand the Reserve's borders to include Chikhachev.

This will be an important step to the creation of a transboundary (intergovernmental) protected area on Chikhachev Ridge and will ensure that Russia-Mongolia collaboration becomes more productive for the conservation of rare species.

Thank you for your attention!