

## **Technical Report on Snow Leopard Network 2013 Grant**

“Organizing monitoring of the Argut River basin snow leopard population in Altai Republic”

**Project Period:** 25 January 2013 – 30 November 2013-12-15

**Project Director:** Spitsyn S.V., director, Arkhar Regional Community Environmental Organization, 659000, Gorno-Altai, Kommunistichesky Prospekt, 28, 24.

**Project Goal:** Protection and restoration of snow leopards in the Argut River basin.

### **Project Tasks:**

Identify remaining areas inhabited by snow leopards in the Argut River basin.  
Involve Argut valley residents in the fight against illegal snare poaching and in monitoring the condition of the Argut snow leopard population using camera traps.

### **Participants:**

1. Spitsyn S.V., director, Arkhar and senior science researcher, Altaisky State Nature Reserve
2. Shumilov V.D., Altai Republic Alpinism Association
3. Kalinkin Yu.N., senior science researcher, Altaisky State Nature Reserve
4. Ponomarev A.V., government inspector, Altaisky State Nature Reserve
5. Pyzhankin M.A., Arkhar
6. Shamanaev A.Kh., data analyst, Altaisky State Nature Reserve
7. Sysov V.P., government inspector, Altaisky State Nature Reserve
8. Beletov A.A., volunteer, Arkhar
9. Samoylov S.V., volunteer, Arkhar
10. Kuzhnikov A.O., volunteer, Arkhar, graduate student Irkutsk Agricultural Academy
11. Markov M., resident, Argut village
12. Bobrov R., operational team leader, Altai Republic Committee for the Protection, Use, and Reproduction of Wildlife
13. Five additional inspectors from the Committee

### **Project Financing:**

In addition to support from the Snow Leopard Network, the project also received support from Snow Leopard Conservancy, WWF, Weeden Foundation, Altai Project, Altaisky State Nature Reserve, Bask Company, Sibinzhiniring Company, individual donors.

### **Project Research**

*Work conditions and winter seasonal variability, 2012-2013*

Home to the remnants of a formerly strong population of snow leopards, the Argut basin can readily be described as inaccessible. During summer surveying, the river itself makes things difficult, rushing and deep, as do its tributaries. The Argut cannot be forded on horseback, let alone on foot, and there are just two bridges along its entire length. Moreover, there are very few trails, and traveling on the river itself is very dangerous. The majority of the Argut River basin is inaccessible to researchers in the summer months. During the winter, when ice covers the river and its tributaries, there is much greater freedom of movement. This winter we

experienced anomalously high levels of snow. The approaches to the region were blocked by drifts and avalanches. We were forced to conduct all of our expeditions, both for enforcement and research purposes, on foot or, when possible, on horseback from Dzhazator (the closest accessible settlement, 48 km away). For the first time ever in our studies, our scientists used skis to conduct their work. Such significant snowfall resulted in frequent and powerful avalanches that also impacted our work. During the field season, our primary means of surveying is to search for and track snow leopard spoor in order to determine suitable locations for future deployments of camera traps. We were unable to search for scrapes as they would have been covered in snow.

### *Research results during the winter field season, 2012-2013*

Four expeditions took place during the winter field season: 2 research trips (January and March) and 2 enforcement patrols (November, February). The following areas were surveyed: the Kalanegir, Iedygem, Bartuldak (left branches of the Argut) river basins. In March the Karakem River (right tributary of the Argut) was surveyed for the first time. Spoor of a female (presume) snow leopard with two kittens were found at the headwaters of the Kulagash River in January as well as the tracks of a female in estrus in the Karakem basin in March (3km long spoor), as were two scat samples collected for DNA analysis. The tracks of a male were found in March near the Kulagash River's mouth. Cameras deployed in Iedygem regularly recorded images of 2 snow leopards (Vita and Kryuk), animals that actively visit a particular marking site. The locations where the spoor was found and camera deployments are both indicated on the attached map. Camera trap data is provided in Table 1 in the appendix to this report.

### *Description of the spring-fall 2013 survey seasons*

Planned summer snow leopard research activities in the Argut basin were canceled due to climate anomalies, particularly in the area around Mount Belukha. The spring was cold and very late arriving. Even by early summer, there was still extensive snow cover, making it impossible or at least very difficult to search for scrapes. Over the summer, rain was almost constant, and as a result, many of the river crossings were impassible, and bridges were destroyed. High precipitation also increased the danger of rock falls and mudslides. There was also relatively frequent snow during the summer. Taken together, these conditions made summer field work quite risky, and lower the chances of successfully reaching our goals, as fresh snow covered scrapes and other evidence of snow leopard activity. The only work we were able to complete was servicing of deployed camera traps. It only became possible to conduct fieldwork toward the end of November, when water levels dropped due to freezing temperatures and the end of glacier melt. This work continues even now, in December.

### *Results of camera-trapping in summer-fall 2013*

During the summer, camera traps were deployed in Argut in only two locations. Three cameras have been in place for over a year at a scent marking site on the left bank of Iedygem River, a tributary of the Argut. Two of these record photographs and another video. A fourth camera was placed in early April by a hunter from Argut village (aka Kurkure) – Mergen Markov, as part of a collaboration with Arkhar. It was installed not at a marking site but along a snow leopard's trail. On May 15, 2013, the camera trap photographed a snow leopard not previously recorded by us. It is possible that it is the image of a pregnant female. This

hypothesis is made based on the animal's exterior appearance (large barrel, relatively "light" head). This year, possibly in connection with the rainy summer, the male Kryuk did not climb higher up the mountains, instead remaining close to the marking site in the forest area. And while in 2012, snow leopards stayed away from the camera trap site all summer and half of the fall, this summer Kryuk visited the site four times. Kryuk also visited the other, right bank of the Iedygem, passing along the route tracked by Mergen Markov's camera trap. Another rare felid – the manul cat – visited Vita and Kryuk's marking site three times this summer. Data on camera trap visitation is shown in the appendix in Table 1.

## **Conservation Work**

### *Methods and approaches*

The main threat to Argut snow leopards is snare poaching. We have invested significant resources in fighting this threat, taking a comprehensive approach: in addition to direct enforcement patrols (the first of their kind in this area!), and enforcement and research patrols removed snares set for musk deer and large predators. We actively and successfully used "disinformation" about threatened patrol work as well as hidden cameras in hunting areas that secretly record any visitors to the area. Many local hunters truly feared going out to hunt for fear of their activities becoming known through these secret cameras.

### *Results*

During the winter 2012-2013, over 25 snares set for musk deer were destroyed, one citation issued, and two illegal firearms were confiscated. No poaching snares were found in the Koir, Bartuldak, Iedygem, and Karagem River valleys. However, Inegen villagers have once again begun setting snares in the areas around the Maly and Sredny Ary-Yula Rivers, although this area is relatively distant from the snow leopard habitat we have identified. The total number of snares in Argut snow leopard habitat has dropped by 75-80% overall relative to 2010. Thanks to support for snow leopard conservation by influential people in Dzhazator and Argut villages, canny disinformation about the presence of hidden trailside cameras tracking poachers, and the constant presence of our team members and government hunting inspectors in snow leopard habitat, the number of snare poachers in the Bartuldak, Iedygem, Karagem, and Kulagash valleys was reduced to almost zero in the winter of 2012-2013. The most important outcome in this regard is that snow leopards Vita and Kryuk are still alive! We have successfully protected them from poachers' snares for two winters!

## **Engaging local residents in snow leopard monitoring and conservation**

During the course of this project, four residents of Inegen and Argut villages have been trained in snow leopard monitoring and habitat assessment with the additional use of camera traps. Their acquired camera-trapping skills were developed and strengthened during joint field activities with Arkhar staff during the January-March 2013 field season in Argut snow leopard habitat. Arkhar entered into a formal written agreement with one of these villagers – Mergen Markov – an active snare poacher and year-round resident of Argut. This agreement lays out a partnership to preserve and monitor the Argut snow leopard population. According to the agreement, this person affirms that they will no longer practice snare-poaching in snow leopard habitat, search for snow leopard marking activity, and conduct camera-trapping activities using provided technology. In the event Markov can identify new snow leopard marking sites and collect

photographic images of this species, he will receive a financial award, but only in the event that the camera-traps show that Vita and Kryuk are still alive and well. Mergen Markov has been working on the project using camera traps since March 2013 in the Argut, Kulagash, Iedygem, and Karagem river basins. In July he received compensation for images of a snow leopard equivalent to the market price of a snow leopard pelt (fur buyers will pay 40,000 rubles/\$1250). In September, Kryuk was recorded passing by the camera trap. It is important to note that the site Mergen identified is a crossover between two territories, is very difficult to reach, and was previously unknown to us. In fact, we had assumed that such an inaccessible ridge would be unattainable by local hunters without special equipment. And because of that, during our work we had specifically skipped over this area when conducting our snare-removal work. It's frightening to think what would have happened to our snow leopards if we hadn't embarked upon our partnership with Mergen Markov!

The collaboration with Mergen Markov will continue. Moreover, we are attempting to attract other residents of Argut village known to be involved in snare poaching to this work. We must provide these poachers with an economic alternative to poaching. In addition to paying rewards on an annual basis, we will also provide other income opportunities to villagers participating in the monitoring program. Specifically, we will rent horses from them for expeditions, as well as pay them per diems for participating in our patrol and research work. Our team has been working in Argut since November 28, including Mergen Markov. He is providing 3 horses and he is participating in the expedition on a paid basis, earning about \$1000 for a 14-day expedition. This is a significant sum for an unemployed Argut villager.

## **Conclusions and Recommendations**

The last two years of work in Argut in 2012 and 2013 have given the first encouraging results. We identified remaining parts of snow leopard habitat. The habitat is focused in the areas around Mount Belukha (Katunsky Ridge) in the Argut River basin – left banks of the Kulagash, Iedygem, Sulu-Ayry (headwaters of the Koir River)), headwaters of the Ak-Kema River and its tributaries the Tekelyu and Yarlyu. Camera traps and tracking work have identified the presence of at least 6-7 individual snow leopards.

It is surprising that this population has persevered in the face of significant poaching pressure so close to a settlement (Argut) with residents actively hunting snow leopards. The village is home to individuals specializing in snow leopard poaching, while still others accidentally catch snow leopards in snares set for other predators (wolf, lynx, wolverine) as well as musk deer.

Enforcement activities conducted during the project, including enforcement patrols and snare removal, gave measureable results. Local residents had their first ever encounters with hunting inspectors, and a few of these hunters parted ways with their firearms. Many felt a new fear of setting out to hunt! However, these efforts would not have been as significant without the aid of local residents. This is one of the most important aspects of our efforts to preserve and restore the Argut snow leopard population. If we are able to continue this collaboration and even expand upon it, then there is a significant chance of restoring the Argut population to its previous levels. Today, the snow leopards Vita and Kryuk are proof of this - alive and healthy and continuously so for the past two winter hunting seasons.

It is also encouraging that Sailyugem National Park will soon become operational, a fact that should greatly increase enforcement in the larger area.

Given our experience and data from 2012-2013, it is vital that we continue working in Argut in the following program areas:

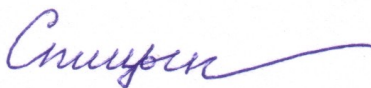
1. Research – It is necessary to conduct a detailed survey of the right banks of the Argut and Karakem Rivers as well as conclude a survey of the left-side tributaries (Kulagash, Iedygem, upper Koir (Sulu-Ayry)).
2. Continue and expand monitoring by involving local residents, create jobs (economic stimulus). Expansion assumes not just a larger research/protection area but also the involvement of more residents.
3. Develop eco-tourism, where the main attraction for tourists is the snow leopard and the possibility of seeing the felid with their own eyes or via a camera. Of course, eco-tourism is limited to a certain extent by the area's remote and difficult location as well as the area's increased risks. These issues will be unavoidably addressed with the beginning the park's work.
4. Conservation efforts must continue a comprehensive approach: enforcement patrols, snare-removal work, disinformation, and sustainable use by local residents. It will be vital to establish relations with Sailyugem National Park's enforcement division and to conduct joint patrol activities with their staff.
5. Continue to work with donors, particularly on fundraising to support villager engagement in snow leopard monitoring and conservation in Argut. To achieve this, we must work more actively with the media.
6. We must also identify and train new specialists. There is much to be done and not enough trained people to do it!

Appendices:

1. Map of the project area, including locations where snow leopard activity has been identified and the location of camera traps
2. Camera trap data
3. Table of Argut snow leopards and their identifying characteristics
4. Photographs

08.12.2013

Spitsyn, S.





Argut River valley expedition route and camps in January 2013



Legend

- Poachers traps
- pawprint Snow Leopard
- field camp
- routes

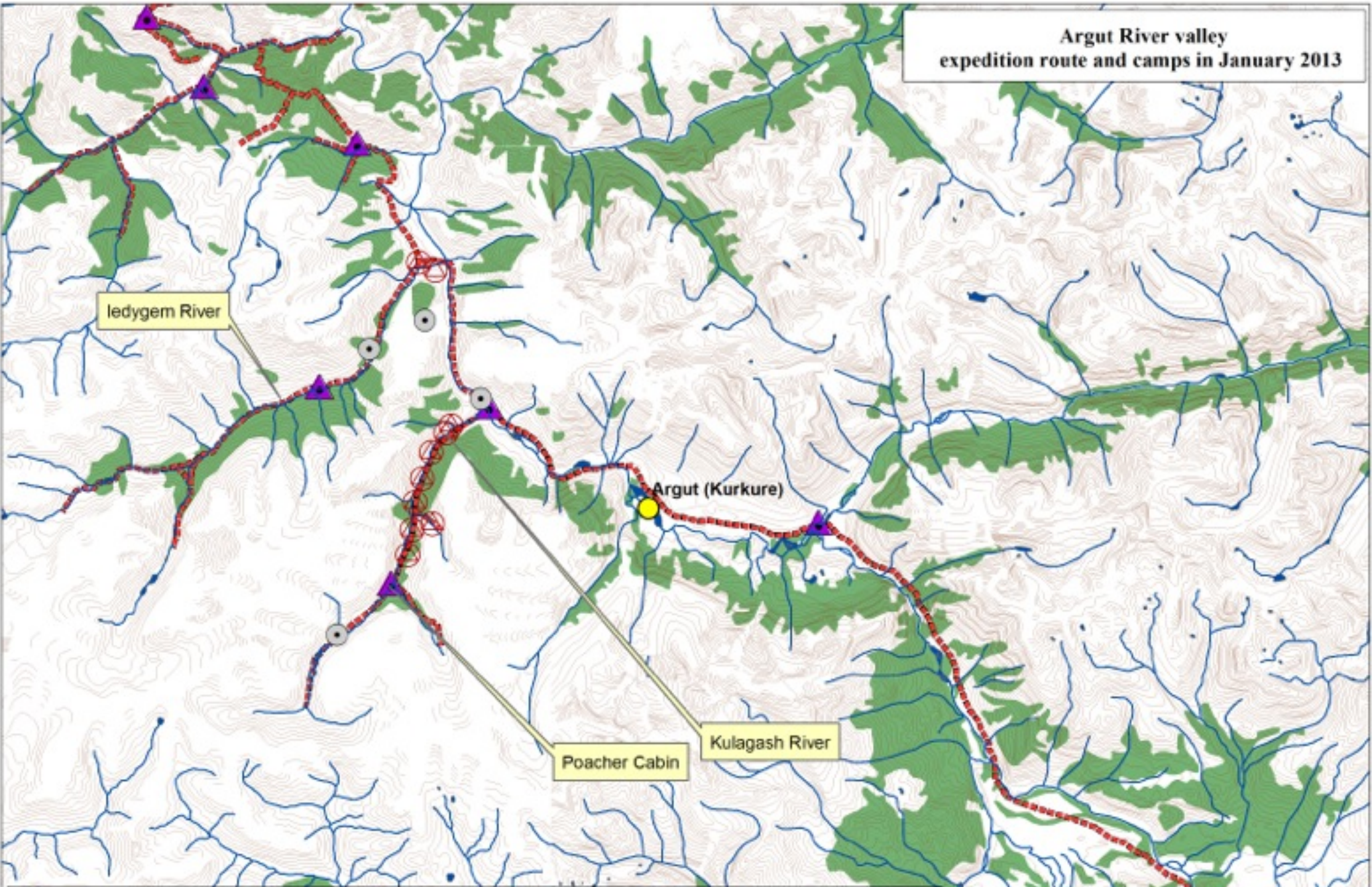


SNOW LEOPARD CONSERVANCY








Argut River valley  
expedition route and camps in January 2013



**Legend**

-  Poachers traps
-  pawprint Snow Leopard
-  field camp



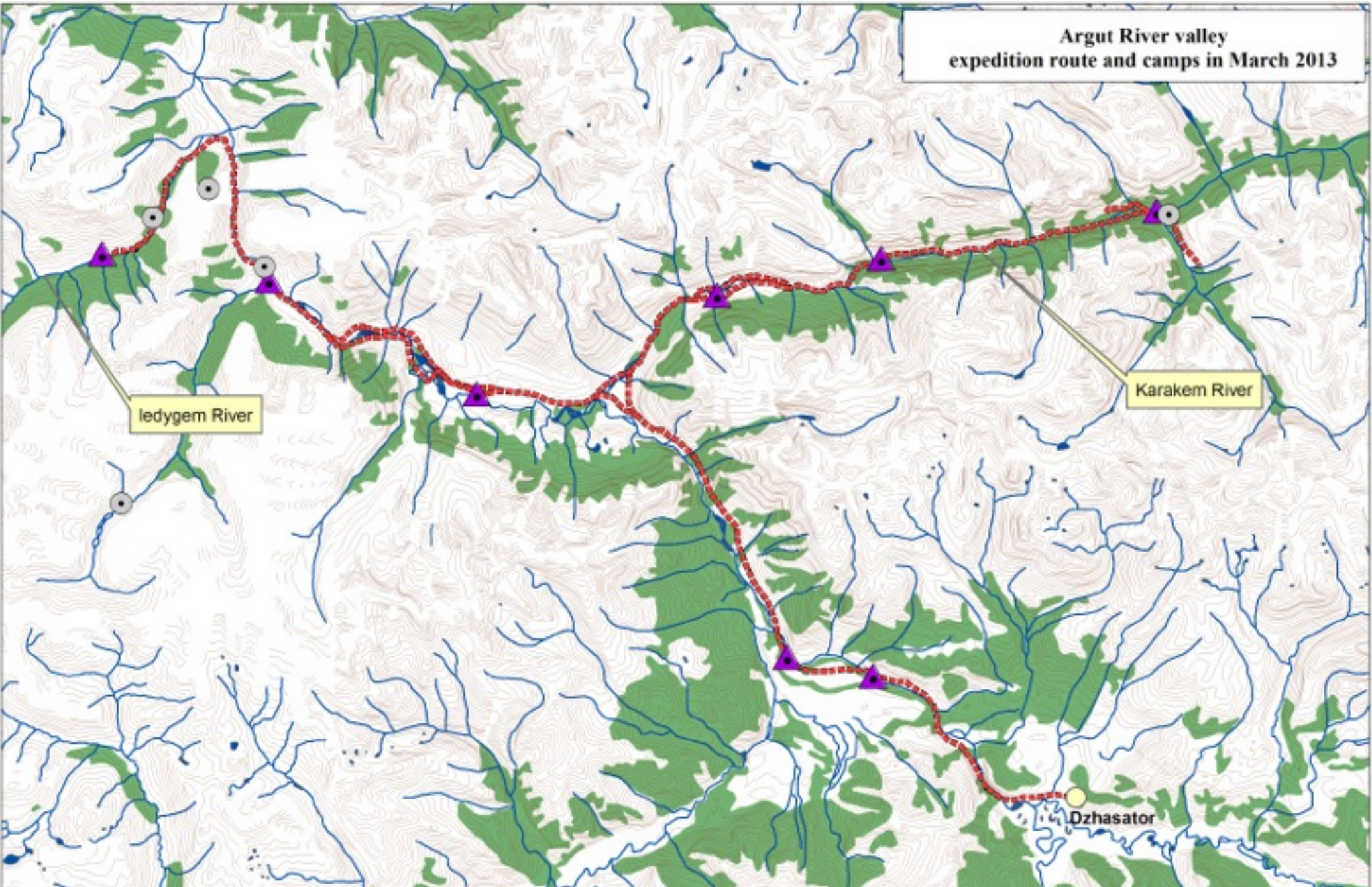
SNOW LEOPARD  
CONSERVANCY



Dzhasator



Argut River valley  
expedition route and camps in March 2013



- Legend**
- pawprint Snow Leopard
  - ▲ field camp
  - routes



Dzhasator

Iedygem River

Karakem River



**Argut Snow Leopards  
Camera Trap Data**

	Name	Sex	Age	First encounter/ Camera deploymt date	First photographed	Camera Trap ID	Number of visits/ Observation period	Comments
1	Vita	Female*	Unknown	28.02.2012/ 24.03.2012	06.04.2012	R185 R685	9 / 24.03.12 - 24.09.13	* There's a fuzzy photo of the hind end indicated it is a female. Indirect evidence: finer head, lighter body today, elegantly proportioned.
2	Kryuk	Male*	Unknown	28.02.2012/ 24.03.2012	09.05.2012	R185 R685 H1900	16 / 24.03.12 - 24.09.13	* Clear photographs of hind end indicating male
3	?	Female*	Unknown	13.05.2013/ 28.04.2013	13.05.2013	H1900	1 / 28.04.2013 - 01.10.2013	* Indirect evidence: fine head, round barrel indicating pregnancy.

Notes:

Camera traps Reconyx R185 и K685 were deployed in a single location, set at different angles. The site (scent marking site) is situated at the base of a rocky outcropping on a steep slope below the tree line. The Reconyx H1900 is situated along a snow leopard trail (at a valley crossing) along a ridgeline.

Snow Leopard Visitation to a Scent Marking Site in the Iedygem Watershed, 2012-2013  
Data Collected by Sergei Spitsyn

<b>№</b>	<b>Visit date</b>	<b>Camera ID</b>	<b># ofImages</b>	<b>Species</b>	<b>Name</b>
1	06.04.12	Reconyx R685	7	snow leopard	Vita (female?)
2	29.04.12	Reconyx R685	2	snow leopard	Vita
3	09.05.12	Reconyx R685	18	snow leopard	Kryuk (male)
4	11.06.12	Reconyx R685	5	snow leopard	Kryuk (male)
5	08.11.12	Reconyx R685	33	snow leopard	Kryuk (male)
6	15.11.12	Reconyx R685	16	snow leopard	Vita?
7	25.11.12	Reconyx R685	16	snow leopard	Kryuk (male)
8	11.12.12	Reconyx R685	7	snow leopard	Kryuk (male)
9	16.12.12	Reconyx R685	6	snow leopard	Kryuk (male)
10	30.12.12	Reconyx R685	10	snow leopard	Vita
11	04.01.13	Reconyx R685	3	manul cat	-
12	06.04.12	Reconyx R185	9	snow leopard	Vita (female?)
13	09.05.12	Reconyx R185	12	snow leopard	Kryuk (male)
14	11.06.12	Reconyx R185	6	snow leopard	Kryuk (male)
15	08.11.12	Reconyx R185	14	snow leopard	Kryuk (male)
16	15.11.12	Reconyx R185	30	snow leopard	Vita
17	25.11.12	Reconyx R185	19	snow leopard	Kryuk (male)
18	11.12.12	Reconyx R185	10	snow leopard	Kryuk (male)
19	16.12.12	Reconyx R185	12	snow leopard	Kryuk (male)
20	30.12.12	Reconyx R185	13	snow leopard	Vita
21	06.04.12	Bushnell 1	2	snow leopard	Vita (female?)
22	09.05.12	Bushnell 1	2	snow leopard	Kryuk (male)
23	15.11.12	Bushnell 1	3	snow leopard	Vita
24	25.11.12	Bushnell 1	2	snow leopard	Kryuk (male)
25	11.12.12	Bushnell 1	3	snow leopard	Kryuk (male)
26	16.12.12	Bushnell 1	3	snow leopard	Kryuk (male)
27	30.12.12	Bushnell 1	4	snow leopard	Vita
28	23.01.13	Reconyx R 685	10	snow leopard	Kryuk (male)
29	27.01.13	Reconyx R 685	3	manul cat	-
30	29.01.13	Reconyx R 685	2	manul cat	-
31	01.02.13	Reconyx R 685	8	snow leopard	Kryuk (male)
32	06.02.13	Reconyx R 685	6	snow leopard	Kryuk (male)
33	07.02.13	Reconyx R 685	12	snow leopard	Vita
34	09.02.13	Reconyx R 685	9	snow leopard	Vita
35	10.02.13	Reconyx R 685	7	snow leopard	Kryuk (male)
36	22.02.13	Reconyx R 685	8	snow leopard	Vita
37	23.02.13	Reconyx R 685	7	snow leopard	Kryuk (male)



Snow Leopard Visitation to a Scent Marking Site in the Iedygem Watershed, 2012-2013  
Data Collected by Sergei Spitsyn

38	25.02.13	Reconyx R 685	1	snow leopard	Vita?
39	01.03.13	Reconyx R 685	5	snow leopard	Kryuk (male)
40	30.03.13	Reconyx R 685	5	snow leopard	Kryuk (male)
41	19.06.13	Reconyx R 685	4	snow leopard	Kryuk (male)
42	14.07.13	Reconyx R 685		manul cat	-
43	22.07.13	Reconyx R 685	5	snow leopard	Kryuk (male)
44	09.08.13	Reconyx R 685		manul cat	-
45	22.09.13	Reconyx R 685	4	snow leopard	Kryuk (male)
46					
47					
48					