



# Here be Snow Leopards

Tessa McGregor spent two weeks on the hunt for the elusive snow leopard in the Altai Mountains...this is her story

**T**he snow leopard inhabits the immense solitudes of Central Asia: it is the mystical spirit of the mountains and embodies remote wilderness. Its pale green eyes and exotically marked fur make it not only one of the most elusive of cats, but arguably the most beautiful of its tribe. To see one is many naturalists' dream, to study them a wildlife biologist's biggest challenge. That is how I found myself heading off to the Altai Mountains...

It was snowing in Siberia. Not the cold snow of winter, but a hot, dusty storm of cotton-tree seeds, covering everything in white fluff. We had been in the city a week, getting things ready for the two-month expedition that lay ahead. The hot days were filled with the noise of sparrows, swifts and traffic. Sometimes exquisite voices and virtuoso piano performances floated out from the open windows of the music academy situated a few blocks from the hotel. Volodia, Olga and I discussed fieldwork and the forthcoming journey in the evenings over cold beers and Russian maps, fighting to be heard above the open-air karaoke bars. The Oriental restaurants, Internet cafés and designer clothes shops that were springing up all over the city seemed strangely at odds with the old women wearing headscarves and selling flowers on street corners. Here in Novosibirsk, the Russian Federation seemed in a hurry to shed its Soviet past. I was impatient to shed the city and get to the mountains.

There was one thing left to do before we set off...I had to visit the zoo. And so, on a hot June afternoon, I found myself so close to a male snow leopard that I could hear him breathe, marvel at the thickness of his fur, the length of his tail and look into those famed green eyes; but the bars that separated us brought his species' plight into even sharper focus.

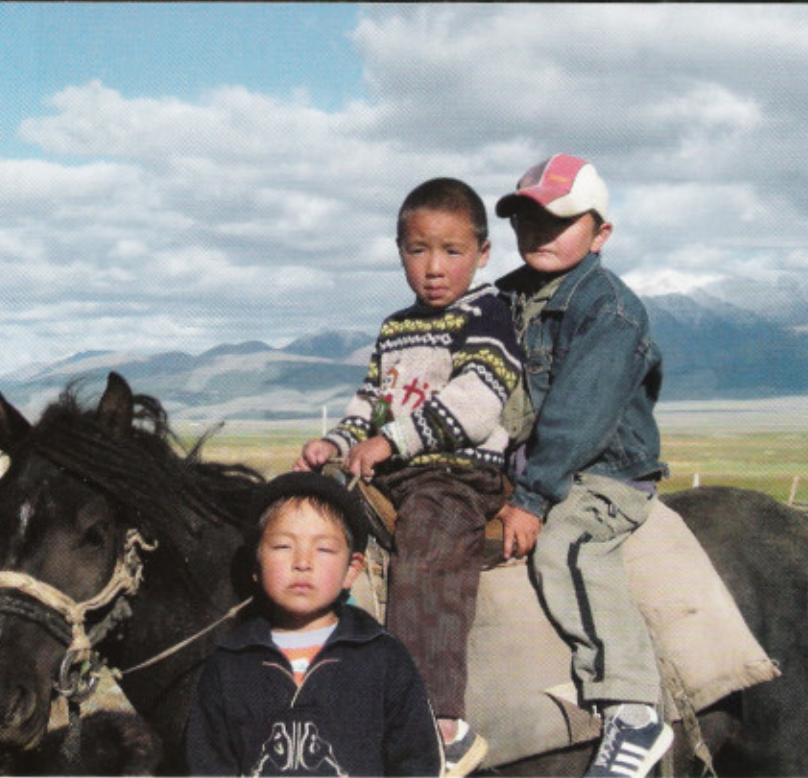
That evening we met the team for the first time. We sat around a rustic table in a Russian restaurant, its wooden walls covered with agricultural implements and animal skins: wolf, bear, fox and deer to name but a few. I consoled myself with the fact that at least there weren't any snow leopard skins until team members told me they had seen a coat for sale in a shop window made entirely of snow leopard fur.

"How many pelts do you think that would take?" I was asked. I didn't know the answer, but I knew it was too many.

Team members had flown in from the UK, Germany, Switzerland, Holland, even the USA. We could all speak English, but I wondered what else we had in common as we chatted over kvass and fresh berry juice. Our ages ranged from 18 to 72, and professions and backgrounds were as varied as ages. Even motives for joining differed, but everyone was in tune with the Biosphere Expeditions motto "adventures with a purpose" - and we certainly had a big purpose. ►

"FEW FOREIGNERS GET THIS FAR, BUT THOSE WHO DO ARE REWARDED BY A VARIETY OF HIGH MOUNTAIN LANDSCAPES AND IMMENSE SPACES OF OPEN STEPPE, FRAMED BY SNOW-COVERED PEAKS."









**Above:** Just getting to the camp was an experience in itself

**Below Right:** Unfortunately not all snow leopards are living in the wild

## Head for the hills

Just getting to base camp was an expedition. For two days our four Land Rovers travelled through rich agricultural lands and vast forests of silver birch and pine, where mushroom pickers and berry collectors sold their wild harvest by the roadside. As we drove through villages of wooden houses surrounded by vegetable plots and fruit trees, the roads were lined with people selling home-grown produce. We passed soviet built concrete towns and beautiful rivers; we held our breath as we drove through police check points, hoping they wouldn't stop us to inspect our papers, as this risked making the journey even longer. We followed the magnificent Katun River and admired the first distant mountains. That evening we slept in a comfortable wooden house in middle Altai. After a hearty meal and a reviving Banya (Russian sauna) followed by river-cooled beers, we were more than ready for our last night in a bed. I fell asleep to the sound of the river and crickets accompanied by a tinkling cowbell as the scents of mountain air, wet grass and wild cannabis drifted through the open window.

Mist hung heavy in the cool morning next day. After the most delicious porridge I have ever tasted, we continued our journey into Asia. Caucasian features became a rare sight. Mountain ranges got higher, soils thinner and glacial rivers flowed faster. The vistas seemed lonelier and grander. We stopped at a roadside restaurant near the Chuya River for lunch in the afternoon. The region is of great ecological and archaeological importance, rich in ancient burial mounds and Palaeolithic rock art. We ate plov (rice and lamb), Kazakh soup and home-made bread to background music of Tuvan throat singing. I learnt that a snow leopard had been sighted not far from here two weeks previously, but we were over 200km from base camp and the person who had seen it had gone away.



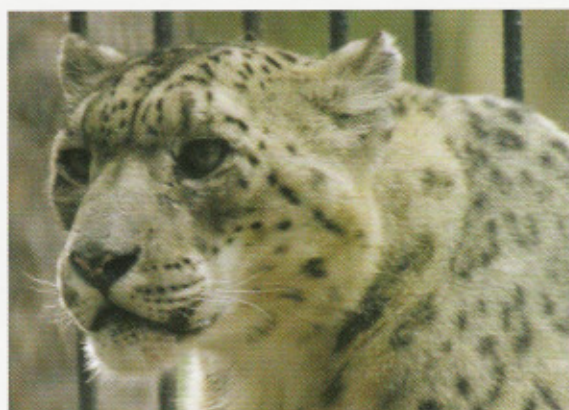
## Information

**Biosphere Expeditions** organise an annual expedition to the Altai Mountains in the Russian Federation. The expedition is divided into three two-week slots, running back to back. The expedition contribution is £1100 per person per two-week slot (of which at least two thirds are spent directly on the project). Prices include transport, meals, accommodation, guides and specified equipment. Not included are international flights to the assembly point in Novosibirsk, visas and insurance.

**Land Rover** sponsors Biosphere Expeditions as part of its Fragile Earth Policy. This includes supplying expedition vehicles and making vital research possible in remote areas around the globe.

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Base Camp was at 2200m, 40km beyond the last road and 1000km from Novosibirsk.

Those last miles across the steppe under dark skies pierced by shafts of evening light were a dramatic introduction. Our tented encampment was in a valley overshadowed by the mountain ranges of Tapdair and Sajlugem. They rose up to 3500m and were the core of our research area. We were all relieved to get into our sleeping bags after the long drive. Even in the dark, we were aware of the silence, the solitude and the space, amplified by the clarity of the stars.

The Altai Mountains are one of the most beautiful and remote parts of the world. They were designated a World Heritage Site in 1998 and are home to a number of rare endangered species. Sadly since the collapse of the former Soviet Union the region was threatened by all kinds of exploitation. These mountains stretch across the very heart of Central Asia, going through China, Mongolia, Kazakhstan and Russia. They mark the juncture of several natural (geological and vegetational) zones and cultures (ethnic and religious pagan traditions). Shamanism is practiced here. Few foreigners get this far, but those who do are rewarded by a variety of high mountain landscapes and immense spaces of open steppe, framed by snow-covered peaks. Not the easiest place easy place to study wildlife, but that is what our team was here to do.





"WALKING ON THE ROOF OF THE WORLD WHERE A SNOW LEOPARD HAD WALKED WAS AN EXPERIENCE OF A LIFETIME. SADLY THERE WAS ALSO GRIM EVIDENCE - THE SKINS OF A FEMALE AND HER TWO CUBS KILLED IN OUR RESEARCH AREA EARLIER IN THE YEAR."

## A single step

Our task was daunting – where should we start when confronted with an entire mountain range that had never been surveyed before? The aim of the expedition was surveying snow leopards and their main prey species – ibex (wild goats) and argali (wild sheep) and to record the wildlife of these mountains. Our goal was to obtain enough data to prove the importance of this fragile habitat, whose mountains stretched across the border into Mongolia and hopefully, in time, help it gain badly needed status and protection. Trans-border reserves are vital if snow leopards are to survive, as their territorial ranges don't follow national boundaries, but conservation efforts are hindered by political instability in some countries and large border areas are off-limits to scientific study. Hardly surprising, when field biologists carry all the paraphernalia of spies – maps, binoculars, cameras, GPS, camouflage clothing and even night-vision equipment in some cases. We were no exception; but we had obtained permission to work in an area that had been closed even to Russian tourists in the 1990's. The collapse of the Soviet Union had left the Altai Republic one of the poorest regions of the Russian Federation, but it had opened the door to international cooperation – our team was proof of that.

And so began the process of turning 12 volunteers into field biologists in less than two weeks. On the first day, under a burning sun, Volodya, our Russian scientist, and I explained the fieldwork. Ground squirrels darted from their burrows around camp and frequently let out high-pitched alarm calls ►

## Biosphere Expeditions

Biosphere Expeditions is an award-winning, not-for-profit company that runs conservation research expeditions to all corners of the earth. It gives ordinary people the chance to play a key role in scientific study by joining local scientists in the field and taking an active part in gathering crucial data. Through hands-on work Biosphere Expedition team members help make a real difference to the survival of endangered species, fragile habitats and local communities. The feel good factor that comes from actively helping to conserve parts of our global heritage draws team members back year after year to participate in these adventures with a purpose. Dates for the 2005 Altai Expedition slots:

3-15 July, 17-29 July, 31 July-12 August

The assembly point for expedition departure and return is Novosibirsk. Expedition contribution per slot: £1100 (approx 1650 Euro/\$2000) of which at least two thirds is spent directly on the project. Team members must make their own travel arrangements to and from the assembly point, obtain a visa and purchase suitable travel insurance.

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**Above:** The sense of isolation in the Altai is total

when a black-eared kite flew overhead. Team members got to grips with GPS's, data sheets, compasses and maps despite the vicious mosquitoes and horseflies. Some of us practiced off-road driving to familiarise ourselves with the terrain, under the scrutiny of André, our Russian driver, 'compot maker' and rock-star manqué. He was sceptical about non-Russian vehicles and by the look on his face, women drivers as well. Oleg and Victor, our tireless mountain guides, sorted and stored the supplies. Tolia, camp helper and brilliant horseman, made a fire and filled the solar showers with water from the river while Nadia our cook made supper. Olga and Nastya, our brilliant interpreters, completed the team. We were all excited and impatient to get surveying.

"Has everyone got sun cream, insect repellent, spare fleece, waterproof, food water, compass, map, GPS, ruler, pencil, notebook, digital camera, binoculars?" I asked before we set off. There was something else to carry: sample tubes, ethanol, marker pens and plastic bags. Faecal recognition and collection was an important part of our work. If we found any snow-leopard scat, the holy grail of dung, it would be sent back to the UK for DNA analysis. Dung from other animals was also very important in helping us to build a picture of the wildlife of these parts. After our first evening in the field we poured over the day's findings together in the mess tent.



Everyone studiously filled in data sheets while Volodya and I identified dung, bits of fur, bones and photos of tracks on the digital cameras. Charlie looked at me as I sniffed a carnivore scat. "No one told me I'd be doing this. Imagine what my mates will say when I tell them I spent my holiday going up mountains and picking up poo. And guess what, I got to sniff it in the evenings!" It was impossible to keep a straight face after that and so the joking began. Someone produced a bottle of vodka and we all toasted the first successful day. We were already a team.

The days that followed threw everything at us...rain, sleet and snow and sun. Temperatures oscillated between 40° C to below freezing at night, but nothing seemed to dampen our spirits or deter us from our work. We surveyed lush river valleys, steep scree slopes, boulder-strewn passages and mountain ridges where the views took our breath away, with vistas stretching into Mongolia and Tuva. We got fitter and collected more and more data. The big mammals were very elusive, but hearing rock-falls when we got close to ibex or catching glimpses of argali, even at a distance, was enough to get the adrenaline racing. We all knew the likelihood of seeing a snow leopard was as remote as the terrain we were surveying. They are not only very rare, but masters of camouflage - it was reward enough to know they might be there. I marvelled at the range of skills team members brought to the expedition and often laughed so much in the evenings that my sides ached.

## Crying wolf

Everyone grew in confidence. Observations grew sharper and I was not the only one now to get excited over 'poo'. We were rewarded by sightings of ibex, argali, wild boar and even wolf. Finding fresh bear tracks and dung made us even more excited.

Our survey area covered about 80 sq km and included mountains, steppe, river valleys and glacial lakes. Where belts of larch and Siberian pine forest grew, we found signs of maral and musk deer. Sinewy willows followed the rivers; poplar groves in the steppe looked like oases; the valleys were thick with creeping juniper, dwarf birch and tussocky grass. The



lower slopes were similar and I blessed the marmots for making trails that made walking in these places easier. The higher terrain was broken - stones, rocks and high grassy plateaus where argali grazed.

We scanned the mountains with binoculars, willing distant brown boulders to move

"I've spotted a group of ibex!"

"Where?"

"Over there"

"I still can't see them....Oh yes, but I think that's just rocks." The only way to be sure was to wait. If the distant specks moved they were ibex. If they didn't we kept looking. Sometimes we had unforgettable sightings, like coming across a herd of 22 argali on dark scree. Despite their pale underparts and rich brown coats we only saw them when they moved, picking their way daintily over the ridge and out of sight.

Although large mammals were hard to see, our survey area was rich in wildlife. Wild flowers of every colour carpeted the steppe and grew even at the tops of mountains - tiny alpine, jewel-like amongst the rocks. Bird life was as impressive, especially birds of prey: eagles, buzzards, falcons, kestrels, kites, and vultures. We even saw the 'bone-breaker', a lammergeyer high above, clasp a bone in its talons. Flocks of choughs called in the mountains and flew down to the steppe to feed, but my favourite birds were the impossibly elegant demoiselle cranes that danced and raised their golden-headed chicks on the steppe. Shy marmots, overactive ground squirrels and chubby little pikas all frantically got on with breeding, feeding and getting as fat as possible before the winter. They sustained virtually every predator. The semi-nomadic herders did not worry about wolves attacking their livestock in summer - "They are full of marmot," they told me.

Like us, the semi-nomadic herders were here for the summer. They came with livestock and put up pale felt yurts in the steppe and valleys. Families came back every year to traditional grazing grounds with their sheep, goats, cattle and horses. Some of them even had yaks. Their days were busy: herding, shearing, milking, haymaking, trapping marmots, collecting wild onions, rhubarb, berries and mushrooms. Whole families worked, from young children to grandparents. Sometimes the men went fishing, hoping to catch the grayling that ran in August. These people were an important source of information and interviewing them was part of the survey work. Herder hospitality was generous; we spent time sitting in yurts, drinking tea and eating hard cheese, butter and sour cream with freshly made boursak. As we became friends we learnt more. I rode out herding with one family, covering great distances on the surefooted horses. We even learnt how to make felt. These working days ended up with meat, fresh bread and shots of vodka, eagerly knocked back to innumerable toasts, some long and poetic. Relatives and friends dropped in, bringing news of what was happening in other areas.

We surveyed increasingly remote and high places, bent double as we climbed 45° slopes. My map was criss-crossed with survey lines and patterns were emerging. We knew where the best ibex and argali areas were. We had found their resting depressions, caught them on remote camera and even observed them. We also knew they were declining. Snow leopard signs were so hard to find it sometimes seemed an impossible task, but with persistence and team work, we succeeded. By the time it came to leave we had the evidence. Some of it exciting, like the scats that are now waiting to be analyzed in the UK, others exhilarating like the tracks we found on the top of Silugiem in fresh snow. Walking on the roof of the world where a snow leopard had walked was an experience of a lifetime. Sadly there was also grim evidence - the skins of a female and her two cubs killed in our research area earlier in the year.

## Land Rover

Land Rover is famous for its 4WD vehicles. Their off road capability is legendary. They are used all over the world to cope with every terrain. On and off road, Land Rovers carry Biosphere Expedition teams to and around the survey sites. Land Rover's Fragile Earth Policy outlines the company's commitment to the environment and details key Land Rover environmental practices and technologies. Fragile Earth also includes the company's Drive Responsibly Off-Road ethos, which encourages careful driving and the preservation of the environment for future generations. The policy also involves Land Rover's collaboration with four carefully selected global environmental sponsorship partners including Biosphere Expeditions, whose activities reflect the values of Fragile Earth. Land Rover supplies expedition vehicles and helps research happen where it is most needed.

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Leaving base camp was a poignant moment. The Altai had marked us all in different ways. We were taking away new skills, friendships and, most precious of all, the hard won data that meant we had added another piece to the complex jigsaw of snow leopard conservation. When mapmakers in a bygone age had to depict unknown regions they sometimes left the enigmatic cipher 'and here be dragons'. I looked at our map with pride, for now we could say with confidence 'and here be snow leopards'.



## What Katy did

The prize of the Land Rover - sponsored competition was a place on a Biosphere Expedition to the Altai. Entrants had to write an essay about why they would make good team members. The winner was Katy Harris and the runner up Graeme Down. Their prize-winning essays earned them both places on the 2004 expedition.

**Bottom:** The expedition team lines up after a busy time