Chasing the World's Largest Sheep
Altai Argali
In the Russia-Mongolia Transboundary Zone

By James P. Gibbs
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Photos courtesy of Author

Our day begins with swigs from a large plastic jug covered with pats of yak dung; while labeled as anti-freeze, it actually contains freshly fermented mare's milk.

Dawn arrives auspiciously in this remote valley in the Bayan-Ölgii Province of extreme western Mongolia. It is early August 2013 and the night brought snow, sleet, and lightning all at the same time. But the large tent remained upright this time, and inside, our crew of eight is dry and slumbering soundly. The savory smell of smoke from *argal*—sun-dried yak dung that children gather into baskets from where the animals congregate at night around the yurts—wafts on the breeze. Our day begins with swigs from a large plastic jug covered with pats of yak dung; while labeled as anti-freeze, it actually contains freshly fermented mare's milk. This gift was dropped off in the faint dawn light by a local herder happy to see visitors to this remote region.

We are camped at the base of a large ridge system known as Sailyugem Ridge on the Russian side and Sikkemhin Range on the Mongolian side, stretching along the Mongolia-Russia border. This very ridge system was once celebrated as the best wild sheep hunting grounds in all of central Asia by Demidoff and Carruthers writing in the early 1900s. Solitary concrete monuments protruding here and there from the ridge tops mark the border itself. On this vast open landscape, every few days we spot well-armed border guards, moving in pairs on horseback among their isolated outposts. They are looking for the few who try to sneak overland, mostly unscrupulous animal traffickers with snow leopard pelts and saker falcons from Mongolia bound for the Russian market and beyond. The only regular migrant along this remote border zone requires no special permission to cross: Altai argali *(Ovis ammon ammon L.)*, the largest wild sheep in the world.

Argali range where grassland gives way to scree and snowfields. The chill air up here is of startling clarity. Sound carries eerily at these high elevations; even a stone dislodged by an ibex far across a valley can be heard if the wind is slight.

Magnificent Migrants

The Altai subspecies of argali, which can weigh over 425 pounds, is prominent among the five generally-recognized sheep species on Earth. Two species, Dall's sheep and bighorn sheep, are native to North America. Dall's rams top out at 200 pounds and large bighorn rams, with some spectacular exceptions, tip the scales at around 300 pounds.

Altai argali ranged over a vast swath of mountain-steppe habitats until 200-250 years ago. Today they are restricted to western Mongolia, the Khangai range in eastern Kazakhstan, and southeastern Altai Republic and southwestern Tuva Republic of Russia. Numbering 6,000-8,000 in the 1970s, the Altai argali have declined to 4,200-4,500 animals today. The population we are studying remains a critical nucleus of the entire subspecies.

Most members of this population crisscross the Russia-Mongolia border every year to survive. In winter the argali generally situate themselves on the southern (Mongolian) side of the ridge system on windblown slopes where snow cover is less and they can dig through to access forage. Temperatures regularly dip to below minus 40°F. In spring the argali linger long enough on the Mongolian side to drop their lambs and then shift back into Russia, essentially pushed out by the arrival of herders and their livestock moving up from wintering ranges in lowland plains. Grass growth is sparse and thus forage competition, especially on the Mongolian side, is intense. Among the typical Mongolian livestock, only camels eat distinctly different forage. Sheep, goats, horses, yaks, and cattle have largely the same food preferences as argali. Livestock herds have grown enormously in Mongolia, driven by expanding global markets for wool and cashmere. Mongolia has 40 head of livestock for each of its two million people, but lacks a national grazing policy. The pressures on Mongolia's grasslands and wild sheep are immense.

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Scouring the High Country

We spend four weeks on the Mongolian side, assessing rangeland condition for livestock and argali, before heading back toward the Russian border. Bumping along the muddy rutted road, we meet our dear colleague, Sergei Spitsyn, a biologist from the Altaisky

State Nature Reserve. We are here to assist Sergei with the semiannual count of transboundary argali, this time in the same mountains but on the Russian side.

To count argali in summer you must go where they are—up! Argali range where grassland gives way to scree and snowfields. The chill air up here is of startling clarity. Sound carries eerily at these high elevations; even a stone dislodged by an ibex far across a valley can be heard if the wind is slight. The most effective method for counting argali is simply to cover as much ground as your legs and lungs will permit, scaling the high ridges and descending their slopes during daily walks of 20 to 30 kilometers. We often surprise Siberian ibex, which are extremely abundant in this area, but argali only once or twice a day. There is often a critical moment between first observation of an argali group and their detection of you. This yields a fleeting opportunity to photograph the group and thereby get accurate data on group composition and size. Seconds later the animals explode into action and tumble from view over the nearest edge.

Fixed-wing aircraft or helicopters would serve very well for surveying argali in this open and sunny landscape. But the Russian government provides barely enough funds for Sergei's salary. Every year we scratch around for small grants to pay for food, spare parts, and fuel for Sergei to complete these surveys. Until the Russian government starts taking argali conservation seriously, old-fashioned walking surveys subsidized by international wildlife conservationists will be the key to tracking this core argali population.

Alternative methods do exist. One can climb to a carefully-chosen promontory, lie flat, and scan the vast landscape for hours, eyes straining through high-powered binoculars or a spotting scope. A million boulder-like forms may require inspection before one transforms itself, first into a solitary argali, and then to a surrounding group. The method is tedious but rewarding. Few thrills compare with observing a long, clean line of ewes and lambs threading over a rocky crest, or a cluster of as many as 100 argali resting together in the sunny lee of a distant slope.

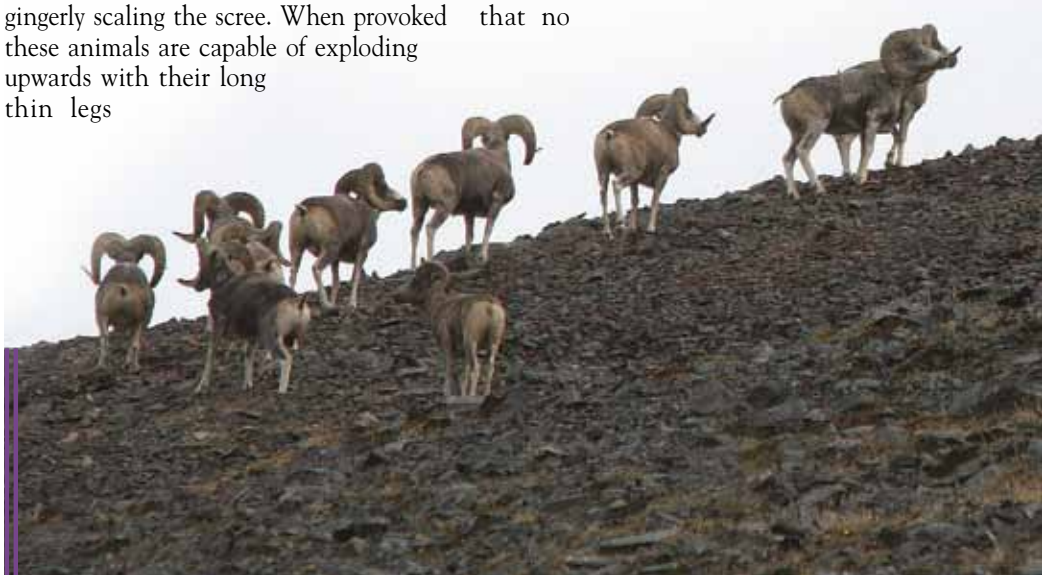
I recall a particularly long and dispiriting morning of spitting-cold rain and seeing very little. I sought a sheltered spot for a snack and then resumed my methodical scanning of the surrounding mountainsides. Nothing. Fifteen minutes later my binoculars locked onto four heads poking out of a patch of shrub birch far lower on the adjacent slope than I would ever expect argali to be. Each had massive horns. They had been watching me intently all this time. Judging from their horn curl, which reached three-quarters of a circle, these males were likely six or seven years old. That makes them *atgar har* in local terms, meaning black rams massive enough to be part of the rut. Horns of rams older than eight years come full circle or more; the horn tips are at eye level and can reach over five feet in curl length. Such males attain a dark body color and visible light saddle and are known as *shaazgay alag,* which stands for "speckled like a magpie." Locals also refer to blue rams (two to three years with horn curl about one-quarter of a circle) and yellow rams (four to five years with a half-circle curl of horn).

After a few minutes these massive *atgar har* began moving slowly upslope, gingerly scaling the scree. When provoked these animals are capable of exploding upwards with their long thin legs and compact bodies, but this group gently ascended 500 meters and then disappeared. Upslope was some of the best argali habitat remaining on the planet, the famed Mount Chernaya. This large plateau of moist grassland is interspersed with many wet areas where the animals can find forage and water easily.

The Perils of Poaching

In principle, one might consider Russia to be a haven for Altai argali given their status as a rare, endangered, and strictly protected species. Yet an incident in January 2009 is revealing the true state of affairs. A helicopter carrying senior Russian government officials crashed into Mount Chernaya, killing seven passengers. Many local Altai people, strongly animist, believed this to be the work of spirits angered by this and many other recent intrusions by outsiders into their sacred homeland. The more damning explanation is that the helicopter was engaged in aerial hunting when it went down. Photographs of the crash site show carcasses of argali among the helicopter wreckage, including one with a knife stuck in its haunch.

Hunting argali, one of Russia's rarest animals, is punishable by up to two years in prison. But helicopter poaching of argali is an open secret in Altai. Many high-level poachers feel confident that no



criminal investigation will ever be opened against them because convictions are rare; when helicopters are used, it is rarely possible to determine which animal was killed by whom. Such was the case in the 2009 incident. One crash survivor, the Deputy Governor of Altai Republic, did not deny argali poaching had occurred but, according to media accounts, he blamed the act on those who died. The case presented by the defense prevailed.

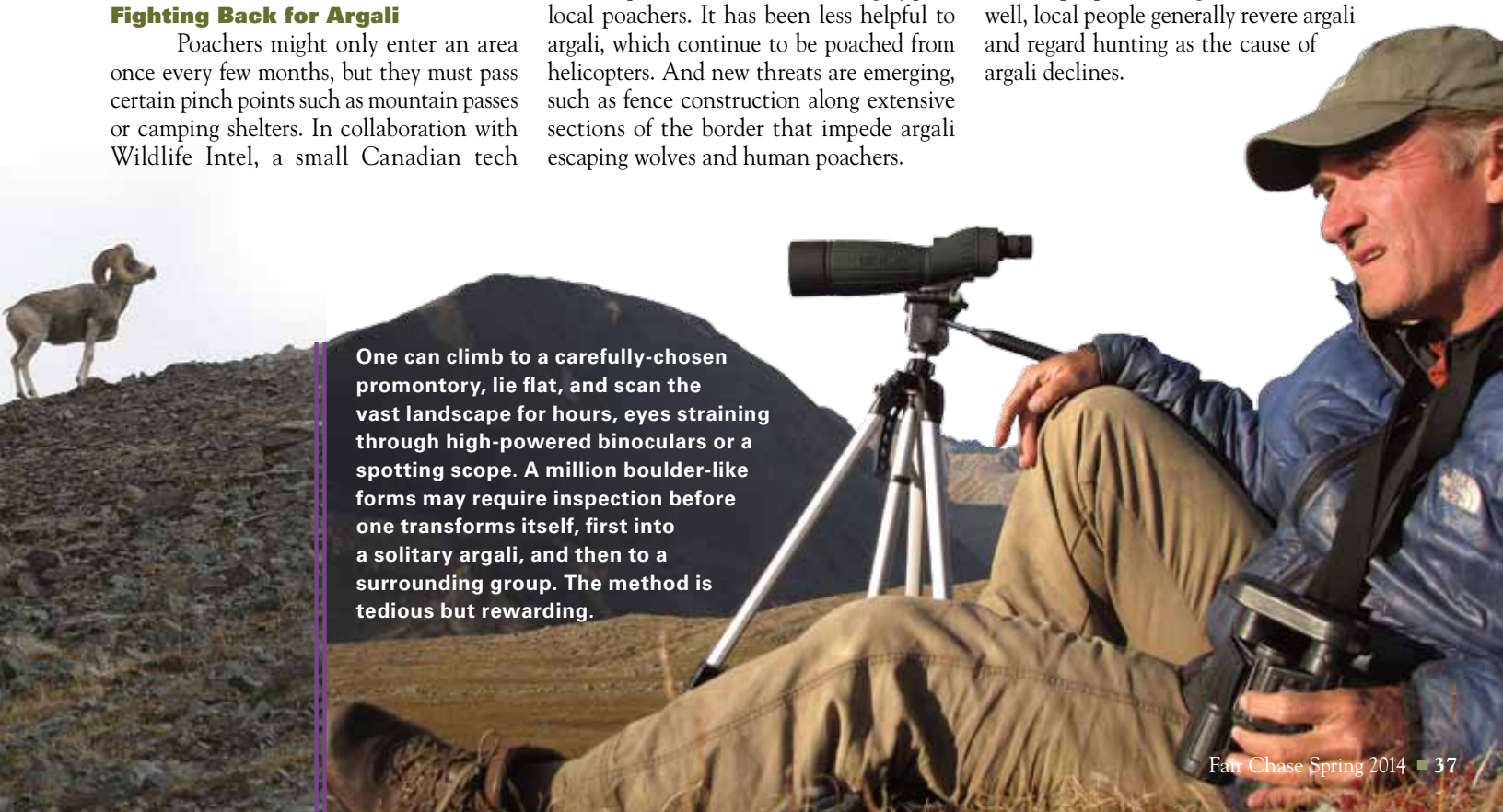
Fortunately there is a dedicated cadre of wildlife protectors on the Russian side, mostly local guys who participate in regional wildlife brigades organized by the Russian unit of World Wildlife Fund with significant outside support from sources such as the U.S. Fish and Wildlife Service and The Altai Project (Earth Island Institute). But the brigade's work is like searching for needles in haystacks. Patrols can only cover a tiny fraction of an area, two or three times a year.

Fighting Back for Argali

Poachers might only enter an area once every few months, but they must pass certain pinch points such as mountain passes or camping shelters. In collaboration with Wildlife Intel, a small Canadian tech company, our team has developed technology to monitor pinch points. Assembled from off-the-shelf components, these small electronic devices are solar-powered, concealable, and capable of monitoring these pinch points 24 hours per day, 365 days per year. The technology detects when humans pass and then sends a real-time alert to anti-poaching teams via satellite phone.

Enduring clouds of voracious mosquitos, we have spent many days digging holes in trails to install the metal detection devices at key locations. We have hiked through snow to reach crude cabins for the installation of temperature-change sensors, capable of detecting occupants. The units have triggered arrests and depressed poacher activity through a general deterrent effect: the locals believe that the technology is behind every tree and rock in the region, and stay away for fear of being caught. The technology has certainly helped the region's snow leopards, vulnerable to snaring by poor local poachers. It has been less helpful to argali, which continue to be poached from helicopters. And new threats are emerging, such as fence construction along extensive sections of the border that impede argali escaping wolves and human poachers.

Because of poaching, Altai argali numbers on both sides of the border are very low but apparently stabilized. The Russian government recently designated significant portions of their side of the Sailyugem Range as a formal National Park and the Mongolian side has long designated their side as Siilkhemiin Nuruu National Park. But strict protected status has not succeeded in expanding argali numbers because funding, resources, and trained personnel are insufficient to carry out even basic protection activities. These are merely "paper parks." Managed trophy hunting involving local communities could generate direct benefits for argali conservation, but it is difficult to initiate such programs with so few animals to work with. Moreover, trophy hunting of argali remains a contentious issue on the Mongolian side where it can be permitted, primarily because resources from past trophy hunting ventures did not substantially flow to local people or to argali conservation. As well, local people generally revere argali and regard hunting as the cause of argali declines.



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A New Conservation Approach

Despite its potential to help local people and argali, licensed trophy hunting on the Russian side will not gain traction anytime soon due to legal obstacles. Therefore we are collaborating with The Altai Project to initiate another means to try to make argali conservation pay: ecotourism based on citizen science. Visitors pay for the opportunity to participate in argali population surveys, experiencing a challenging adventure while helping to generate valuable scientific data. The involvement of visiting foreigners also helps bring legitimacy in the eyes of local people to the cause of argali conservation within Russia. Locals are also involved in food provisioning, guiding, and logistics; they receive income from guests and a small surcharge flows back to argali conservation. This partnership has hosted citizen science groups in the last two years. One participant in 2013 had the rare privilege of securing the first photograph of a snow leopard in Altai Republic, Russia. So far this plan is working well, despite the logistical difficulties of bringing foreigners into border areas. We expect to launch another expedition in summer 2014 (for details, see *WildAltai.org*).

We at the Roosevelt Wild Life Station are privileged to contribute to Altai argali conservation in this remote corner of the world. To complete their annual cycle along the Russia-Mongolia border, Altai argali currently cross a knife-edge of geography and a gamut of threats to their existence. It's a wonder they have held on at all. The political uncertainties of the region make it difficult to predict what the future will bring, but Altai argali are worth fighting for.

There still remain some 500-1,000 animals in this small area, enough to restore a significant population given the right conditions. Outside groups play a critical role in filling the void left by central governments lacking the will (Russia) or resources (Mongolia) to implement argali conservation. We cannot complete the work, but neither are we free to desist from it.

Sergei Spitsyn, our main collaborator, exemplifies the spirit that motivates us. With enormous effort and at considerable personal risk, Sergei spends up to nine months each year roaming these landscapes to survey snow leopards and argali. We share his goal to ensure that these magnificent animals can continue to complete their transboundary migration in what were once the finest sheep hunting grounds in all of central Asia. ■

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ABOVE: Trail camera photos of argali and Siberian ibex. In summer, we often surprise Siberian ibex, which are extremely abundant in this area. Argali we only encounter once or twice a day, usually either groups of 5-10 ewes with their lambs or male-only groups.

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