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SAIGA NEWS



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FEATURE

Polina Orlinskiy: New International Conservation Actions Agreed for Saiga Antelopes

UPDATES

Buyanaa Chimeddorj: Mongolian saiga numbers increase to 8500

Buyanaa Chimeddorj: Young herders are conservation messengers

Albert Salemgareev: Results of the 2021 saiga aerial survey in Kazakhstan

Albert Salemgareev: Results of the 2021 saiga calving survey in Kazakhstan

Mikhailova Nataliya: Eternal Wanderers on show in the State Darwin Museum, Russia

Gaidukova Tatiana: 'Vozrozhdeniye' Rescue Rangers!

Galina Kalmykova: Steppe News – Everyday Life of Stepnoy Reserve

Diana Toimbek, Tatiana Gaidukova and Natalya Shivaldova: Saiga Day 2021

ARTICLES

Vyacheslav V. Rozhnov et al.: Modern satellite technologies to study the spatial distribution of saigas in the north-west pre-Caspian region

Sh. Enkhtuvshin et al.: Wildlife health interventions to prevent further disease outbreaks among Critically Endangered Mongolian Saigas

Natalya Kondrashina and Olga Krever: Saiga as a priority for the federal project 'Conservation of biological diversity and development of ecological tourism'

Irina Kalyuzhnaya et al.: Saiga in Lake Elton Biosphere Reserve and adjacent areas of the Trans-Volga region in Volgograd Province

SAIGA HEROES

Eugeny Polonsky, Russia

SELECTED NEW PUBLICATIONS**ANNOUNCEMENTS**

SCA award winners 2021

IN MEMORIAM

Anton Mezhnev, Russia

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COVER: Saiga male in the winter. Stepnoy Reserve, Astrakhan region, Russia. Photo by Valery Maleev

POLINA ORLINSKIY¹

New International Conservation Actions Agreed for Saiga Antelopes

In September 2021, the governments of Kazakhstan, Mongolia, the Russian Federation, and Uzbekistan recently agreed to joint conservation actions for saigas as part of their agreement under the United Nations Convention on the Conservation of Migratory Species of Wild Animals (CMS). For the next five years, the [Medium-Term International Work Programme for the Saiga Antelope \(2021–2025\)](#) will provide a framework for the conservation and sustainable use of the species throughout its range.

The new Work Programme was the outcome of the [Fourth Meeting of the Signatory States to the CMS Memorandum of Understanding concerning Conservation, Restoration and Sustainable Use of the Saiga Antelope \(Saiga MOU\)](#) held online on 28 and 29 September 2021. The Saiga MOU is the only international instrument dedicated solely to *Saiga spp.*, covering all saiga populations. The Secretariats of the CMS and of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) work closely together to contribute to the conservation of this flagship species of the Eurasian steppes.

The new Work Programme applies different approaches to saiga conservation depending on the status of the species in each of the four Range States. The most recent population counts have shown an increase in saiga numbers in three out of four Range States, and especially in Kazakhstan, where the total population of saigas has increased from about 83,000 in 2015 to 842,000 in 2021. Currently, about 97% of the global *Saiga tatarica* population

is found in Kazakhstan. The Russian populations are still quite small, though increasing slowly, but the population in Uzbekistan remains at a critically low level. The UN conventions treat the Mongolian saiga as a distinct species (*Saiga borealis*), occurring only in one population in Mongolia and numbering 8,541 animals. This population is also increasing.

Conservation efforts for this species are critically dependent on international collaboration between the Range States and beyond. Several populations are transboundary and the species' migrations between its summer and winter ranges can exceed hundreds of kilometres north to south and back.

CMS Executive Secretary Amy Fraenkel said: "The adoption of the new Work Programme by the four Saiga Range States underscores the importance of transboundary conservation. The seasonal migrations of the Saiga Antelope show why ecological connectivity – the unimpeded movement of wild species – is so vital."

The Meeting also endorsed the [report "Sustainable Use of the Saiga Antelope: Perspectives and Prospects"](#), to guide the establishment of systems for sustainable use of saigas, where this is possible]. According to the report, the number of saigas in the Ural population in Kazakhstan is sufficiently high for the Government to consider sustainable harvest. The report was compiled by the Saiga Conservation Alliance (SCA) on behalf of the CMS Secretariat (see *Feature Article in SN26*).

Against the background of the rapidly growing populations in the country and reports of human-saiga conflict, the Government of Kazakhstan expressed an interest in establishing the necessary mechanisms for sustainable use, as provided for under the MOU. Kazakhstan also reported on conservation activities, including stepped-up protection measures.

However, in all other Range states the populations remain small despite recent growth and the governments intend to continue strict protection of the antelopes within their borders. Range States and NGOs reported on conservation actions that led to the increase in saiga numbers, ranging from Steppe clubs in schools to strengthened anti-poaching brigades and the establishment of protected areas.

The recent positive trend is the cumulative effect of the efforts of Range States, Scientific institutions, NGOs and other stakeholders that have been undertaken over the past few years under the umbrella of CMS in cooperation with CITES.

Yet threats to Saigas, such as disease, poaching and human-wildlife conflict, exacerbated by climate change and barriers to migration, persist throughout the range and can have devastating effects, particularly in smaller populations. The mass mortality event of 2015, when over 200,000 animals died in Kazakhstan, is yet another reminder that Saigas can be very vulnerable to disease linked to periods of extreme weather.

The new [Work Programme](#) adopted by the Meeting covers nine aspects of saiga conservation as well as specific measures for each population. In addition to discussions on sustainable use, other topics that received particular attention in the Meeting included the establishment of new protected areas, strengthening of transboundary cooperation, mitigation of the impact of barriers to movement and understanding the impact of climate change.

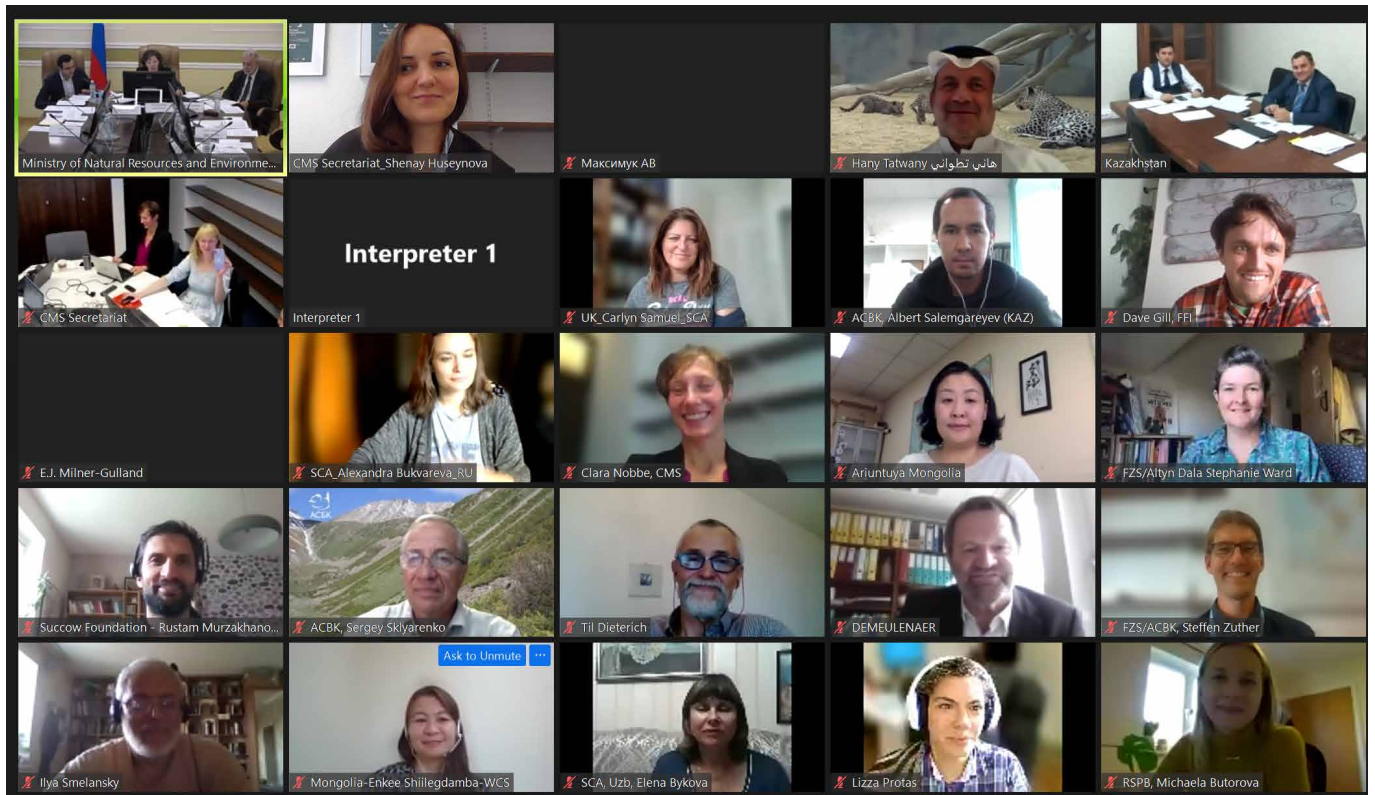
Finally, the Signatories to the MOU agreed to continue the cooperation between the CMS Secretariat, the SCA and the Association for the Conservation of Biodiversity of Kazakhstan (ACBK) as the two organizations that support the CMS Secretariat in coordinating the Saiga MOU in an expert capacity.

The bilingual (Russian and English) meeting was held online due to the continued restrictions imposed by the global COVID-19 pandemic. This was the first time a meeting of Signatories has been held online in the 15-year history of the saiga MOU. Nevertheless, the Fourth Meeting of Signatories to the Saiga MOU proved to be effective and accommodated discussions of all the documents that had been submitted for adoption. This was in large part due to the joint organizational efforts of the Ministry for Natural Resources and the Environment of the Russian

Federation (Minprirody) and the CMS Secretariat, the active participation of all Range State Governments as well as the support of this event from the wider saiga conservation community, including all cooperating organizations of the MOU, independent experts and other NGOs.

EDITOR'S NOTE: All the documentation for this meeting can be found here: cms.int/en/meeting/fourth-meeting-signatories-saiga-mou-mos4

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Participants of the Fourth Meeting of Signatories of the saiga MOU. Photo of the zoom call

BUYANAA CHIMEDDORJ¹

Mongolian saiga numbers increase to 8,500

The Mongolian saiga’s population was reduced to 5,000 as of January 2020, due to various factors such as an outbreak of goat plague (Peste des Petits Ruminants or PPR), illegal hunting, habitat loss, and food shortage during harsh weather conditions. In November 2020, experts from WWF-Mongolia and the Saiga Ranger Network completed a survey, which estimated the population size of Mongolian saiga to be approximately 8,500 individuals. The saiga population was estimated using the distance sampling line transect survey methods (24 transect lines with a total survey effort of 1,860 km) across its entire range including Shargiin Gobi, Khuisiin

Gobi, Durgun steppe, Mankhan soum of Khovd province, Zavkhan soum of Uvs province, and Durvuljin soum of Zavkhan province.

Although evidence suggests that the Mongolian saiga population has been growing, the major threats associated with droughts, overgrazing and infectious diseases still exist, which could have detrimental impacts on this small population. For example, the population reached over 15,000 individuals in 2014. Unfortunately, thousands of Mongolian saigas died in 2017 due to an outbreak of PPR and a dry summer (poor pasture) followed by a cold winter (extreme low temperature and

heavy snowfall). This indicates that the translocation of Mongolian saigas to their former range is critical to increase overall resilience of the population against drought, dzud, and infectious diseases. Enhancing law enforcement activities to reduce illegal hunting is also essential to support continued population growth.

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Saiga observation.
Photo: WWF Mongolia

BUYANAA CHIMEDDORJ¹

Young herders – conservation messengers

In February 2021, WWF-Mongolia organized a mobile campaign called “Gobi and Saiga” for local communities to raise awareness about sustainable use of pastureland and the importance of the Mongolian for the ecosystem. The campaign provided local herders with the opportunity to exchange their views on these issues.

Unlike the previous campaigns, this was led by 14 local young herders in collaboration with saiga rangers. They

rode camels to visit herder households within the saiga range, where they gave presentations and shared awareness materials. They also gave information about the law on livestock taxation which has recently been adopted and potential livestock marketing options through agricultural, savings and credit cooperatives which could improve herders’ livelihoods. The key message agreed by local herders was that “sustainable and rotational pastureland use is the only option. Instead

of large unproductive herds, highly productive herds of a limited size are better for herders in terms of both their economic returns and pastureland carrying capacity.”

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Young herders’ participation in saiga conservation in Mongolia has begun.
Photo: WWF Mongolia

ALBERT SALEMGAREEV¹

Results of the 2021 saiga aerial survey in Kazakhstan

Between 14th and 29th April 2021, the official annual aerial survey of all three populations in Kazakhstan – Betpak-Dala, Ural and Ustyurt was conducted. It was organised by Okhotzooptom (on behalf of the Forestry and Wildlife Committee of the Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan) and conducted by specialists from the Association for the Conservation of Biodiversity of Kazakhstan, who were responsible for the scientific side of the survey, including transect planning, preparation of an aircraft (installation and calibration of survey strip markers and photographic equipment), training for the team of surveyors, data analysis and preparation of maps of transects and saiga concentrations. Other participants in the aerial survey were representatives of the forestry and wildlife inspection units of the relevant areas and Protected Area staff from the Altyn Dala State Nature Reserve, Irgyz-Torgai State Nature Reserve, and Korgalzhyn State Nature Reserve.

The population survey covered over 120,000 km². Aerial and portable GPS navigators, photo equipment, a laser altimeter, GIS mapping and improved data processing and analysis methods meeting global standards were used to achieve results of the highest possible precision.

The survey showed that the saiga population size in Kazakhstan is approximately 842,000 individuals, which is a 150% increase compared to 2019.

This includes 285,000 individuals in the Betpak-Dala, 545,000 in the Ural and 12,000 in the Ustyurt populations. The observed population growth was probably due to ample food and good weather in the past two years, as well as improved law enforcement.

The previous survey was in 2019, when the estimated total number of saigas in Kazakhstan was 334,400 individuals (Betpak-Dala population – 111,500 individuals, Ural – 217,000, Ustyurt – 5,900). The aerial survey did not occur in 2020 as planned because of COVID-19 related travel restrictions.

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06



Aerial observations of running saigas. Photo: Dina Julayeva



Working moments of the saiga aerial survey. Photo: Dina Julayeva

ALBERT SALEMGAREEV¹

Results of the 2021 saiga calving survey in Kazakhstan

Since 2008, specialists from ACBK have regularly studied saiga calving sites. The purpose of this monitoring is to obtain data on female productivity, sex composition, juvenile mortality rate and the location of calving sites. In 2021, the survey was organised in the first half of May in Aktobe, West Kazakhstan, and Kostanai Provinces. Calving sites are monitored on foot along transects. The data collected include number and sex of newborn saigas, litter size, biological samples (such as blood), and biometric measurements. At the same time, the calves are ear-tagged. Also, the calving sites are mapped and vegetation type and condition is recorded and mapped.

In total, 63 transects were walked and over 800 saiga calves were examined, 680 of which were ear-tagged. The newborn male-to-female ratio was 1:0.87, with males dominating in the Ural and Betpak-Dala populations and females forming a noticeable majority in the Ustyurt population, where the sampling rate was relatively low.

Males from litters of two or three calves, particularly MM (two males) and MMM, can be slightly heavier than singletons. Within FMM litters, males are generally considerably heavier than females. Females from mixed litters are usually heavier than singleton females.

One of the key challenges of this work, which researchers face annually, is to find the calving aggregations, since their locations vary from year to year. This means specialists cannot develop an effective strategy to protect and monitor saigas in advance. This is

why we use mathematical modelling to forecast the location of mass calving sites and reduce the difficulties of searching for sites using stratified sampling. Knowing potential calving locations also helps ensure more efficient protection.

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ACBK's volunteers measure the weight of a calf. Photo: Dina Julayeva



Newborn twins. Photo: Dina Julayeva

NATALIA MIKHAILOVA¹

Eternal Wanderers on show in the State Darwin Museum

Migration is one of the most impressive and enchanting natural phenomena. Migrating mammals, birds and insects are of great interest to both professional biologists and amateurs wishing to learn more about the world we live in.

Migration is one of the most impressive and enchanting natural phenomena. Migrating mammals, birds and insects are of great interest to both professional biologists and amateurs wishing to learn more about the world we live in.

In May-July 2021, an exhibition entitled *Incredible Travel Without a Compass and Maps* was displayed in the State Darwin Museum – the world’s largest and Russia’s only museum of evolution. The exhibition’s topic was animals migrating by air, water or land. Visitors could learn about distance record holders, animals that die as soon as they complete the only migration in their life, and the hardships migrating species come across on their way.

However, the exhibition was not only about animals, but also about the researchers who dedicate their lives to studying this phenomenon. Numerous photo and video documentaries revealed the 100-year-long history of studying the movements of living organisms across the Earth using different equipment – from tags and rings with identification numbers through to various radio and satellite telemetry devices and modern miniature gadgets with GPS receivers powered by similarly small solar panels, allowing migration to be tracked in real time.

The saiga was one of the subjects of the exhibition, which displayed material from various parts of the species’ range kindly provided by colleagues from Kazakhstan (Association for the Conservation of Biodiversity of Kazakhstan), Mongolia (WWF Mongolia, Wildlife Conservation Society) and Russia (Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences). Visitors could familiarise themselves not only with the saiga’s history as a remarkable ungulate species which, in spite of all the hardships it has faced, has survived from the Pleistocene to inhabit the arid landscapes of the huge Eurasian continent, but also with people that study

the migrations of this ‘eternal wanderer’. This included the methods they use to understand the species’ ecology and ethology, identify calving and rutting grounds, track changes in the saiga’s range and analyse the impacts of linear structures (roads, pipelines, fences along state borders, enclosed pastures and so on) on its movements.

Mass eartagging of saiga calves in their birth areas was launched in the mid-late-1940s, and involved various outstanding specialists, such as A. G. Bannikov, A. B. Bekenov, Yu. A. Grachev, L. V. Zhirnov, A. V. Maksimuk, A. A. Sludsky, V. A. Fadeev and others. This helped researchers to study migration routes and periods, seasonal distribution, movement speed and life expectancy in different parts of the range. In the early 21st century, tracking saiga movements was made easier through new technologies, including satellite telemetry, but ear tags remained in use as one of the simplest and cheapest research methods, including into migration.

08



The part of the exhibition dedicated to saiga migration.
Photo: Maria Tikhonova

Alongside unique photographs portraying the process of catching and marking saigas and pictures of satellite collars of different configurations and transmission systems, such as Telonics ST-20/3210 with the satellite system Argos, the exhibition presented collars with Pulsar transmitters manufactured by the firm ES-PAS in Moscow with the GPS/Argos satellite system, which had previously been successfully used to track other mammals, such as the Siberian tiger, Amur leopard, European bison and wolf. There were also some brand new saiga tracking devices, including the ICARUS Basic Tag Solar/GPS (Ear Tag version), weighing less than 4.5 g and powered by a tiny solar battery (for more detail see the article by V. V. Rozhnov et al. in this issue of SN). Videos, including

about saiga tagging, kindly provided by ACBK, were screened non-stop on the museum's walls.

Partners of the exhibition were: ES-PAS, the official Russian representative of the ARGOS satellite system, which has been designing and manufacturing various transmission systems to track marine and terrestrial animals since 2007; the Institute of Geography, of the Russian Academy of Sciences, which, as a party to the ICARUS Russian-German space project, coordinates the testing of minute transmitters used to study animal migration and of communication components on the ground and on board the Russian Orbital Segment of the International Space Station (ISS), conducts research and carries

out preliminary data processing for project participants; the Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences, which has long been studying animal migration using various methods, including satellite telemetry; and Moscow Zoo. The support from the scientific community made it possible to exhibit some unique materials, covering the history of the study of animal migration and demonstrating the cutting-edge space technologies currently in use.

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ЖИЗНЬ В ПУТИ

Что такое миграция?

Миграцией называют массовое движение живых организмов, которые в поисках новых мест обитания перемещаются из одной точки пространства в другую.

Этим процессом управляют сложные законы, тесно связанные с изменениями в окружающей среде.

Миграции ограничены в пространстве и времени и подчинены определенным ритмам. Миграции могут измеряться часами, днями, месяцами или годами.

Одни животные движутся поодиночке, другие — группами.

Почему это происходит?

Во всех случаях основной побудительной причиной перемещений является потребность живых организмов в пище и условиях, обеспечивающих размножение.

Большинство миграций совершается ежегодно и связано с чередованием сезонов относительного изобилия с сезонами бедности.

О навигации

Животные, отправляющиеся в дальние путешествия, как правило, ориентируются по очертаниям ландшафта, положению звезд, Солнца и магнитному полю Земли.

Некоторые виды используют обоняние, для рыб важную роль играют течения — их сила, температура, наличие отмытой и т. д.

О силе

Для того чтобы преодолеть огромные расстояния, животные должны обладать необыкновенной выносливостью и иметь большой запас энергии.

О важности изучения миграций

Мигрирующие животные связывают разные континенты и их экосистемы. Они меняют состав сообществ на маршрутах своего следования, потребляют огромное количество пищи. Вместе с собой они несут разнообразные болезни, паразитов, семена. Люди не только не могут игнорировать эти процессы, но должны в деталях понимать суть происходящего.

Как изучают миграции?


Около 100 лет назад ученые начали помечать животных, используя кольца с оригинальными номерами.

Люди традиционно воспринимали зверей по их следам, обращая внимание на сплывшие ветки, приметную траву, гнильца, норы и оставленные фекалии.


С 1960-х годов наблюдения велись с помощью небольших радиопередатчиков.

С конца 1980-х годов млекопитающих и морских черепах стали помечать трекерами Argos, и сегодня они по-прежнему служат наиболее важным инструментом для отслеживания перемещений на значительные расстояния через спутники.


Около десяти лет назад СРБ-датчики стали достаточно маленькими, чтобы разместить их на мелких животных. А сегодня процесс стал настолько технологичным, что мы можем наблюдать за миграцией видов в режиме онлайн, благодаря электронным датчикам весом до 5 г, спутникам и софитам, вышкам, дронам и фотолюбителям.



Ученые за работой сито паразитов дельты Н. Ю. Фельдманова



В. В. Рознов и А. Л. Селевман помечают кошку и котенка на спутниковый передатчик на территории заповедника Флинта. В. Юрченко



Tablet computer showing the importance of studying animal migration. Designed by Andrei Polyakov

TATYANA GAYDUKOVA¹

‘Vozrozhdeniye’ Rescue Rangers!

Members of the ‘Vozrozhdeniye’ children’s ecological steppe club and staff of the Stepnoy Reserve, both in Astrakhan Province, have become real friends. The children, from secondary school No. 1 of Liman village, are deeply concerned about the fate of their homeland and make regular visits to the reserve, where they are happy to gain new skills in observing animals and to offer help in improving their environment.

Winds almost as strong as hurricanes blow across the steppes of Limansky District throughout the year, bringing all types of rubbish into the reserve and sometimes exposing used bottles, tins and other domestic waste buried in the sand that may injure animals or even cause fires. So the schoolchildren took empty bags on their latest trip to the reserve in spring and collected waste as they were walking in the reserve, helping Stepnoy staff to keep the territory clean and in good order.

In mid-March, when frosts recede and the soil becomes increasingly warm, the staff of the reserve begin planting tulip bulbs. They involve members of the ‘Vozrozhdeniye’ club in this noble activity, which has already become a good tradition. Spring 2021 was no exception. The children take this work – laborious, yet enjoyable – very seriously, helping to make even furrows, arrange tulip bulbs an equal distance apart, and water them.

Aware that early spring is the hardest time for resident birds, when many of them may die if uncared for, the ‘Vozrozhdeniye’ team did their best to help. Immediately upon arrival, the children set to work – they were eager to hang bird houses and feeders which they had made themselves. Reserve staff helped place the birds’ bed- and dining-rooms in the most suitable places. A camera trap was installed in a tree next to one of the feeders; the pictures it would take would let us find out who had eaten lunch there.

In spring, when nature revives after hibernation, white-tailed eagles and other raptors, which need cosy nests to raise their young, begin constructing shelters, which is not very easy when most of the construction material has been lost in the steppe during winter. That is when the Reserve staff, knowing bird behaviour perfectly, come to their aid, making artificial frames for them to build their nests. They are

10



Installation of a frame for a raptor to nest on.
Photo: Tatyana Gaydukova



Kids from the steppe club setting a camera trap installed to watch animals
Photo: Tatyana Gaydukova

assisted by the ‘Vozrozhdeniye’ kids, who thus also learn the secrets of birds’ lives.

In winter, when all wildlife seems to stop, the artesian well continues to trickle and forms a small puddle, which is dammed with dry plants and can therefore satisfy animals’ thirst. That also required the ‘Vozrozhdeniye’ team’s help. Armed with the necessary tools, they quickly cleaned the watering hole to let all the animals enjoy this oasis. Who was making use of this drinking place can be seen in pictures

from a camera trap – a special present to the ‘Vozrozhdeniye’ steppe club from the Stepnoy reserve.

Aware that the younger generation will one day take their place, Reserve staff do their best to help children learn more about the wildlife of the region they live in, as well as fostering in the young residents of Limansky District a sense of responsibility and care for their environment and a reflective attitude towards their future.

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‘Rangers’ from ‘Vozrozhdeniye’ ready to plant tulip bulbs.
Photo: Tatyana Gaydukova

GALINA KALMYKOVA¹

Steppe News – Everyday Life of Stepnoy Reserve

For the second year running, the coronavirus outbreak that has brought numerous restrictions continues to thwart one plan after another, sometimes with catastrophic consequences. Notwithstanding this, saigas require constant care and protection. No cataclysms or pandemics are able to impede the work of the state rangers of the Stepnoy Reserve – faithful servants and guardians of nature devoted to the conservation of saigas in the north-west pre-Caspian area.

The rutting season and the period preceding it are always hard times for saigas and for those ensuring that they remain undisturbed. The end of 2020, with bad weather and scarce food, was even more so than usual. That year’s rut was unusually long, which forced the rangers to considerably strengthen

the protection of the harem herds and intensify their awareness-raising work. In their efforts to deliver information to as many people as possible about the importance of saiga conservation, the rangers visited all livestock breeding farms within and around the reserve to remind residents about the necessity to restrict traffic in saiga aggregation areas, even on public roads.

With the coming of spring, the steppe returned to life, turned green and began to sing with the voices of its numerous inhabitants. Aware that soon the hot Astrakhan sun would scorch the emerald steppe into a greyish-yellow infinite space prone to fire, the rangers were prompt in laying 120km of mineralised fire barriers along the boundary of the reserve. They also ploughed the areas most exposed to fire and

cleared roads of vegetation. In addition, they produced colourful leaflets warning against the burning of grass, which may easily evolve into large-scale conflagrations in the steppe, and distributed them to livestock breeding stations and in the villages of Liman District.

Step by step, doing their everyday jobs including regular patrols, repair of information boards and raptor nest-frames, cleaning and creation of watering holes and other things, the rangers approached the saiga birth period – a long-awaited time which prepare themselves for with particular care. Bright and clear information signs with the inscription ‘No entry. Saiga birth area’ were installed all along the perimeter of the ‘saiga population restoration and conservation area’ of the reserve, where females usually aggregate to bring their long-nosed babies into this world. They undertook their annual awareness-raising talks with locals to tell them about the need to minimise disturbance in this period which is so important for

saiga. Finally, on 30th April, the first newborn saiga was observed among the almost 6,000 saigas that had gathered in the reserve. Mass calving began two weeks later, between 12th and 17th May. The steppe was filled with the calves' dissonant sounds. Whether or not the 2021 birth season has yielded positive results for the population will be known only some time later, but already the rangers can confirm that, despite the difficulties of the first half of the year, the 2021 calving was successful.

A lot of other interesting things have taken place in the life of the reserve

this year, the description of which would occupy many pages. These include a competition for the school-children of *Liman District entitled Let Feather Grass Rustle, Let Saiga Run*, where children showed their creative abilities, composing verses and illustrating them. A collection of winning entries was published with the support of the Saiga Conservation Alliance. The Kultura Russian TV channel continued to film a documentary about the rangers' work. Stepnoy also took part in an experiment conducted by specialists from the Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences, to mark saigas of different

ages with superlight ear tags with GPS transmitters, so as to study their distribution and identify their migration routes throughout the year (see the article by V. V. Rozhnov et al. in this issue).

The Stepnoy reserve staff express their gratitude to the Saiga Conservation Alliance, WCN, Thin Green Line Foundation and WWF Russia for supporting their saiga conservation activities.

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The Stepnoy reserve staff and Members of the Vozrozhdeniye steppe club celebrated Saiga Day together. Photo: Galina Kalmykova



Green marathon. Photo: Galina Kalmykova



Release of tagged saiga. Photo: Galina Kalmykova



The rangers are getting ready to start the winter saiga count survey. Photo: A. Tkachev

DIANA TOIMBEK¹

Report from Saiga Day 2021: Kazakhstan

Every year, in spring or early summer, the Saiga Friends network of clubs within secondary schools in the saiga range holds Saiga Day. On this day, club members play games, give presentations, create handicrafts and organise themed competitions. Over 200 students from 6 schools in Kostanay, Aktope and West Kazakhstan Provinces of Kazakhstan took part in Saiga Day in 2021. This year, the holiday was dedicated to the impact of climate on biodiversity. The activities developed by ACBK included five topics: children discussed the difference between climate and weather, ongoing climate changes, cases of global warming, methods employed by other countries to deal with climate change, and the impact of climate change on biodiversity. The children also drew saigas and other animals, gave presentations and painted handmade eco-bags.

Asem Iskakova, head of a Saiga Friends club at the Gumar Karash Secondary School, Borsy village said: 'This year, Saiga Day was very exciting. The contents of school textbooks quickly become outdated, and we are always in search of new, updated and interesting information. This year, we have familiarised children with latest discoveries in climate change, ways to mitigate its outcomes and how it is being fought worldwide, using new techniques. I hope the students appreciated our efforts'.

Since 2010, ACBK has been involved in environmental education for people living near saiga habitats, including for small children and teenagers. As of today, 10 Saiga Friends clubs have been established in the saiga range in western, south-western and central Kazakhstan. At the clubs, schoolchildren from areas



Children from Akkaytym draw steppe animals. Photo: ACBK



Schoolchildren from A. Baitursynuly village guess the animals in the game "Crocodile". Photo: ACBK

where illegal saiga hunting is often recorded learn about the saiga's role in the steppe ecosystem. The establishment of Saiga Friends clubs was made possible by the support of the Saiga Conservation Alliance and Fauna & Flora International (FFI).

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Members of the Saiga Friends club with prizes received for the Saiga Day, Akkol village. Photo: ACBK



Students from secondary schools with self-made eco-bags. Photo: ACBK

TATYANA GAYDUKOVA¹

Report from Saiga Day 2021: Russia

On 15th May 2021, a big Saiga Day celebration was organised at the Neftyanik stadium in the village of Liman, involving pupils from 15 schools across the district. Headed by children from the 'Vozrozhdeniye' steppe club, teams marched solemnly around the stadium, accompanied by the Environmental Anthem, carrying the flags of Astrakhan Province, Liman District and the World Wide Fund for Nature (WWF) and the logos of organisations doing much for the protection of nature – the Saiga Conservation Alliance, 'Stepnoy' reserve and 'Vozrozhdeniye' steppe club.

Welcome speeches were given by M. A. Grebenshchikova, Head of Liman District, V. O. Shmunk, Head of the 'Russian Caucasus' regional branch of WWF Russia, M. V. Ivanov, Head of the Department of State Hunting Inspection and Wildlife Protection, Nature Management and Environmental Conservation Service of

Astrakhan Province, O. B. Obgenova, the supervisor of Russia's steppe clubs, and Ye. V. Polonsky, member of the Union of Photo Artists of Russia. These were followed by a competition introducing the teams, after which the children began a quest game called 'Steppe Patrol 2021' devised by the Vozrozhdeniye steppe club.

The game involved contestants carrying out various tasks at 15 stations with the common goal 'to make joint efforts to conserve saigas'. The kids were absorbed in the game and worked as teams, with their teachers maintaining their team spirit. Representatives of the Nature Management and Environmental Conservation Service of Astrakhan Province, officials from the Department of Education of Limansky District and rangers from the Stepnoy Reserve ensured the rules were observed. A team of coaches from the Children and Youth Sports School helped to organise the game.

When each team had completed every station, their leaders submitted their assignments to the jury. The mistress of ceremonies then announced a treasure hunt with the help of 15 keys hidden around the stadium. Each team used the keys to open their pieces of a jigsaw puzzle, then the participants put the pieces together to compose a big panoramic picture with saigas – our treasure which we have to work together to preserve! While the jury was deciding the results, the children danced cheerfully to a modern flash-mob. This exciting event gave the students and adults a wide range of positive emotions and broadened their horizons.

At the awards ceremony, Vladimir Kalmykov, Director of the Stepnoy Reserve, presented all the teams with certificates of participation. O. B. Obgenova, on behalf of the steppe clubs, awarded the children from the 'Vozrozhdeniye' steppe club a wonderful saiga-shaped cup and badges, to acknowledge their role in the organisation of this great event. The WWF representatives presented the children with T-shirts, bags, writing pads and WWF badges. However, the most important present for the winners of the quest

14



Participants in the quest game 'Steppe Patrol 2021'.
Photo: Anna Lastochkina



The festival was a success!
Photo: Dmitry Znamenshchikov



Members of the Vozrozhdeniye steppe club. Photo: Galina Kalmykova

was a trip to the Stepnoy reserve to see the legendary saiga with their own eyes. At the end, all the participants joined hands to form a huge circle and closed the event with the song of the Vozrozhdeniye steppe club. The celebration was successful; through their game, the children united to contribute to the cause of saiga conservation

in the North-West pre-Caspian are. We hope that the saiga's future is in their hands!

Among other factors that made it possible to organise this event was that, in 2021, WWF Russia won the 'Environmental conservation and wildlife protection' category of the

Foundation for President's Grants competition, with its project 'Let us conserve saiga together!', implemented with the assistance of Stepnoy reserve, the firm Garkushenko SP, and T.A. Gaydukova (manager of the 'Vozrozhdeniye' steppe club).

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Report from Saiga Day 2021: Uzbekistan

'Restoration: the sea, the saiga, the steppe' was the motto of Saiga Day in Uzbekistan in 2021, because the organisers wished to highlight their commitment to the common cause of restoring the steppe and inviting back the saiga. We are all well aware of the situation with the Aral Sea, which has had an awful impact on Karakalpakstan's wildlife. Although we cannot bring back the sea, we nevertheless can preserve what we still have and resist the onslaught of sand on cities, towns and villages. This is why steppe clubs in Karakalpakstan enthusiastically join in activities to cover the

area with a 'sea' of steppe vegetation, which is currently being planted on the dry bottom of the Aral sea. Following tradition, in 2021 Saiga Day came to schools in early May. It was celebrated in five schools simultaneously.

In Muynak, we were heartily received by the steppe club of School No. 1. Senior students competed in a game following the 'environmental express' format (running between stations to perform challenges). The thematic stations were 'Knowledge', 'Creativity', 'Sport' and 'Steppe', and proved really challenging.

School No. 2 then took up the baton of celebrating Saiga Day. The steppe club at this school is very new, opened soon after a preparatory workshop held earlier in 2021 in Nukus, where we discussed with the teachers the best way to celebrate the Saiga Day. We were eager to see how creative the teachers' approaches would be, and how the children would respond.

The result was beyond our expectations. At the entrance to the school, there was an exhibition of items depicting saigas and other steppe animals it coexists with. The artworks were made using a wide range of materials and techniques – from paintings and drawings through to plasticine, embroidery and appliqué and even shells and sand from the former bottom of the Aral Sea. A very interesting type of relay was organised in the gymnasium.



Saiga Day 2021 in villages near the Saigachy reserve on the Ustyurt Plateau. Photo: SCA



A play in a school theatre about the saiga and a person choosing between good and bad. Photo: SCA

The contests were themed, and the saiga was the protagonist in all of them.

The next stage of the celebration was an environmental theatre production. The audience was deeply moved by a simple story about a boy who chose to protect saigas and, therefore, was a happy man throughout his life. The play was short, but its themes made it rich and memorable. The story was organically entwined with Karakalpak folk music, folklore and traditions.

The steppe club at school No. 31, Kyrk-Kyz village, heartily received guests from school No. 52 of the neighbouring

village of Elabad. The events there were organised in partnership with the company Uz-Kor Gas Chemical. Employees of the Saigachy reserve took an active part in the celebration. The team from the Elabad village was supported by the Sodium Factory.

The kids from the host Kyrk-Kyz steppe club received their guests with a flash-mob and then invited everyone to an exhibition of pictures in the school-yard. Every child, whether a participant or an audience member, wore a saiga mask of face paint on their sunburnt faces. The programme included a fancy-dress show, sporting competitions and environmental contests. The last

mission was an obstacle course, where the teams raced each other while solving tasks and overcoming obstacles on their way, as migrating saigas do. It was the first time that the children from the new steppe club at school No. 52 had taken part in an environmental event.

Teachers from school No. 26 in the village of Karakalpakstan decided to celebrate Saiga Day in a special way, with a bike ride on the steppe. Their students took part in a marathon, a drawing competition and a show called The Saiga on Migration. The event's special feature was singing to a guitar, which made the event very lyrical and



Participants and guests after the close of the Saiga Day at school No. 1. Photo: SCA



Kindergarten children – the youngest participants in the Saiga Day activities in Zhaslyk village – staging a costume show about saiga. Photo: SCA

unforgettable. Almost everyone in the village of Zhaslyk, near the Saigachy reserve – young and old, parents and children, teachers and students – is involved in the Saiga Cup sports festival. As a result, poaching in the area has dropped almost to zero, as it has become very unpopular and even infamous. For Saiga Day, a special class was organised for entire school No. 54. Each teacher demonstrated their creative abilities, while the kids acted as saiga protectors. Students from grades 5-8 used their creativity and second-hand materials to make artworks related to the main theme of the event – ‘Restoration: the sea, the saiga, the steppe’. The festival culminated in a concert organised in a traditional way on a summer stage in the centre of Zhaslyk. It opened with a saiga anthem followed by traditional dances and folk songs. Children recited verses about saigas, delivered a costume performance and played folk musical instruments. Even kindergarten children took part in the event and presented a concert programme. Importantly, these

celebrations in Zhaslyk are supported by the village administration. Every year, the villagers look forward to taking an active part in all these activities.

We would like to express our deepest thanks to all the innovative teachers heading steppe clubs for their priceless contribution to the upbringing of

the new generation and raising of people’s awareness of the importance of conserving the unique saiga antelope.

‘Saigas, come back! Now we are able to protect you’, was an appeal some children inscribed on their placards.

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SCA and Saigachy Reserve staff with the winners of the Saiga Cup 2021. Photo: SCA

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Modern satellite technologies to study the spatial distribution of saigas in the north-west pre-Caspian Sea region

Studying animals' short-distance and seasonal migrations has become a focus of attention in recent decades. Among the goals of such research is identifying potential negative impacts on this important ecological process, in order to develop strategies to prevent and mitigate risks. Migration routes which animals have used for many centuries are often obstructed by man-made obstacles, which is leading nowadays to reduced migratory activity in wild ungulates and, as a result, to an increasing range of problems for these species. This has prompted experts from 92 countries to start designing a Global Ungulate Migration Atlas as part of the Global Initiative on Ungulate Migration (GIUM) in partnership with the Convention on the Conservation of Migratory Species of Wild Animals (CMS). Most of the maps in the atlas will be based on satellite tracking of saigas. Regular seasonal migrations are typical of all saiga populations. However, the population in the north-west pre-Caspian region makes short-distance migrations throughout the year, a very different movement pattern from traditional seasonal migrations.

Specialists from the A. N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences, have for many years been studying various biological and ecological features of saigas, including its movements in the north-west pre-Caspian region. They

have tested various modern methods to study saigas over the past almost 15 years, carrying out numerous experiments on saigas raised in the Centre for Wild Animals of the Republic of Kalmykia and the Saiga Breeding Centre at the Astrakhan hunting farm,

which they fitted with different types of satellite transmitters and released into the Stepnoy reserve.

Experiments to track saigas using Telonics ST-20/3210 (USA) and Pulsar (Russia) satellite transmitters operating the GPS/Argos system were conducted in 2004, 2009, 2012 and 2014. The goal was to study how animals bred in captivity adapted to a natural environment. Although the transmitters were quite bulky (*Fig. 1*), their deployment was a huge step forward in studying saigas, including their spatial distribution. We have already described experiments using similar transmitters in one of the chapters in a monograph on breeding saigas published in Russian and English in 2017–2018.

In autumn 2020 a new stage in the tracking of saiga in the north-west pre-Caspian region started, featuring new-generation satellite transmitters. It was a part of ICARUS – a Russian-German project implemented jointly by the Severtsov Institute of Ecology and Evolution, Max Planck Institute of Animal Behaviour (Germany), Institute of Geography under the Russian Academy of Sciences, RSC Energia and the Russian Orbital Segment (ROS) of the International Space Station. ICARUS Basic Tag Solar/GPS ear tags,

18



Fig. 1. Saiga with an Es-Pas transmitter (Russia, Moscow). Photo: V. Rozhnov (left) and A. Khludnev (right)



Fig. 2. ICARUS ear tags were installed on 5 saigas in the Saigak breeding centre in November 2020.
Photo: V. Rozhnov

are tiny devices 5–15 g in weight, with a GPS receiver, data transmission unit, battery and solar panel for charging, as well various indicators (Fig. 2). Due to its small size and weight, the transmitter causes very little discomfort to the animals. The ROS equipment receives coordinates from the device and re-transmits them to the Flight

Control Centre on the ground, from where they are forwarded to a data bank to be processed and analysed.

It is no coincidence that the north-west pre-Caspian saiga population was selected for this project. The average annual insolation for this region is the highest in Russia, which makes

solar-powered transmitters the best choice for this area. Furthermore, any projects to study, conserve and restore endangered species like saiga require science-based approaches using up-to-date technologies and remote (sustainable) methods. The Stepnoy reserve has been providing strong protection to saiga since 2000, and the Saigak

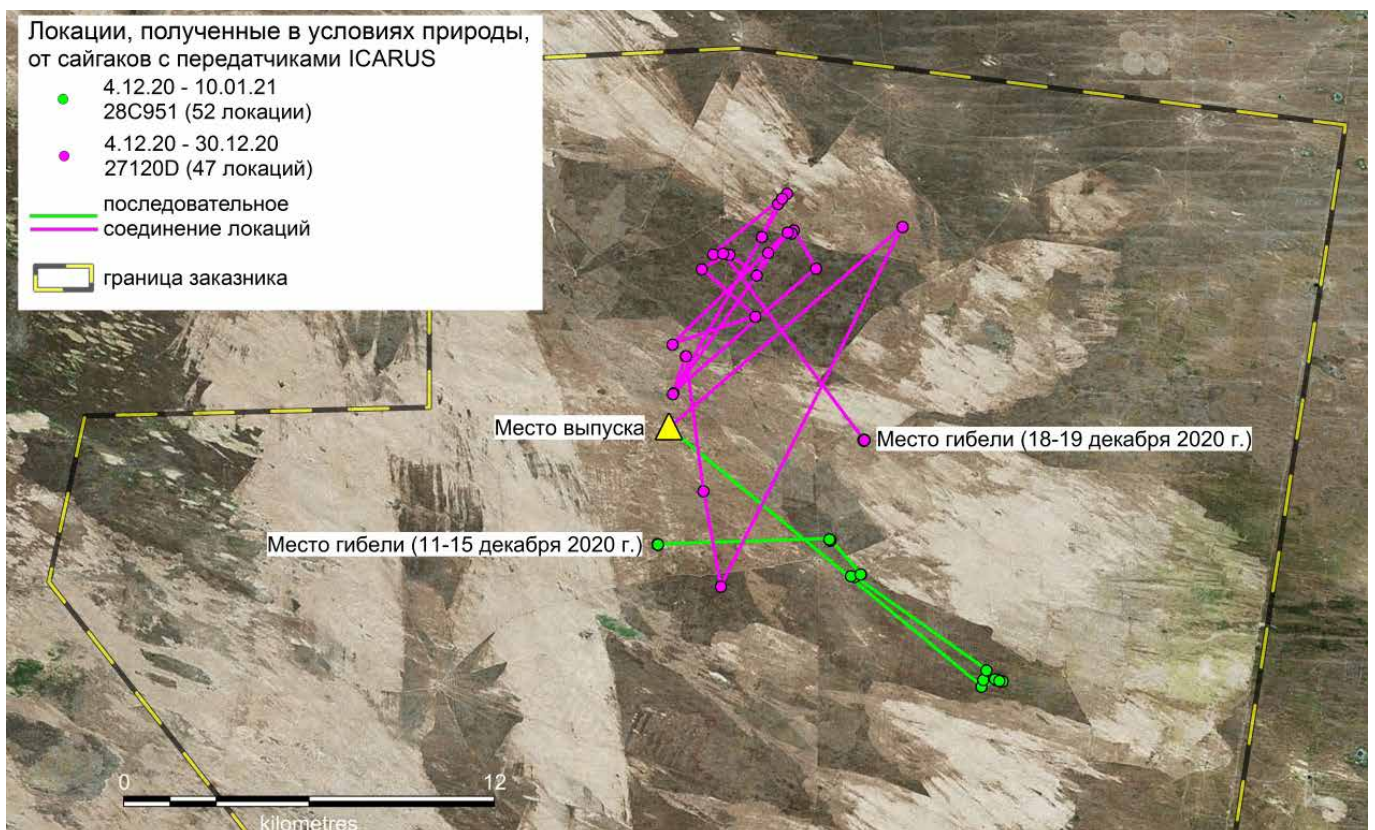


Fig. 3. Tracks of adult saiga males (green and pink lines) released in the Stepnoy Sanctuary in December 2020. The yellow triangle marks the place of release, the green and pink dots indicate successive locations of saigas. The last points indicate the place of death of saigas after the rut

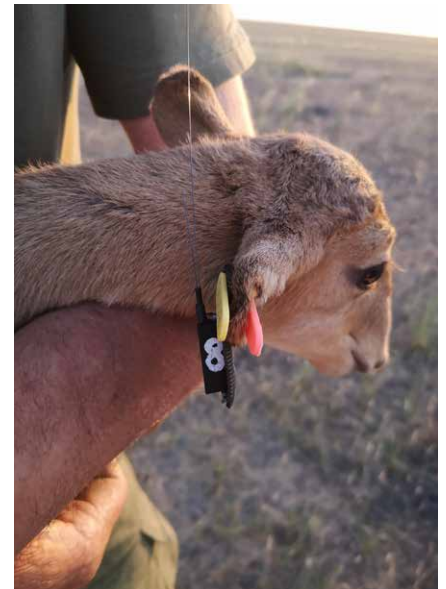


Fig. 4. Adult male and saiga calf with an ear tag and ICARUS 'avian' transmitter powered by solar energy.
Photo: V. Rozhnov

breeding centre, working to conserve this species' gene pool and breed this animal for re-introduction, is also located in Astrakhan Province. They have everything needed to successfully implement this project.

In late November 2020, when saigas entered the rut, five ICARUS transmitters were attached to adult males which were being prepared for release from the Saigak breeding centre into the Stepnoy reserve to study saiga movement. Apart from being of great scientific interest, this research helps improve planning of saiga conservation and test the tracking system.

The observations from the transmitters suggested that three of the five saigas managed to take part in the rut, after which, exhausted by the stress and hunger, they were killed by wolves (Fig. 3). The transmitters were found in the steppe and forwarded to the manufacturers for updating based on the test results.

In 2021, a decision was made to release the males in early summer instead of late autumn, in the hope that this would allow them to better adapt to the natural environment and be more successful in the rut. Even tinier ICARUS transmitters, 1x1.5 cm in size, identical to those used in ornithology, but with a modern fastening system (Fig. 4), were fixed on three adult saiga males. The animals were released into the Stepnoy reserve in June 2021. Moreover, specialists managed to fit several calves with these 'superlight' ICARUS 'ear tags'.

The data from this type of transmitter will make it possible to analyse the spatial distribution of saiga herds – perhaps taking into account existing linear obstacles – including females with calves, and learn more about their fates during and after the rut.

The authors are grateful to specialists from the Astrakhan hunting farm and Stepnoy reserve and the managers of the Service for Natural Resources Management and Environmental Protection of Astrakhan Province for their cooperation.

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Wildlife health interventions to prevent further disease outbreaks among Critically Endangered Mongolian Saigas

In 2016, the outbreak of Peste des Petits Ruminants virus (PPRV) in Mongolian livestock and the subsequent spillover into the Mongolian saiga antelope (*Saiga tatarica mongolica*) resulted in mass mortality within this critically endangered species and the death of many other rare wild ungulates. It is estimated that this single event resulted in an 80% population decline, which reversed the past two decades of conservation efforts to secure this population's survival. This catastrophe occurred in the context of a dramatic increase in the number of livestock in Mongolia, which has doubled in the past decade to about 66 million and continues to rise. Not only has this brought livestock and wild ungulate populations into closer proximity, thereby increasing the risk of infectious disease transmission, but it has led to competition for critical resources between these species.

Wildlife disease monitoring is not included in current government planning due to funding limitations and lack of wildlife health expertise. This project sought to pilot a functional surveillance system targeted on wildlife

diseases (with an initial focus on the Mongolian saiga as a case study), and to build capacity to integrate wildlife disease monitoring into saiga conservation planning and into the national PPR eradication strategy.

The Wildlife Conservation Society (WCS) was at the forefront of Mongolia's response to the 2016–2017 PPRV outbreak and subsequent efforts to improve procedures for surveillance and detection of diseases at the wildlife-livestock interface. Through this project, we leveraged this leadership role and our close relationship with the General Authority for Veterinary Services (GAVS) of Mongolia and broader national government. The project has four main components:

1. training for veterinarians and rangers
2. the implementation of participatory reporting and surveillance within saiga range
3. the use of reporting tools facilitating this surveillance; and
4. the institutionalisation of these methods through collaborative policy development with government agencies and partner organizations.

The training for veterinarians and rangers was organized in Khovd province on 11th–14th September 2020. The training provided information about the current status of PPR and other



Fig. 1. Workshop participants mapping distribution of livestock within the saiga range. Photo: WCS

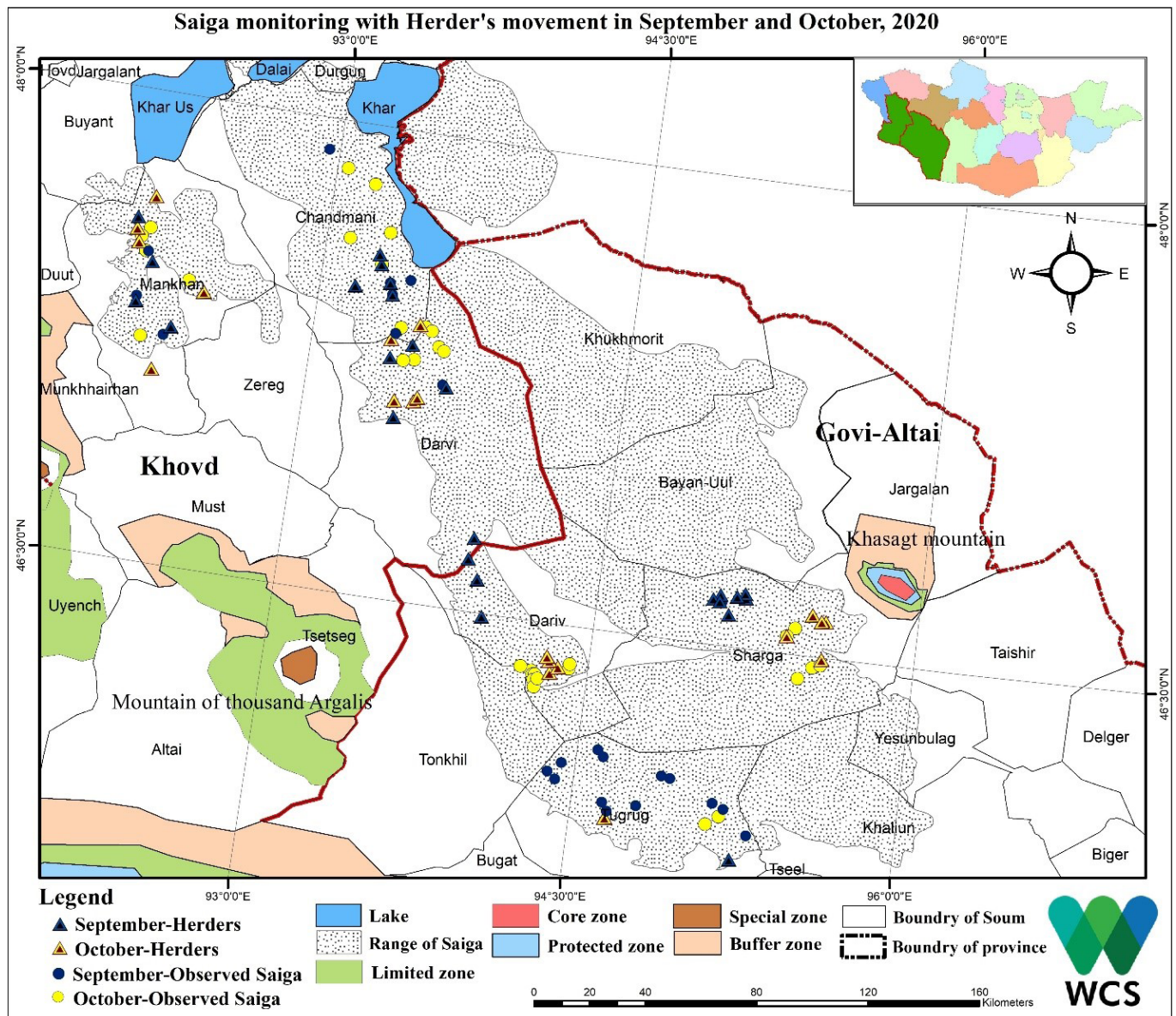


Fig. 2. An example of saiga health monitoring survey data collected during September and October 2020, in western Mongolia

wildlife diseases, as well as basics of methodologies for wildlife monitoring and herder interview surveys. In addition, a SMART-based approach to saiga/wildlife disease monitoring and semi-structured interview questionnaires was developed, using a participatory epidemiology approach where both ranger and veterinarian teams jointly collect surveillance, monitoring, and epidemiological information. This approach was tested for the first time in Mongolia. A total of 20 rangers and

veterinarians participated in the training (Fig. 1). The project also provided essential supplies including veterinary sample collection tools, handbooks, cameras, binoculars, and spotting scopes required to carry out the joint monitoring.

To establish a system for early detection of disease in livestock and wildlife, teams were set up to conduct monthly observations along specified monitoring routes. Monitoring teams included

the 7 veterinarians and 7 saiga rangers trained in participatory surveillance. Each team covered approximately 250 km per trip. A total of 2,424 saiga (119 males, 321 females, 83 calves, and 1,901 unknown) and 361 goitered gazelle (6 males, 14 females, and 341 unknown) individuals were recorded in 163 locations during four surveys conducted from September 2020 to January 2021 (Fig. 2 and 3). No sick or dead saigas were observed during the monitoring period.



Fig. 3. A group of saiga antelopes observed during the monitoring in western Mongolia.
Photo: WCS

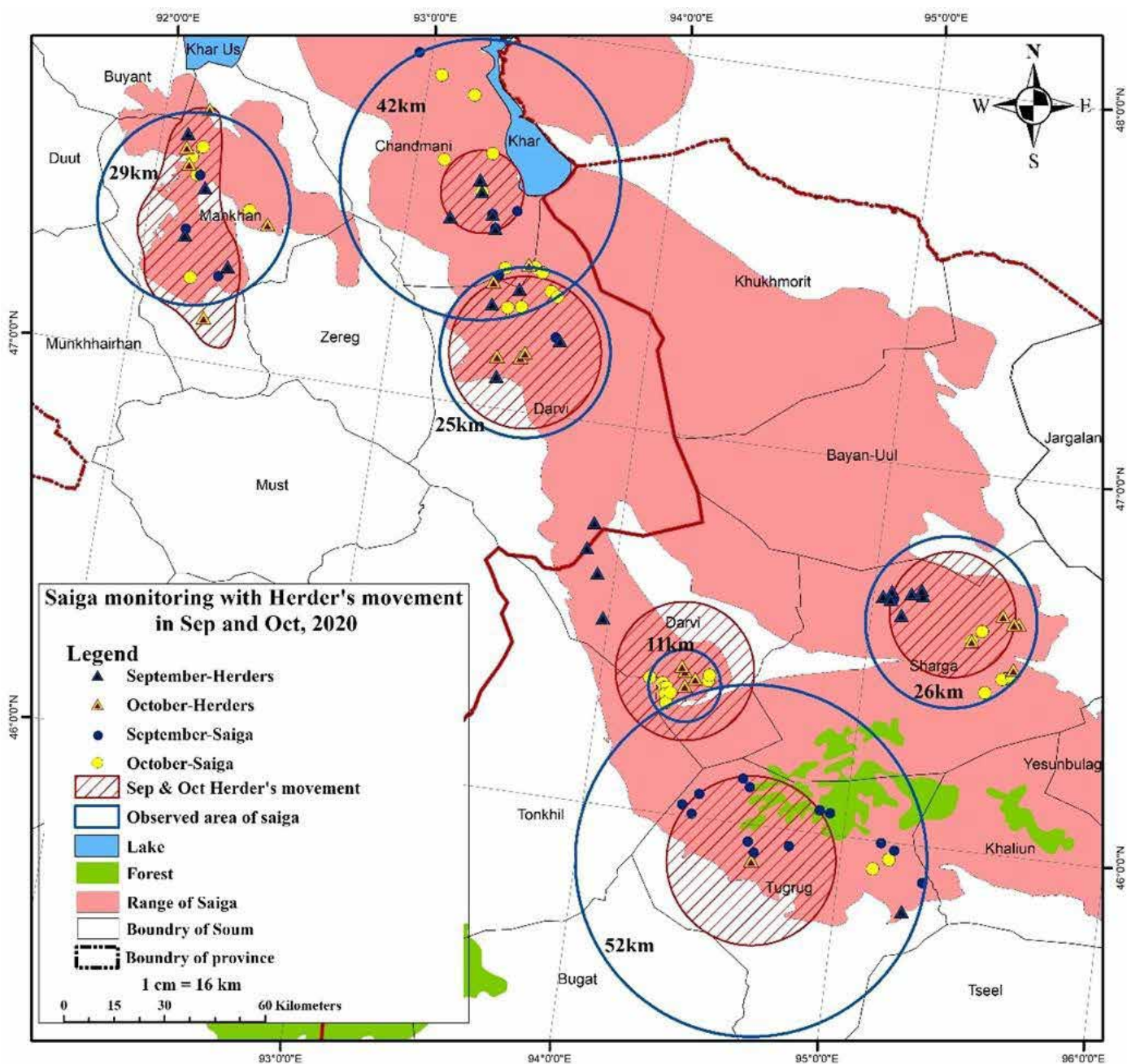


Fig. 4. Saiga groups observed from September through October 2020 in Khovd and Gobi Altai Provinces of Mongolia overlapping with herder camp locations



Fig. 5. Local and national partners were jointly trained and established a saiga and livestock disease monitoring system based on a participatory epidemiology semi-structured interview and wildlife disease monitoring SMART based approach. Photo: WCS

In addition, 392 herders from 162 households were visited and interviewed for the participatory epidemiology survey to better understand seasonal movements of herds, their distance, and the spatio-temporal interactions between livestock and wildlife, as well as to better understand perceptions regarding PPR. The results suggest that the herders from Bulgan and Mankhan soums of Khovd province move the longest distance (on average 85–170 km), mostly due to availability of resources such as pasture and water resources. Results also indicated they move longer distances during summer and autumn and relatively short distances in winter and spring. Livestock and wildlife interact frequently during spring and autumn

seasons, suggesting higher risk of disease transmission. For instance, all saiga groups observed during the monitoring were within 11–52 km of herder camps during Sep–Oct 2020 (Fig. 4).

The closing meeting of the project was held online on 27th January 2021, attended by a team of 19 people, including veterinarians and rangers from WCS, Mercy Corps Mongolia, Khovd, and Gobi-Altai provinces. Attendees provided information and exchanged views on project results, implementation, and future issues (Fig. 5). Based on the results, recommendations to prevent future PPR outbreaks and implement mitigation measures were made at soum, provincial, and national levels. Full reports from

the project were printed, translated into Mongolian, and disseminated to all partners. One of the highlights of this effort was how veterinarians and rangers worked as a team in an efficient and effective way to detect and respond to livestock and wildlife diseases in a timely manner. All partners were satisfied with this approach and its outcomes.

WCS sends our sincere appreciation to all national and local partners for their dedication and support in continuing to protect Mongolian saigas from potential disease threats!

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Saiga as a priority for the federal project 'Conservation of biological diversity and development of ecological tourism'

The federal project entitled 'Conservation of biological diversity and development of ecological tourism,' an 'Environment' national project, (hereinafter – 'the federal project') is being implemented following Presidential Decree No. 204 of 7th May 2018; 'On the national goals and strategic objectives of the development of the Russian Federation for the period up to 2024'.

The federal project entitled 'Conservation of biological diversity and development of ecological tourism,' an 'Environment' national project, (hereinafter – 'the federal project') is being implemented following Presidential Decree No. 204 of 7th May 2018; 'On the national goals and strategic objectives of the development of the Russian Federation for the period up to 2024'.

One of the federal project's objectives is conservation and restoration

(including reintroduction) of rare and endangered animal species, according to the List of Faunal Objects Requiring Urgent Restoration and Reintroduction Steps approved by the Ministry of Natural Resources and the Environment of the Russian Federation (Decree No. 26-p, 29th August 2019). The saiga is one of the 13 species in this list to be included in the Red Data Book of the Russian Federation (2021) with rarity status 1, threat status 'endangered' (EN) and conservation measures priority I.

Another decree by the Ministry of Natural Resources in November 2019 is aimed at creating a task force to address the conservation and restoration of certain rare and endangered species of fauna in the Russian Federation, which is divided into an administrative team and expert groups, including one for the saiga antelope. Members of the saiga team have developed a roadmap to implement steps under the federal project to conserve and restore saigas. These include: development of a saiga conservation strategy; development of guidelines for saiga monitoring, including using unmanned aerial vehicles (drones); saiga protection within key strictly protected natural areas; establishment of new protected areas and expansion of existing protected areas; zonation of protected areas; providing machinery and equipment for protected area management within the saiga range; training of state rangers; organisation of a saiga census using drones; monitoring of saiga populations and their habitats; biotechnical activities (including creation of watering holes); study of the impact of predators on saiga populations; research into the species' morphological and genetic diversity using molecular genetic analysis and

25



Preparing the drone for launch. Photo from archive of the Stepnoy Reserve



Installing a drinking trough for saigas in the Bogdinsko-Baskunchaksky Nature Reserve
Photo: N. Pirogov



Saigas at a watering place in the Chernye Zemli Nature Reserve. Photo: Viktor Konev

other methods to identify individuals and populations; environmental education activities and events involving local people in saiga conservation; participation in international activities, including those aimed to fulfil Russia's obligations under the CMS Memorandum of Understanding; fulfilment of the agreement between the Ministry of Natural Resources and the Environment of the Russian Federation and the Ministry of Agriculture of the Republic of Kazakhstan to conserve, restore and use the Volga-Ural saiga population, including a programme to monitor transboundary populations. The strategy has been approved by the Task Force administration and Head of the Ministry of Natural Resources of Russia, Alexander Kozlov in August 2021, and sent to the relevant constituent entities of the Russian Federation for implementation.

In order to support the federal project, the Ministry of Natural Resources of Russia developed a Business and Biodiversity initiative to raise the environmental and social responsibility of businesses and attract off-budget resources for the federal project. The task force to implement this initiative

includes representatives of over 20 businesses and public organisations. The Russian Ministry of Natural Resources has concluded a series of agreements with individual businesses, providing financial support for project activities. One of these agreements, with Lukoil, supports the saiga conservation activities of the Chernye Zemli and Stepnoy Reserves.

In 2019, WWF Russia initiated the testing of drone survey methods for saigas. A test survey counted 5,021 individuals, 11% of which were males. Another drone survey in 2020 estimated the North-West pre-Caspian population at 7,000 individuals. Based on these surveys, draft guidelines were prepared for saiga monitoring using drones. Vehicles, navigation and communication devices, fuels and lubricants were procured for the Stepnoy and Chernye Zemli Reserves – key protected areas within the saiga range. Fire prevention and fighting measures were also undertaken in these protected areas. Drinking troughs for saigas were installed in the Chernye Zemli and Bogdinsko-Baskunchaksky Nature Reserves.

One of the challenges to the free movement of saigas was a wire fence along the border between Russia and Kazakhstan. Based on an agreement between the Russian Ministry of Natural Resources and the Kalmyk and Astrakhan departments of the Border Service of the Federal Security Service of the Russian Federation, five gates 1 m wide and 70 cm high were constructed in the fence to let them go through. In addition, no barriers will be installed on the Kazakh-Russian border two kilometres to the north-east of the Bogdinsko-Baskunchaksky Nature Reserve. Nevertheless, the problem is still acute, particularly in the eastern part of the border, which is closed with a continuous fence on the Kazakh side.

The implemented and projected measures under the federal project are expected to ensure the conservation of the saiga and steppe ecosystems and lead to the growth of the North-West pre-Caspian population saiga population to 20,000 individuals, and the area – up to 20,000 km² by 2024!

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A. G. KAIRGALIYEVA²

Saiga in Lake Elton Biosphere Reserve and adjacent areas of the Trans-Volga region in Volgograd Province

Established in Volgograd Province in 2019, the Lake Elton Biosphere Reserve (see Saiga News No. 25, 2019/2020) is, in fact, the only protected area whose objectives include the protection and monitoring of saigas in the transboundary Ural population. Visual observations and censuses are carried out both as part of routine patrol activities and as special surveys along permanent transects laid for the monitoring of particularly valuable fauna. Survey records include encounter date and location, number of recorded saigas, weather conditions and, where possible, herd structure and movement directions. Apart from that, information about saiga encounters received from locals is analysed by specialists from the Volgograd Provincial Hunting Management, the border service and biologists. Publications on this subject in specialist and popular magazines, the regional mass media and social media are analysed to understand the situation. The results are entered into a database, which currently includes about 70 records of encounters with saiga herds and signs.

Together with records from the Elton weather station (aisori-m.meteo.ru/waisori, pogodaiklimat.ru/history/34476.htm), these data were used to make a first attempt to characterise the overall situation of saigas in the Trans-Volga region of Volgograd Province, with a special focus on 2020 and the first half of 2021.

2020 was very warm and dry, with a mean air temperature of +10.5°C, which is 2°C above the norm, and a mean precipitation of 182 mm, which is 100 mm below the average. The highest deviation was recorded in January-March, when the mean temperature was 6–7°C above the average, the precipitation was only

37 mm so snow cover did not form in most places. As a result, ponds, depressions and marshes within the biosphere reserve, as well as in most of Pallasovsky District, were not sufficiently filled with meltwater, which led to lower quality grass and water and food shortages for domestic and wild animals.

In total, there were 36 records of saigas in 2020, which was almost 4 times as many as in 2018–2019 (Fig. 1). The animals were recorded between late February and late December, with the largest number of records (12) in June (see Table). The total number of saigas observed throughout the year was almost 72,000, with over 50,000 individuals registered in May alone.

The records were of both individual adults and herds varying in size and sex-and-age composition, from large mixed aggregations migrating for considerable distances between Russia and Kazakhstan to small mixed groups (adult females and males or females with youngsters) leading a relatively sedentary life. Mass migration to Russia usually took place during the day through sections of the border without a barrier. There were up to 25,000 individuals in early May in the northern part of Pallasovsky District, near the border with Kazakhstan, in the Torgun valley and in adjacent watersheds (sections 1–5, Fig. 2); up to 5,000 individuals in mid-June in of the biosphere reserve, in the southern portion of Pallasovsky District, near the Kalinin farm (section 6). However, as in the previous years, most of the saigas returned to West Kazakhstan within a few days. The groups that remained, which consisted largely of females and juveniles, stayed throughout the summer until late September in the eastern

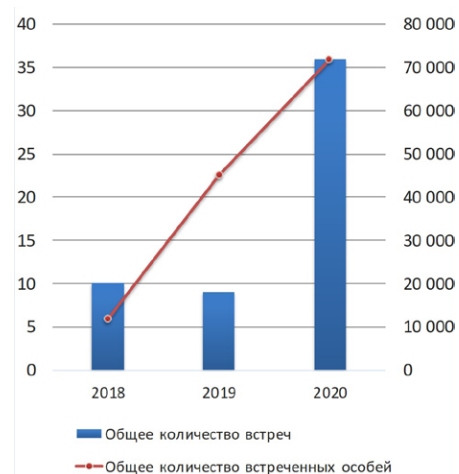


Fig. 1. The number of records (blue) and recorded saiga individuals (red line) in the Trans-Volga region of Volgograd Province in 2018–2020

Table. Saiga occurrence and herd size in the Trans-Volga region in Volgograd Province in different months of 2020–2021

Record location	Saiga occurrence in different months*: number of encounters / size of recorded herds (no. of individuals), min-max												
	2020							2021					
	II	IV	V	VI	VII	VIII	IX	XII	I	II	III	IV	VI
Border between Staropoltavsky and Pallasovsky Districts			$\frac{1}{20\ 000}$										
Pallasovsky District, north		$\frac{1}{50}$	$\frac{6}{100-25\ 000}$								$\frac{1}{10}$		
Pallasovsky District, south (territory of the Elton BR)	$\frac{1}{50}$		$\frac{1}{1\ 500}$	$\frac{12}{1-5\ 000}$	$\frac{7}{3-2\ 000}$	$\frac{3}{4-11}$	$\frac{2}{4-10}$	$\frac{1}{800}$	$\frac{1}{40}$	$\frac{2}{12-40}$	$\frac{1}{8}$	$\frac{3}{4-26}$	$\frac{2}{5-300}$

Notes: *No saiga records were made in January, March, October and November 2020 and in May 2021. Bold type – herds with juveniles.

part of the biosphere reserve (sections 6–9). The final record of a mass movement of saigas from Kazakhstan in the year was in late December, when a mixed herd of 800–1,000 individuals was observed.

In 2021, the weather was characterised by significant fluctuations in air temperature and increased humidity. The winter was quite cold and snowy, the snow cover varying from 50 cm to 120–150 cm, up to 200 cm on occasional days, and thaws alternating with strong frosts (up to -24°C). The spring was long, quite cold and rainy. The

snow cover melted completely only by late March, the mean temperature in March being -0.8°C . Thanks to the record high precipitation in the first half of the year (263 mm, compared to the usual average for the whole year of 260–280 mm), depressions and marshes were filled with meltwater and rainwater up until mid-May, and therefore livestock and wild animals were provided with sufficient water and food.

Nevertheless, despite the favorable weather conditions, only 10 records of saiga groups, totaling less than

500 individuals, were recorded in the first six months of the year. The herds were small (up to 40 individuals) and dominated by males, which might have stayed on the eastern shore of Lake Elton for the rutting period and winter. No mass arrival of saiga was recorded in the first half of 2021.

Saiga deaths were recorded during the survey period. In May–June 2020, local residents found remains of 3 calves in the northern portion of the area, and about 20 carcasses within the biosphere reserve, east of the village of Elton, near a railway, which probably



Arid brushwood-cereal steppes in the spring, Lake Elton Biosphere Reserve.

Photo: Alexander Popov

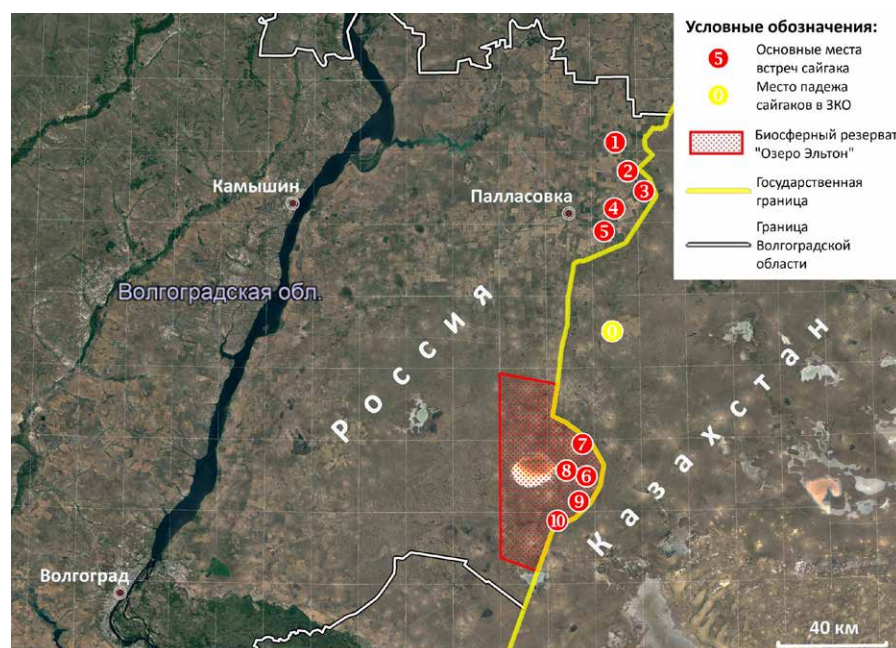


Fig. 2. Key saiga record locations in the Trans-Volga region of Volgograd Province in 2020–2021

Legend: saiga records locations (red circles); saigas death site (yellow circles); Lake Elton Biosphere Reserve (red polygon); state border (yellow line); Volgograd region border (white line).

Numbers represent key saiga record locations:

1. Parizhskaya Kommuna village
2. Kumysolechebnitsa village
3. Kulikov village
4. Savinka village
5. Limanny and Serogodsky villages
6. Kalinin farmstead
7. Baykadan livestock breeding area
8. Elton village, Mount Ulagan and Utinaya Balka area
9. Karabidayevka farmstead and Sherkesh livestock breeding area
10. Polynny railway junction

died as a result of scarcity of water and food. The severe winter of 2021 was, probably, the cause of the death of some adult saigas, whose remains (3-4 individuals, males and females) local residents also found east of Elton village.

Given the short survey period, it is too early to draw conclusions about the status of the Ural saiga population in the Trans-Volga region of Volgograd Province. Nevertheless, some conclusions can be made about the movement dynamics, sizes and spatial distribution of migrating herds in this part of their range. The saiga's transboundary migrations from Kazakhstan to Russia and back are generally spontaneous and look more like nomadic than seasonal movements. We believe that the concentration of saiga records in certain sections of the northern part of Pallasovsky District and the eastern part of the biosphere reserve (Fig. 2) is associated with the existence of suitable habitats (rangelands abounding in marshes and depressions filled with water in spring and covered with richer cereal and herbaceous vegetation in

summer), places where animals can shelter in the heat of the day (thickets of *Spiraea spp.*, fragments of old tree plantations and orchards that can still be found on watersheds and slopes), and the absence of insuperable obstacles on their migration routes.

Despite the numerous encounters with females and calves (see the Table), no calving was observed in the area in either 2020–2021 or 2018–2019, which we believe may be due to disturbance by regular military training activities in an adjacent shooting range.

Since 2018, the frequency of visits and the sizes of migrating saiga herds have been constantly growing, including during the calving period (Fig. 1), which is probably a result of the growth of the Ural population observed in Kazakhstan in 2019 and 2021 (see *Saiga News, No. 25, 2019/2020* and A. Salemgareev's article in this issue).

However, while saiga numbers in Kazakhstan continue to rise, in the first half of 2021, saiga encounters in the Trans-Volga region in Volgograd

Province dropped more than twofold and the numbers of recorded saigas almost 100 times in comparison to the same period in 2020. There are several possible explanations for that. On the one hand, as is well-known, saigas from the Ural population use the Elton rangelands in spring and summer, more rarely in winter, when there are water and food shortages in the main part of their present-day range – western Kazakhstan. However, when the resources are sufficient there, they need not move long distances.

Abnormal weather conditions – the record thick snow cover and the overall high precipitation in winter and spring, which might result in the shortening of traditional migration routes and/or their deviation to more southerly areas – might be another reason for the sudden drop in the frequency of visits to and the numbers of recorded saigas in Volgograd Province. It is also possible that the migration was interrupted by strong thunderstorms and downpours that, according to the territorial forestry and wildlife inspectorate of West Kazakhstan Province,



Saigas on the slope of Mount Ulagan, Lake Elton Biosphere Reserve, June 2020.

Photo: Oleg Suvorov

caused saiga deaths in May 2021 near Tau village (tengrinews.kz/kazakhstan_news/massoviyiy-padej-saygakov-sluchilsya-v-zko-437320) located on the animal's regular nomadic routes.

Long-established practice shows that saiga conservation is impossible without the involvement and support of local people. Close contacts with farmers and shepherds yield some very useful information, while explanatory talks with local residents ensure the observance of protected area rules. Therefore, environmental education is as important as biodiversity conservation and monitoring for the Lake Elton Biosphere Reserve. The necessity to protect the saiga – a species listed in the international, federal and regional Red Data Books – and the importance of collecting information about its status are regularly raised in the municipal and regional mass media, on social media, in the protected area's official mailings to village heads and on the official website of the Committee for Natural Resources, Forestry and Environment of Volgograd Province (oblkompriroda.volgograd.ru).

In order to enhance the environmental knowledge of the younger generation, classes in 'nature-loving' with a special

focus on the conservation of rare species, including saiga, are organised in the visitor centre of Elton reserve and local educational institutions. In total, in 2018–2021, specialists from the protected area gave over 40 lessons in pre-schools and more than 70 lessons in various schools across the district, thus covering over 2,000 people. In 2020, because of the coronavirus pandemic and resultant lockdown and switch to online classes, the reserve made a video lesson entitled "Saiga, the Miracle of the Steppe" to be shown online by six educational institutions in Pallasovsky Municipal District.

The active dialogue with the local population has yielded its first results and contributed to improvements in saiga conservation and monitoring. A survey of residents of the Russian part of the Ural saiga population range showed that negative attitudes towards this wonderful animal are extremely rare. This is despite it being mostly recorded outside the protected area, in the north of Pallasovsky District, where large herds trampled and damaged crops and competed with livestock for food and water. Outreach by the Reserve has led to a change in the attitudes of people living in Lake

Elton Biosphere Reserve from neutral to positive towards saigas. Local residents readily share information about saigas which they encounter with reserve staff. About one third of the saiga records in the saiga database are observations by locals and border guards. Moreover, some shepherds cooperate with the protected area, assisting in the maintenance of mineralised fire barriers and arranging additional drinking troughs for saigas at their livestock stations and on their pastures.

The authors are grateful to A. Vakulenko, senior researcher at the Volgograd Region Hunting Inspectorate, and A. Ivanov, PhD, researcher at the Timiryazev State Biological Museum, as well as to local residents (especially T. Bekesov and O. Suvorov) who provided valuable information about their encounters with saigas and the animals' movements in the Trans-Volga part of Volgograd Province.

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Wildlife photographer Evgeny Polonsky: I photograph to let more people know about the saiga and its habitats

Today we are talking to an old friend of our newsletter, the well-known Russian wildlife photographer and blogger, Evgeny Polonsky. Evgeny's photographs have won accolades at many exhibitions and competitions and been published in magazines such as National Geographic Russia and Photodelo. Another sign of recognition of Polonsky's professional merits was his induction into the Association of Russian Photo Artists. Although Evgeny is not directly associated with saiga study and conservation, his view of this unique animal through a camera lens is very important for both the popularisation of the species and the support of people engaged in its conservation and study. Evgeny is happy to grant us use of his works on various platforms, and his wonderful pictures of saigas can often be found in Saiga News.

Editor: When did you take up a camera for the first time?

I was born in the city of Astrakhan, on the banks of the Volga, the great Russian river, into a family of hereditary sailors. I went in for photography at the age of 12, when my brother gave me his old Smena, a popular camera brand in the Soviet Union. My first pictures were of my pet who

I really loved – a shepherd dog named Chanita. I also attempted to record unusual situations involving my family and friends with my camera, but most of the photos were scenes of my native ancient city and its residents, including animals and birds.

Ed.: When did you grow interested in wildlife, in general?

A long time ago, I was lucky enough to become acquainted with Oleg Gulevsky, a great photographer, who once invited me to accompany him on a trip to the countryside, and it was there where I got engaged in observing the world through a camera lens. I also wanted to show all the remarkable places in Astrakhan Province and interesting moments in the lives of wild animals to as many people as possible.

Ed.: When did saiga and its neighbours get into the focus of your camera and attention?

Probably it began more than ten years ago, when I met Igor Shpilenok, a popular Russian natural history photographer, well-known blogger and winner of the BBC Wildlife Photography competition, who came to our province to photograph the Astrakhan Reserve and Stepnoy reserve. This meeting resulted in a strong friendship, and Igor shared his vast experience with me, generously contributing to my professional development. But the main reason was, certainly, the situation that arose for saiga in the north-west pre-Caspian region after the break-up of the USSR. Then, the economy collapsed, and the



In his element.
Photo: Oleg Sidorov

resulting strong growth in poaching almost completely destroyed these representatives of our ancient fauna. It was, on the one hand, the desire to document, before it was too late, these original, almost extraterrestrial animals brought to the brink of extinction, and on the other hand, the irresistible urge to do something to save them, that made me become more closely acquainted with the state rangers and wild residents of the Stepnoy reserve, which is now a habitat for a considerable proportion of this saiga population.

Ed.: What does your photography day look like?

Showing the life of animals and birds in the way I see it through a camera lens is no simple thing. One should be thoughtful and carry out detailed research into the subject. Learn as much as possible about one's target object. So, before going into the field, I find basic information about the animal in the literature, which sometimes has little to do with reality. This is why I have to spend so much time watching animals and learning their behaviour in

the wild so as to take the shot I want. Photo-hunting after some animals would be pointless without serious preparation. The rangers of the reserve helped me to make several hides, from which I can photograph saigas, wolves and other animals and birds. It is actually hard for me to describe my photography days – they are so different. But the average day looks like this: after driving about 250 km from Astrakhan to the field station of the Stepnoy reserve, I leave my car there and take my equipment and necessities to my hide some 500 m from a watering hole on foot so as not to disturb the saigas. Once in the hide, I set up my equipment and prepare for a long wait until my camera lens captures incredible moments from the life of saigas and other inhabitants of the reserve coming to drink.

Ed.: Could you tell us an interesting saiga story?

There are plenty of them... One frosty winter day, in early December 2020, I arrived at the reserve as usual, and after brief preparations set off on foot for my hide. That was the rutting

period, an important time for the saiga, which usually occurs in late November–early December, when large aggregations split into small herds. At that time males develop sideburns, pronounced black stripes under the eyes and a collar of darker fur, looking very 'stern,' and grow extremely ill-tempered. I've often watched rutting males inflating their trunk-like nose to make it look like a megaphone, bending it S-shaped and producing a blare, which turns into a snore, to fight off other males in a competition for the attention of the largest number of females. If the scary sounds do not work, they resort to their horns, which sometimes results in very fierce battles. This time I didn't observe anything of the kind, since no other saigas were seen at the watering hole. Knowing that the animals would sooner or later come to drink, I settled comfortably in my shelter, set up my equipment and got ready for a long wait. The day was coming to a close, the temperature had dropped so that I started getting cold feet, and I even began to plan how I would spend the night there. But, luckily, I did not have to wait long: a movement in the corner of my eye was a reward for my patience. There he



Saiga female with calves on the artesian.

Photo: Eugeny Polonsky

was – an adult male with an inflated nose, dark collar and sideburns. He stood very still and was gazing in my direction. So as not to frighten off this ‘serious man’, I pressed the shutter button very carefully. But the characteristic click had no effect on the saiga, so I was able to take a few wonderful shots. The photo session continued for about 10 minutes, after which the male turned round and, proudly bearing his horns, walked away for some important saiga business, which was, probably, to inspect his harem.

Ed.: What is the best part of your job?

This is, rather, a near-professional hobby. I love everything about it. In fact, living in the wild is much calmer and safer than in a city. To take a single good picture I sometimes have to be cold or burnt by the sun in my hide, but I never regret it, since the joy of victory makes up for all the discomfort I’ve had. Photo hunting yields trophies – pictures of rare animals and birds, which not only become the property of the hunter, but – through the Internet, newspapers, magazines and exhibitions – please those wildlife lovers who cannot visit remote places or who care about the fate of our little brothers and sisters. Showing the nature of my homeland – Astrakhan Province – in all its beauty and telling people about its unique wildlife is my primary goal, and I am very happy to get feedback from those who see my photos. On numerous occasions I have pictured the Stepnoy staff during their anti-poaching operations, and the Caspian coast border guards in action fighting against illegal sturgeon fishing. Contributing to the conservation of the wildlife of my native land is another thing that makes my occupation in animal photography so rewarding.

Ed.: What are the prospects for saiga conservation? Which are the first steps to be taken to help this species survive?

In my judgement, the small team of rangers at the Stepnoy reserve are facing the gravest challenge of protecting the North-Western Caspian saiga population. They are ordinary, but very serious people, fans and connoisseurs of wildlife, committed to their business, with a high sense of responsibility for their duties, in particular, saiga protection. It is through their efforts that poaching has not been recorded for quite a while in Astrakhan Province. Now that we are observing the growth, though slight, of the saiga population and the animals are being recorded far beyond the protected area, we can make a cautious assumption that the most terrifying ‘point of no return’ (population extirpation) has been avoided thanks to the measures taken by these rangers supported by governmental organisations and various sponsors. All we have to do is to hope that, despite the looming grave outcomes of climate change, no natural disasters – epizootics, droughts and fires causing mass death – will take place, and to make every effort to fight negative anthropogenic impacts. Since the conservation of wildlife in general, and rare species in particular, is financed on leftovers, it is very important to do our utmost to ensure those responsible for saiga protection are provided with stable financial support to be able to purchase fuels and lubricants, repair old and buy new equipment and vehicles, and carry out their work.

On my part, I will keep on photographing to let more people know about the saiga and its habitats and see how beautiful and fragile the nature of their

native land is. Photo exhibitions including short lectures are the format that may help the saiga survive. I’ve taken part in a number of photo exhibitions, such as Wildlife of Russia, Russia is Our Family Home, Pristine Russia, Sunlit Shores, Golden Tortoise-7, and Nature Trails: Conserving the Future! I’ve seen how people of all ages react to pictures of wildlife. In 2021, WWF, with the support of the Presidential Grants Fund, organised a mobile exhibition dedicated to the saiga and other inhabitants of the steppe. An exhibition called Lets Conserve the Saiga Together is still on a tour of the villages of the Republic of Kalmykia and Astrakhan Province near saiga habitats, which is a step towards the salvation of saigas.

Ed.: Do you do anything to share your experience?

Yes, I try to focus on educating young photographers from Astrakhan, where I not only tell them the history of photography and teach them wildlife photography techniques, but show them how to use a camera lens to learn about animal behaviour and love and protect the wildlife of their homeland.

Ed.: Thank you very much, Evgeny, for agreeing to spend time give such a detailed interview to our magazine. We wish you many more interesting trips, unusual wildlife encounters and every success in your work. We would be happy if you keep on sharing your photos and stories with us, which, we are sure, are very interesting to our readers.

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Saiga males are preparing for the fighting. Photo: Galina Kalmykova

SCA award winners 2021

In 2020, COVID sadly meant that the Saiga Conservation Alliance needed to cut down its activities. So it was especially pleasant to be able to resume our grants competitions in 2021. We had a good range of applications to our three competitions – Small Grants Programme, Young Conservation Leaders and Excellence in Saiga Protection. Many congratulations to our winners! We are looking forward to working with them in the next 12 months. If you would like more details of their projects, in the words of the award recipients themselves, please visit the SCA website.

Small Grants Programme



Karina Karenina, Russia: "Socially Significant Areas in the Saiga Habitat Territory of the North-

Western Caspian Region". In this project, we will record saiga behaviour in the Stepnoi Reserve and map the most important areas for saiga survival and reproduction. We hope that the information we obtain will be used to improve the effectiveness of saiga conservation initiatives. It's an honor to receive the award from Saiga Conservation Alliance and I want to use it to help saiga conservation as much as I can.



Mikhail Shpigelman, Kazakhstan: "Friendly neighborhood with steppe antelope":

I am very grateful to the Alliance for this grant, which will allow me to study the productivity of the steppe, the number of agricultural crops on a transect through the saiga's Ural range, and to develop recommendations for resolving the conflict between farmers and saigas.



Svetlana Aitkulova, Russia: "Development of a monitoring system for migratory saiga herds on the

territory of the Lake Elton Biosphere Reserve": The project will enable the Elton Nature Reserve to use camera traps to monitor saigas, thereby helping the migratory herds of the Volga-Ural saiga population.

Young Conservation Leaders



Dilnaz Malikova, Kazakhstan: The Saiga Conservation Alliance has given me a great chance to implement

my idea of developing an online course for schoolchildren in Karaganda province about the importance of saiga conservation. With the support of SCA team I can then expand my project scope to other countries.



Ekaterina Berezina, Russia: During my research, I plan to use photos from camera traps placed near the

waterholes in the Stepnoi Reserve to broaden our understanding of the way saigas move around the sanctuary and use waterholes in their daily routine.

Excellence in Saiga Protection



Vladimir Kalmykov, Director of Stepnoi Reserve, Astrakhan region, Russia, winner of the Excellence in

Saiga Protection 2021 award: I regard this award as a recognition and appreciation of the very difficult and important work that the entire team of state inspectors of the Stepnoi Reserve does tirelessly. At the same time, I would also like to note that without constant attention and timely assistance provided to the Reserve by the Alliance, our work could not be so effective. The staff of the Reserve are sincerely grateful to Alliance for everything that has been done for over 15 years to preserve and revive the saiga throughout its range.



Maksim Kulushev and Alexey Garagan, rangers in Committee of hunting and fishing of the Saratov region, Russia, "Highly commended": We are very pleased that our saiga conservation work has been appreciated. Holding such competitions is very important to draw attention to the problems of saiga conservation. We believe that only together is it possible to preserve this rare and amazing species of animals.

More details here:

saiga-conservation.org/2022/01/08/sca-grants-winners-2021

An irreparable loss – Anton Mezhnev (Oct. 22, 1963 – Jan. 8, 2020)

With a feeling of deep sorrow, we have to report that our “saiga” community has suffered an irreparable loss. On the evening of January 8, 2021, terrible news came, which shocked literally everyone – Anton Pavlovich Mezhnev, who had spent more than 10 years studying and conserving saigas both in Russia and internationally, and was a great friend of the saiga community, suddenly died.

Having graduated in 1985 from the Department of Vertebrate Zoology of Moscow State University, Anton Pavlovich worked for many years at the Central Research Laboratory of the Hunting Department of the Russian Federation, later renamed the Central Game Control Agency, of the Ministry of Agriculture / Ministry of Natural Resources of Russia, where he researched and monitored various game species. His innate craving for knowledge of natural processes, versatile views, excellent university education, training at the Diplomatic Academy of the Russian Ministry of Foreign Affairs, and his experience, allowed Anton Pavlovich to work for many years within the Ministry of Natural Resources of Russia where

he was responsible for the development of state policy and legal regulations related to hunting and the protection of hunted resources. For more than 10 years, Anton Pavlovich was coordinator of the implementation of activities under the CMS Memorandum of Understanding on the conservation, restoration, and sustainable use of the saiga antelope in Russia and the representative of the Russian Federation to the CITES Standing Committee, where he defended the interests of the saiga at different levels.

Anton Pavlovich generously shared his knowledge and experience, giving a course of lectures entitled “Hunting Science with the Basics of Legislation” at his alma mater, the Department of

Vertebrate Zoology, Faculty of Biology, Moscow State University. This was of great interest to students, since the course allowed them to obtain basic knowledge in the field of legislation and conservation of biological and landscape diversity, including the international aspect, including considering the problems of bioethics.

Since the establishment of the Section of Experts on Saiga Conservation and Restoration, created under the Ministry of Natural Resources of Russia, and as an employee of the Information and Analytical Center for Wildlife Support, Anton Pavlovich was a very active participant in all activities related to the saiga. On his initiative and with his direct participation, important documents were prepared such as the Action Plan for the Conservation of the Saiga antelope in the Russian Federation for the period up to 2025, in line with the recommendations of the CMS MoU, the Strategy for the Conservation of the Saiga antelope in the Russian Federation up to 2030, recommendations for the inclusion of the saiga antelope in the Red Book of Russia and many others.

36



Anton Mezhnev speaking at the IFAW workshop in Astrakhan State University, December 2018. Photo: IFAW



Anton Mezhnev at the CITES CoP18 in Geneva, August 2019. Photo: CITES

Realizing the importance of ensuring that transboundary saiga populations prospered, Anton Pavlovich paid great attention to Russian-Kazakh cooperation. This included the preparation of various documents and participation in meetings with Kazakh colleagues. But Anton Pavlovich also had a long-standing dream – to see with his own eyes how the saigas of the Volga-Ural and Betpakdala populations were faring. In late 2020, he found out that the Russian Geographical Society had supported his project proposal to conduct an expedition entitled “Across the Volga with Saigas” in summer 2021, along the Russian-Kazakh state border. In mid-December 2020, Anton Pavlovich made a reconnaissance trip, visiting the Astrakhan, Volgograd and Saratov regions, discussing saiga monitoring and cooperation with Kazakh colleagues with various colleagues, and visiting the state border to see with his own eyes the barriers to animal movement. He returned from his trip inspired with an understanding of how he would conduct his summer expedition. But, by the will of some incomprehensible circumstances, everything collapsed in one second...

And these were not all of Anton Pavlovich’s plans, which, unfortunately, were not destined to come true.

A bright and cheerful person, a caring and loving son, husband and father, who neither family, nor friends, nor colleagues can bring back. Sincere condolences to all relatives of Anton Pavlovich. Time will pass and it will be still hard to believe this is true. It will seem to be some kind of mistake, this just cannot be true, and at our next saiga meeting we will see and hear Anton Pavlovich again... And this makes it even more sorrowful and very difficult to find words that can reflect all the bitterness of our loss.

Anna Lushchekina and Saiga Conservation Alliance

Anton Mezhnev was a true and committed supporter of saiga conservation, and a major figure in our small and closeknit saiga community. He was also a kind and generous man who was patient and collaborative. He

did everything he could to further the cause of saiga conservation both in his country and internationally. I was honoured to know him, and to be able to work with him. He will be very much missed.

E.J. Millner-Gulland

The terrible and very unfair news has come that Anton Pavlovich Mezhnev has passed away. He was true professional of the type who is rarely met. An intelligent and selfless person who has done so much to help Russia and the whole world to preserve the unique nature of our planet and maintain the status of the Motherland in very high-level international forums. He was also a very good person, kind and modest, courageous and open. We often met at various meetings on saigas, CITES. Anton Pavlovich was a regular contributor to Saiga News, he was very supportive of the work of SCA and was always glad to share knowledge, experience, and support good initiatives. Blessed memory and condolences to family and friends...

Elena Bykova, Alexander Esipov

It is a very sad surprise that Anton Mezhev passed away, a Russian state employee, although you would not have said that he was a government representative when meeting him, as he was always a remarkably open, easy-going, and friendly person, interested in other positions, knowledge and findings. Working with him during meetings for the conservation of saiga was always a great pleasure. He was an excellent expert on the saiga in Russia, well connected nationally as well as internationally, deeply respected by the whole conservation community and other

state representatives, but was in turn himself respectful of everyone working for the same goals of protecting the nature of Russia and particularly saiga. His outstanding knowledge of CITES and all relevant procedures will be very much missed. His strong support for saiga conservation across the border with Kazakhstan was amazing and leaves a feeling of great gratitude. He leaves behind big footsteps, which it will be difficult to fill. It has been an honour to get to know him. Sincere condolences to his family and friends.

Steffen Zuther

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