ROYLE SAFARIS

Siberian Tiger Winter Tour

Destination: Russia **Duration:** 14 Days **Dates:** 27th Nov – 10th Dec 2015

- Getting a huge male Tiger climbing up a tree to scent mark on a camera trap
- Having the expert guidance of Alexander, a leading Russian tiger expert
- Seeing some winter resident birds including a breeding pair of Ural owls
- Being involved in a vital tiger census by counting tracks and setting camera traps
- Finding tracks of a mating pair of tigers along the road, following each other
- Exploring the immense Taiga forest that spans 2/3 of the northern hemisphere
- Finding a Mountain Hare recently killed by a Sable on the road – minutes old
- Learning about the indigenous Udeghe people from one of their elders in Gvasyugi
- Watching a seldom seen Siberian Weasel hunting alongside the road
- Meeting Zhorik the injured but playful Tiger; rescued from a circus & living in Utyos

Tour Leader / Guides

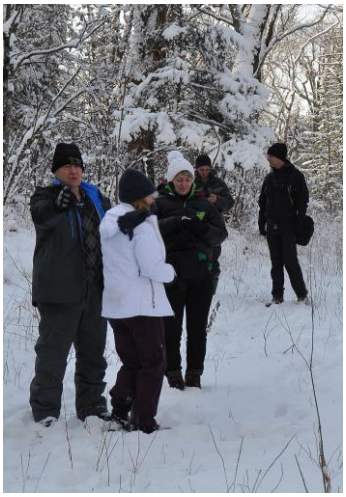
Martin Royle (Royle Safaris Tour Leader)
Alexander (Forest Reserve Director & Guide)
Sergey (Base Camp Cook)
Valeri (Forest Reserve Guide)
Ivan (Base Camp Assistant & Fire Manager)
Istmat (Base Camp Assistant & Cook)
Arkady (Base Camp Assistant & Ski Guide)
Viktor (Russian – English Translator)
Eduard (Uytos Rehabilitation Centre Manager)
Vaseli (Extra driver for Gvasyugi village visit)

Participants

Dr. Rob Voyle
Dr. Kim Voyle
Mr. Marc Begert
Dr. Martin Daniel
Mrs. Natascha Daniel

Overview

Day 1:	Khabarovsk
Days 2-12:	Forest Reserve
Day 6:	Utyos Centre
Day 9:	Udeghe Village
Day 13:	Khabarovsk
Days 14:	Home / Khabarovsk
Days 15:	Home



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Day by Day Breakdown

Overview

Tigers are most commonly associated with the tropical and subtropical forests and elephant grasslands of the Indian Subcontinent and South East Asia; however they used to range far and wide over the Asian continent. From Iran to Korea and Indonesia to Kazakhstan including most of Far Eastern and Central Russia; unfortunately over 93% of their historical range has been lost since the start of the 1900's (incredibly a reduction of 40% since 1990!). Most of the comprehensive decimation of the tiger's range has occurred in China where the tiger has a paradoxical role in the culture; both a revered and celebrated species; an animal integral to the creationist myths of Chinese religion and also one of the 12 animals of the Chinese zodiac. However this reverence is countered by a merciless hunger for tiger products; every part of the tiger is utilised by the Chinese in their traditional medicinal practises. From penis (for fertility) to whiskers (for asthma) and every part of the body in between the demand for tiger products is so lucrative that they have been hunted to the verge of extinction in China and now the demand has been met by poachers in other countries. The vast reduction of the tiger's numbers in China has led to a huge gap in the tiger's current distribution. Whilst still present in areas of South and South East Asia any map of the tiger's range will include a small shaded area along the Russian coastline just north west of Japan. This is the realm of the Siberian tiger (more correctly called the Amur tiger and in the local Udeghe language Amba); a forest that is covered in a blanket of snow and ice for 6 months of the year and then a rich and diverse temperate boreal 'jungle' in the summer. At first glance in the winter this seems like the last place that a tiger would be found, however they have spent a considerable amount of their evolutionary history in the forests of eastern and central Asia. The evolutionary history of the tiger starts in China and Java around 2 million years ago and at this time there were land bridges connecting Java to the mainland and the tiger quickly moved north and reached the Russian Far East, Japan and Korea around 1.5 million years ago. They remained here for some time, spreading west and as far as Turkey (for some reason tigers never made it further west and into Europe and they didn't cross the land bridge connecting Asia with the Americas). The tiger has is and always has been a truly Asian species, born and bred in this vast continent. It is ironic that the most closely associated country with the tiger (India) is the one that they arrived in the latest. Tigers only made it to India round 12,000 years ago, this is known because fossil evidence suggests that they never made it to Sri Lanka and Sri Lanka was attached to India via a land bridge until around 12,000 years ago. Since evidence of tigers has been found throughout India from around then it is clear that they would have made it to Sri Lanka if they had arrived when they were still connected. As tigers have spent most of their history in cooler climates they are more at home in the temperate forests than the sub-tropical ones of India, a fact that is highlighted by their dislike of the heat and their love of bathing in the heat of the dry season. So despite the Russian winter seeming so alien for a tiger to call home, they are very at home here and arguable more so than in India.

So it is here, in the frozen forests of Far Eastern Russia where our search for one of the most elusive and endangered animals in the world would take place. Whilst seeing a wild Siberian tiger is extremely difficult we would be helped in this task by Alexander and his team who run the 20,000 hectare reserve around 200km south of Khabarovsk. This reserve and the surrounding forests are home to a very high density of tigers (a density so high that it rivals densities in some of India and Nepal's most productive national parks); one of the main reasons for this high density of tigers is the prey base. Even though finding any wildlife in these forests in winter is tough there are lots of deer and wild boar around and whilst hunting occurs here (during hunting seasons) it has been less so than in other areas and so the numbers of prey still remains high. Our time in the reserve would coincide with one of the two annual censuses that are conducted in the reserve the numbers recorded here are vital in the ambitious yet achievable target to double the wild tiger numbers throughout their range by 2022); by counting the tracks and also by collecting pictures and videos of the tigers from remote camera traps the team are able to build a picture of the current population. The presence of adult male and females using the same areas are great and a litter of cubs is the perfect reward for many hours of tracing tracks in the freezing conditions. By spending time with the team in the reserve and becoming part of the tiger's continued fight for survival here you will be given a unique view into tiger conservation in a part of the world that is seeing genuine tiger conservation success. Most of the tiger populations around the world are decreasing, plagued with poaching and surrounded by huge and growing populations the tiger's days seem numbered in many countries they exist in. But in Russia the numbers are increasing, from around 40 in the 1940's to 450 or so today (320-350 adults with the rest being cubs and sub-adults). This is in part due to increased conservation since the 1950's when the first ever census of tigers (anywhere in the world) was conducted and the government realised the peril that the tiger was in, part the fact that Vladimir Putin loves tigers and has set up numerous new parks and reserves and has implemented new patrols and anti-poaching measures and also part that Russia is so vast and the population so low, that there are still places where wildlife can live in complete ignorance of people. As the wonderful and passionate Russian tiger specialist Dale Miquelle says 'Nowhere else do so many tigers live around so few people'. All of these factors contribute to an increasing number of tigers and with lots of forest habitat around there is scope for a vastly larger population here. But most of this incredible work is only possible with the help of people like us, the eco-tourist and that is what sets Alexander alone, his ideology

that eco-tourism here will provide enough income to support conservation and research and will also provide alternative income to the hunter that are currently the only people who pay the reserves for their use. So we would try and see if we could find a Siberian tiger, however this tour is about contributing to their continued survival and also to understand a very different tiger to the one that is usually covered in documentaries and books. To see huge tiger tracks in deep virgin snow is an incredible experience and one that will live long in the memory even if we are not lucky enough to catch a glimpse of the incredible and hardy animal that inhabits these frozen forests.

Day 1 Khabarovsk / Forest Reserve *Arrival*

This morning Rob and Kim were the first to arrive and were met at the airport by Martin, Olga and Alexander and taken to Alexander's apartment in the city. A little later Marc, Martin and Natascha arrived and so did our translator for the trip into the forest, Viktor. Once we had all arrived at Alexander's apartment we also met Valeri our secondary driver / guide and had some food and a briefing on the trip and the reserve that would become home for the next 12 nights. Seeing Alexander in the city and confined to a small apartment is a little akin to seeing a tiger in a cage, his infectious enthusiasm comes out when you mention the tiger and the other wildlife of the taiga forest but when he is in the forest he comes alive. After everyone had arrived at his apartment we had a small briefing, some Russian tea and met our Alexander, Nikolai (who would be our 4x4 and snow mobile driver) Viktor (our interpreter) and Olga (who prepares the visa support documents needed to visit Russia and also arranges the ground logistics) and final preparations were made for the stay in the forest. We then loaded up the cars and made a trip to the local supermarket to buy any last minute snacks, alcohol and other supplies we may miss when isolated in the forest for the next 12 days. From here we climbed aboard the vehicles and left the city for the forest; Martin, Marc and Viktor in Alexander's vehicle and Valeri drove Rob, Kim, Martin and Natascha. This would be the configuration for all of our vehicle safaris and transfers throughout the tour. Most of the journey was uneventful, driving out of the sprawling and industrial city of Khabarovsk and into the rural areas that dot the southern boundary of the taiga forest before entering the forest as we closed in on the reserve. The first real snow of the winter was falling as we drove along the increasing icy roads. The snow and winter in general was very late to arrive in the Russian Far East this year and it was only now that some considerable snow was falling. Along the way some of the hardy winter birds were seen including a huge mixed flock of large-billed crows and carrion crows which roost along a section of road a few miles out of the suburbs of Khabarovsk. This is a commonly used roosting site and the 100 plus strong flock (or murder (the collective noun for crows)) looked imposing as they perched in the leafless almost lifeless trees either side of the icy road. Just after crossing the nearly completely frozen over Khor River we spotted a red fox on the side of the road, feeding on some roadkill. The snow was making visibility very poor by the time we crossed the barren snow covered flat marshes and silver birch forests which marked the start of the taiga forest and the reserve. The fresh snow was to prove a little tricky to get through here as it was so fresh and powdery. It was dark by the time we reached the reserve and the snow fall had stopped any chance of us seeing tiger tracks from the last couple of days. There was some logging taking place on the border of Alexander's reserve, this was legal logging but the mess they make and the indiscriminate way that they plough through the forest and take every tree in sight is not good practise. In fact they have so little regard for the forest that it is amazing to think that their entire business depends on the forest and the ability to always be able to harvest trees from it. You would think forward thinking, long term planning and reforestation after logging an area would be part of the policy. Well it is officially but no one (to my experience) pays any attention to this in Russia. The forest is just so big that people do what they want and no one is accountable. When we arrived at the base camp it was time for dinner so after being shown to our cabins, which make up the sizeable base camp located in the shadows of both Little Ambine and Big Ambine; we met the rest of the camp's staff including Sergey (Alexander's son) who is the camp cook and who had prepared a wonderful spread of local food. The vast majority of the food we consume in the reserve comes from the surrounding forest, during the hunting season the wild boar and roe deer are harvested and then stored in the natural deep freeze, the trout and salmon are all locally caught, all of the fruit and jams are collected from the forest as is the wonderful wild garlic condiment that is so typical of the Russian Far East. We also met Ivan, Istmat and Arkady and had explained the traditional banya (Russian sauna and integral part of the culture here) which we were welcome to each evening. After our meal we retired to our cabins for our first night in the Russian forest.

Day 2 Forest Reserve *Tiger Tracking*

This morning we awoke to an unseasonably warm -12^{o}C and had a hearty breakfast prepared by Sergey. There was some snow still falling, however it was much lighter than last night. There was over 3cm on the ground from the snow overnight and this would work in our favour when the snow finally stopped. After heavy snowfall the activity of tigers increases as they patrol their territories with extra vigour to re-scent mark after the snow has washed it away and covered it up. The camp's resident Eurasian nuthatches were very active this morning (as they usually are) flying back and forth from the small feeders near the main cabins and their nest holes and also searching in between the recently cut and chopped logs for firewood. These freshly cut logs are home to hibernating insects and beetle grubs which are welcome food for nuthatches. After breakfast we were given a guided tour by Alexander around the base camp. Throughout the tour and the following days the enthusiasm for the forest and its wildlife that Alexander has shines through and is not lost in translation. In fact there were many times when he would talk about tigers and the wildlife in the reserve and you would understand everything before Viktor had translated anything!

The camp itself had started life as a geologist's camp and in 1993 Alexander had taken over the base and wanted to do more biological research in the forest. He then went about building better and larger cabins, a banyan and other buildings so that he could feasibly run a research station here throughout the year and not just have some people here some of the time as other base camps operated. As he showed us around the base camp he explained about the different trees and plants that are found in the forest and many of which he has planted in the base camp so that the camp can make the most of these species. As we were being shown around we were introduced to Alexander's favourite dog; Zidane he was bounding around with a female, the female (Lera) had been brought here by one of Alexander's friends Lenid in order for Zidane to mate with her. Alexander had lost several dogs recently and now had Zidane and a young female Susha (who was given to the reserve back in February). The dogs here are kept in cages as a precaution against tiger attacks. Tigers in Russia compete with wolves and they have evolved a seeming dislike for wolves and as a result all things canine. In the wild they would actively kill and try to disperse wolves from the forest (to reduce competition) and this can manifest itself in dog killing, which is not just distressing for the dog owner but can lead to a tiger spending too much time around a settlement where it may one day take a human or itself be killed. In fact many of Alexander's stories about tigers occurred within the perimeter of the base camp, including one where a tiger took one of his puppies from just 5m in front of Alexander as he stood in the entrance to the kitchen.

One of the most fundamental things that shines through at the base camp is that nothing is wasted, cigarette butts are saved and burnt as fuel, ashes from the fires and saved, mixed with salt and left as mineral salt licks for the deer at certain strategic locations in the forest and the tea leaves and tea bags are taken from the kettle and buried, these then attract worms that are used in the summer for fishing. It is very humbling to see people here live in harmony with the forest in a way that is so completely lost in most of Western society. We were shown the various cabins that are themed to particular animals in the reserve, *izybur* (wapiti), *medved* (bear) and *kaban* (wild boar) as well as the banya and how it works, the chicken coop, that provides fresh eggs and the big house that is usually only used in summer as it takes too much fuel to heat up sufficiently in winter. Alexander showed us the *Schistandra* vine which produces berries that are made into a delicious jam and also which roots are used to make tea with. We were also guided through some of the other pants that have been deliberately planted around the camp as their roots, leaves and berries are very good in a concoction of teas. One thing that is also very noticeable around here is the high presence of mistle-like parasitic plants that grow is clumps in the tree tops. Around one in 5 trees has one of these and Alexander explained that when a bird eats the berries of the mistle their faeces becomes very sticky so that when the bird defecates it sticks to the trunk of branch of a tree (without falling off and to the ground) this allows the seeds that are undigested in the dung then grow direct from faeces at the top of the tree. One of the most amazing plants that we were introduced to is the famous ginseng, the ginseng grows in this forest all over but amazingly only grows a new bud and leaves every 9 years, so it is understandably highly sought after by the local people and one of the two groups of indigenous peoples here (the Nanai) use lots of ginseng in their medicine. We were also encouraged to try the water direct from the frozen stream at the back of the camp and it is so cold, refreshing and delicious he claims he could bottle it and become very wealthy (however during our stay there was a problem with a microscopic aquatic crustacean (which had had a boom in population) and tainted the water a little), we collected water from another stream nearby once this was realised. He also explained about the old banya that he wants to convert to be a rescue shelter for orphaned bear cubs to hibernate over winter. Currently a neighbouring reserve is run by a bear scientist and he keeps many orphaned cubs over the first 2 winters before tagging them and releasing them to fend for themselves once they are sufficiently old enough. After this introduction to the base camp and a small insight into the way that the local people use the plants here we waited for the snow to settle a little more and had lunch. During this break Valeri had gone out to check on the road conditions, with a lot of fresh snow it is likely some of the lesser used roads would be impassable until the snow had been compacted down better. When Valeri did come back he came back with news of fresh tiger tracks. They were from a young female tiger, she had walked along the main road we had taken to get here yesterday. She was scent marking along the way, this is very typical tiger behaviour after a snow storm. We also found a scat as well as urine next to the road and in a scrape. Scrapes are another typical scent marking behaviour of tigers (and all big cats), they stand and move their hind feet in the substrate back and forth, raking up sand or soil into a small mound which they often leave some scat or urine in. As well as the visual sign of the scrapes and the

mound, the urine and scat act as scent markers and the movement of the cats paws releases scent from inter-digital glands. This scent gland is particularly important for females looking to mate with males. As shown when females in heat increase their scraping rates when patrolling compared to when they are not in heat. The urine was only just frozen and when melting it in the fingers still had a pungent smell, she had passed here only around 1-3 hours earlier. This tiger had not walked past a camera trap and so we would be unsure exactly which female this was. But Alexander has a record of print sizes as well as pictures (for stripe identification) and maps of the tiger's known territories, so he would have a good idea of which female this was. Throughout the trip Alexander and his team would be guiding us along certain transect routes that they use twice a year to make the tiger censuses and he will be making a note of all animal tracks we see. The rare direct sightings along with track data and camera trap images and videos are all combined to produce an accurate summary of the tiger population in the reserve and surrounding forests and Alexander was also in charge of collecting the similar data kept by other reserve managers (although few – if any) are as dedicated and tiger friendly as Alexander, many use the forest reserves strictly as they were meant to be used which is to sell off certain trees to logging commissions and also selling hunting permits. These are things Alexander does seldom, he never allows logging and only sells a few permits as he does need the money to run his research, however he cuts short the hunting season by 2 weeks and never sells his full allocation of permits. This is one of the main reasons that the tiger numbers are so high in and around his reserve, there is more food (seeds and nuts) for the prey animals and so more food for the tigers (deer and wild boar). They seem to use the protection of his reserve as a nursery and the reserve acts like a heart, pumping out tigers to nearby forests. Here his work includes educating the other forest reserve managers on the importance of having a healthy forest and also the local people that the tiger is an important species and one that should be looked after and not persecuted. We turned back around as the tiger's prints left the road and headed into the forest; along the road we noticed various large 'nests' in the trees either side of the road. These nests were made by Asiatic black bears in the summer as they sleep in the trees as well as climb the trees to feed on tender leaves and buds at the top. This is a strange behaviour for the Asiatic black bear and the reason they spend so much time in the trees is the presence of tigers; that are predators of the bears. Obviously during the winter the Asiatic black bears as well as the brown bears that also live here are hibernating, but the reserve in summer and autumn is also the best place in the world to see this endangered bear species.

Other commonly seen tracks crisscrossing the road throughout our stay would be sable, Manchurian elk, wild boar, Siberian roe deer, hazel grouse, Eurasian red squirrel, hare species and various species of shrew and mouse who spent the winter in tunnels under the snow and make quick excursions in the open when crossing the road. On coming back to the base camp the group and Viktor were taken for a hike up Big Ambine (Big Tiger Mountain) close to the base camp with Arkady. The female tiger's tracks that were seen on the road headed off in this general direction so we wanted to go and check whether she had moved around the camp or we could get an idea of exactly where they are. There is more logging activity around the reserve than Royle Safaris had experienced before and the extra human disturbance could be having an affect on the tigers movements. So it was important to see if the female had made a bee-line away from the logging area. Some of the neighbouring reserves had recently sold some areas to the logging companies. This is legal logging however (as we would see over the coming days) the way that the logging is done here is very disruptive to the forest and wildlife. Martin had to use the phone and get signal along the main road so Alexander and Martin went for a drive to the other side of the logging area, this would also work towards seeing if the female tiger had come back onto the road after she was sure she was past the logging area. When we all arrived back at the base camp that evening we found out that no fresh tiger tracks had been seen by either groups, in fact it was rather quiet, a single Eurasian jay spotted on Big Ambine and Martin and Alexander spotting a Siberian weasel foraging alongside the road allowing for pictures and excellent views of this elusive species.

Day 3 Gvasyugi Village *Tiger Tracking & Cultural Sightseeing*

This morning the snow had stopped and the temperature had gotten colder to -18^{o}C. Today after breakfast we went to visit a local Udeghe village. In the world it is estimated that there are no more than 50 tribes who still live out their lives in as much of a traditional way as possible. In the Russian Far East there are two such tribes left in existence, the Nanai and the Udeghe. The Udeghe are more numerous and in the Khabarovsk Krai (district) there are around 600 (out of a total population of 2,000) and the village of Gvasyugi has a population of around 150. This village is of cultural importance as it is the home of Valentina, the village elder and one of the most prominent members of the Udeghe culture. She has single handily translated their language and alphabet into Russian and also published many books on the Udeghe language; in an attempt to save the language from extinction. She has also established the museum at the village and teaches the young women in the village the traditional and important beliefs and

skills that would have otherwise been lost. Skills such as producing their stunning traditional dress and their dances and songs were on the verge of being forgotten as the modern world, alcohol and other temptations start to have larger and larger impacts on their daily lives. The sad part is that once Valentina dies (she is 78) who will take this over, who will be the protector of the Udeghe's culture? It is hoped by Valentina, Alexander and Martin that if more people visit here for the tiger tracking and experience the wilderness as well as the Udeghe culture that the next generation will be value and profit in their culture and the surrounding forests. So that both are protected and secured into the future.

Driving along the forest roads to the village we would once again be looking for signs of tigers and other wildlife. As the morning continued the skies began to clear and several small flocks of hazel grouse flew from the sides of the roads and into the forest, they melt and disappear into the branches of the bare trees as they fly away. We made a short stop to an old research station which is now the home of an old man who 'guards' the area, his name is Valeri and because he is here in his little wooden hut year around, probably sees more tigers than anyone else. They regularly walk past his house, mostly because he has had a habit of keeping dogs here and not looking after them and so they were regularly killed and eaten by tigers. So all of the tigers in the area know to make a pass by his house to see if there is an easy meal to be had. Since the 3rd in the last 2 years was killed because of his negligence Alexander told him he is not to be trusted with another dog and luckily he hasn't had one since. Alexander regularly meets with Valeri as well as all of the other residents and users of the forest in order to maintain good communications and also get an idea of any recent tiger movements or poaching activity; it is a great way to have many eyes in the forest. On this occasion Valeri hadn't seen any tigers recently and there were no fresh tracks around his base. So we carried on around the backside of Big Ambine road, along the side of the road we saw evidence of wild boar, Manchurian wapiti and Siberian roe deer, the tracks of these three large herbivores are all very difficult and show the different ways that they feed. The wild boar tend to move directly across the road and into the forest (often at right angles to the road), the large Manchurian wapiti tend to scrap up the snow with their hooves to get to the vegetation underneath as well as nibbling the bark off trees and the Siberian roe deer move in little undulating pathways up to bushes and small trees on the side of the road to eat buds and any leaves still on the branches. As well as these commonly encountered tracks we found tracks of red fox, raccoon dog and also amazingly Amur leopard cat. This small cat was first recorded from this reserve only last year when Alexander caught one on camera trap. This is only the second sign of the species being around here and would increase their range by several thousand square kilometres. This recent finding also goes to show that we do not know everything that is around here and with carnivore species being discovered it highlights the importance of Alexander's research and also how much protection is needed for this forest. All of these tracks were made from the last 12 hours as they were all made after it had stopped snowing, so the amount of activity on this road early this morning was incredible and with three predators (two of which are very well known scavengers – red fox and raccoon dog) it is highly possible that there is a carcass around here. Further along we had great sightings of hazel grouse in the road, walking through the deep snow and up onto the snow bank before flying back into the forest. This particular road allows for great views out over the valleys and frozen forest. More Asiatic black bear nests lined the road as we reached the south-east border of his reserve. Here Alexander explained the premise for his reserve, the three initiatives he has set up; 1) Study and monitoring of tigers and their prey, 2) eco-tourism 3) maintaining the forest habitat for future generations. Further up along this road we started to see less and less tracks on the road, a clear sign they we had left the protection of Alexander's reserve and started to drive through other reserves and also get closer to villages. Martin did however spot a Siberian roe deer just off the side of the road which ran off into the forest and disappeared. The most interesting set of tracks we saw until we got to the village were some brown bear tracks, they were around 4-5 days old and this must be one of the last bears before going to hibernation. On arrival a the village we were immediately met Valentina and went to the village hall where some of the local woman donned their traditional dress and performed traditional dances and songs for us. Unfortunately with so few Udeghe people left and with the culture dying out without practising these dances for tourists and with the help of Valentina these dances and songs are likely to be lost forever. We were shown the wapiti dance which was used during the hunting season and includes a birch bark horn being blown. Another important dance we were shown was the bear and woman bridal dance. The relationship between bears and women and bears taking women as brides is one that is common and prevalent throughout Northern Hemisphere cultures. We were also treated to the song and dance of the sowing of their traditional dress and Valentina sang a lullaby from a fairy tale. The tale tells of a mother singing this lullaby day and night for 7 days and 7 nights and within this period the baby grew up. As well as the dancing and the songs we saw the traditional instruments such as the tambourine being used for many of the dances. We then lunched at the cultural centre a traditional meal of greyling soup with rye bread. The fish were caught in the nearby Khor River. We then had a tour of their museum, the museum is made up of two sections, first the outdoors section which contains traditional style buildings, store huts and a shrine. The use of bark as insulation, roofing and walls was particularly interesting and the little shrine was complete with an idol to the forest god Amba. Also in this small section was a very small cone shaped wooden hut that is where a women would have traditionally gone to give birth. She would also stay there with her new-born baby (completely isolated from anyone else) for 2 weeks. Inside the museum (the second section) we were shown the traditional dress, some carvings, equipment such as spears, arrow heads, idols and masks. Also in the museum room where the very few and limited texts on the Udeghe people, including Valentina's own publications. They also included some interesting rock art information, from a cave in the north-east from the local village which bears a striking similarity to rock art found in Hokkaido

(northern Japan) and made by the Ainu people. The connections between the various tribal people and the relatedness of each is poorly understand and clearly more research is needed to understand the complex relationships between the people of Manchuria, Amur, Korea and Japan. We were shown the importance of the birch tree as most of the dishes, bowls and handicrafts are made from birch bark. Valentina also told us about the history of the Udeghe here and their shamanistic beliefs. We then left the museum and headed back to the base camp, on the way back we had great views of hazel grouse perched just about the road. Since we left the base camp three wild boar had crossed the road just outside of Alexander's reserve and then we started to see increased wild boar tracks in the reserve, this was a good sign. The tiger's main prey species was heading back to the reserve after the snow and so we hoped for more tigers to follow. For dinner we had traditional Uzbek food prepared by Istmat, the pilaf and roasted garlic was delicious and a great way to end the day.

Day 4 Forest Reserve *Tiger Tracking*

This morning was colder again with the temperature at -23^{o}C the skies were clear and we would spend the morning checking various camera traps and the trails for recent tiger activity. The tigers have various trees that they prefer to scent mark on, they are usually large prominent trees with slight (or pronounced overhangs). These are great places to set camera traps as any tiger walking past the trees cannot pass without at least smelling for the presence of other tigers or scent marking themselves. This means prolonged visits and better chances of identifying the tiger with more pictures and videos. The Eurasian nuthatches and resident greater spotted woodpecker were around the base camp at breakfast again and on the way to the first marking tree we found fresh mink tracks on the frozen stream, these rarely seen animals were brought here for fur farming and have now established large populations throughout Russia. The problem with this is that they are non-native American mink and tend to outcompete the native mustelid species such as Siberian weasels and pine martens. We carried on visa snow mobiles to a small stream that heads into the forest, the snow mobile track that runs parallel to the stream is a tiger highway during the winter. Along the stream Alexander showed us some of the tree species as well as the signs of the wildlife, including a large Manchurian aurelia (otherwise known as the Far Eastern palm). This particular tree is a scent marking tree and we saw claw marks on this tree. The Manchurian aurelia has large numbers of leaves and thorns and in this tree found a Eurasian red squirrel hole at its base. The squirrel had been digging around at the base of the tree collecting nuts it had buried in the autumn. This is one of dozens if not hundreds of stores that the squirrel will have made to help make it through the winter. Some squirrels can store thousands of nuts and seeds in the course of an autumn and obviously they cannot find or eat them all and are heavily responsible for the growth of trees throughout the forest. We then narrowly missed out on sighting a pair of Siberian roe deer, we found their very fresh tracks running off into the forest. They had heard us coming and ran off, being one of the species that has a hunting season they are very skittish around people and hard to see. There were very few tracks to be seen around here and no fresh tiger tracks around. Alexander sent Valeri up the slope and into the forest to search for any signs of prey animals or tigers so we could try and gauge an idea as to where they are at the moment. So we walked into the forest on the opposite side of the stream to where Valeri went scouting, this section of forest is very diverse and Alexander showed us some of the various tree species, particularly some of the ones that are very rare as they are targeted by logging companies such as cedar (which is quite common in this area), a maple tree, large Manchurian walnuts and an endangered yew tree. The forest here has less of the white birch that is dominant on the edges of the reserve and neighbouring reserves and more yellow and black birch trees. The white birch is one of the quickest growing trees in logged areas and where the forest is most white birch it is a sure sign of unsustainable logging. But this part of forest is more typical of what the original taiga forest would be in unlogged areas. Some of the yellow birch trees have had their bark stripped off by Manchurian wapitis, they do this for nutrients in the harsh winter but they also eat the berries which help to cure stomach problems in the deer and also in the local people. We then headed back to the base camp for a late lunch, Sergey came and told us of large male tiger tracks that had been seen a little way away from the base camp, we would go and check these out a little later. These turned out to be the same tracks that had been seen by Valeri and so we didn't check them out in the end. Instead we went to Alexander's cabin to have a look at some of the recent pictures and videos taken in the reserve and also learn more about the work that is done around the reserve. Because of the work Alexander has been doing for the last 22 years all of the wildlife here as well as the tigers have healthy populations the annual censuses show good populations of Manchurian wapiti, wild boar, Siberian roe deer and Siberian musk deer inside the reserve itself and comparable (but smaller populations) in the neighbouring reserves. In the 20,000 hectare reserve there are at least known 15 tigers (including 4 cubs) in the greater area (encompassing another 3 forest reserves like Forest and a total area of 387,000 hectares) has a population of at least 22 tigers that have been positively identified. This includes around 7 males, 10 females (of which 7 are known or thought to be with cubs) and 5 young cubs and several around the age of dispersal; and it is this incredible density of breeding tigers (5.5 tigers/100km^{2}) that makes this reserve by far the best place to try and get a glimpse of what is one of the rarest, most elusive and threatened animals in the Russia.

Day 5 Forest Reserve *Tiger Tracking*

This morning the temperature was a chilly -23^{o}C after around 2.5cm of snow fell on the ground over night. Leaving a nice clean blanket for us to track this morning. After breakfast Alexander and Valeri took the group on the mountain road heading towards the 'Post Office'. This is the nickname of a rocky cliff located around 20km away from base camp and a location where nearly all of the tigers in the area and many that pass through sporadically visit to scent mark. Being one of the most prominent locations in the area for tigers to exchange information. When a tiger scent marks the act to people may seem rather trivial, scraping the soil or scratching a tree coupled with urination or defecating; however the scent released from inter-digital gland, anal glands and in the urine is full of hormones and pheromones. These chemical last between 7-21 days depending on the conditions and can tell other tigers information such as the sex, age, dominance, physical fitness, reproductive state and also when the animal last ate (and possibly much more that we do not understand yet). This information allows animals of the same sex to avoid occupied territories and also know if the individual holding the territory is fit enough to repel an attack by a rival for the territory and it also tells individuals of the opposite sex of sexual receptiveness for mating. Alexander has camera traps set here and since March 2014 he has caught over 11 different tigers on the camera traps. This area may be single most important area in the whole northern Khabarovsk tiger's range for tigers. The road towards the Post Office is usually a bad in winter as a stretch of it is used by logging trucks and they cut the road up, this leads to water building up in the ruts and tyre tracks, this then freezes and when the snow builds up on top it hides the rivets. When it is unseasonable warm (which is has been recently) the ice my not be thick enough to support the weight of cars and so it's a little hit and miss whether the road can be navigated. So we took it slowly and after a getting stuck a couple of times and having to clear some debris and smooth out the road on a couple of occasions we made it passed the worse of it. Along the way we changed several camera traps, we would check these later; as we climbed up the mountainous road we entered some pristine and primary taiga forest; in this area there are less silver birch and on the higher altitudes of this road are very good places to see the true taiga forest. The taiga forest is continuous for hundreds of miles to the north (until the Arctic tundra) and stretches from Scotland and Iceland through Scandinavia, Russia into Canada and even as far east and south as New England in the USA. Here at the reserve the taiga is at is most southerly and it mixes here with the more temperate Manchurian rain-forest that is more prominent along the Sikhote Alyn mountains. It is this habitat that is preferred by the tigers and it is only here in the surrounding forests of the reserve; in the farthermost north-west of the tigers distribution; that you get the tiger living in the tiaga. It is this mixing of the forests here that results in the more Asian species such as tigers, leopards, Asiatic black bear, yellow-throated martens and musk deer sharing the same habitat as northern boreal species such as brown bears, Eurasian lynx, wolves, wapiti, sable and Siberian roe deer. Most of the forest that we have been travelling through since arriving at the base has been heavily logged in the past and the secondary forest growth is dominated by silver and 3 other species of indigenous birch trees. The major difference in what is true taiga forest compared to the secondary birch dominated forest around here is that the most common tree is the larch and taiga has much higher tree diversity. The whole basis for the rich ecosystem here is founded in the presence of large seed bearing trees such as cedar, Manchurian oak, Manchurian walnut and Korean pine. These massive and slow growing hard woods were naturally the first to be targeted by the loggers in the 1950's-1980's and there are very few stands remaining. The odd Manchurian oak, Manchurian walnut or Korean pine still can be seen in the forest and Alexander has a small stand of Manchurian oak in his reserve that somehow remained unknown to the loggers. These acorns are the main source of food for the wild boar which is the number one prey animal for tigers. The whole ecosystem is dependent on the presence and masting success of these few species but in particular the tiger's continued survival is inextricably linked with the Manchurian oak. So seeing some areas of primary taiga forest is very refreshing and gives hope that the thriving tiger population here can continue to be thriving into the future. In this area the amount of Asiatic black bear nests in the trees are very high and there is one particular tree which is hollowed out and the usual hibernation spot for a bear during. The Asiatic black bears like to hibernate inside hollow trees and can squeeze into surprisingly small spaces, whilst the brown bears prefer caves and holes further up the hills and slopes. The black bears are also heavily predated upon by tigers and tiger often check the hibernating trees for sleeping bears. Several of the more well-known hibernating trees can be found to have tiger scratch marks on the outside where tigers have attempted to get into the tree. Along the road we found tracks of a large male tiger walking in the direction we were travelling (away from the base camp and towards the Post Office); they were from yesterday morning and possibly the same tiger who we saw tracks from previously as it continued its progress around its territory. A little further on we saw more tracks (the same size and possibly the same tiger) heading back down the road towards the base camp from this morning (some point during the early morning as the snow had stopped by then). We then found where he had

lay down in the snow. The tiger had lay down for a considerable amount of time just off the road, so much so that he had melted the snow down to the ground underneath. The impression in the snow was perfect, showing the head, body, legs and tail and allowing Alexander to measure the whole animal to help in identifying the individual. With the head and body measuring 1.83m he was definitively an adult male and possibly Martin who regularly patrolled this area and is one of the largest tigers around here. Along with the sleeping tiger impression we also a scat, the scat was still quite soft and a sure sign it is no older than 2-3 hours as things freeze pretty solid fast around here; further on we found where the tiger had stopped, turned and confirmed that it was the same tiger. A tiger typically only sleep for this long after a meal and it was likely that there was a carcass somewhere in the surrounding forest. Carrying on towards the Post Office we found another set of tracks, this time from a tiger around 7 days ago, a younger tiger and one that was heading towards the Post Office and we hoped this tiger would have scent marked and therefore been caught on the camera traps as Alexander was unsure on the individual. On arrival at the Post Office we changed the SD cards and batteries for the three camera traps there, found hairs rubbed from the cheeks of tigers on the trees and rocks around here but no fresh tracks. The tiger from a week ago had left the road and decided against scent marking here, so the chances are this young tiger is an adolescent male and they tend to avoid scent marking as they do not wish to draw attention to themselves until they are sexually mature. On our way back we stopped at the neighbouring forest reserve's base camp and had some food and tea with Alexander (an indigenous forest worked) and tiger scientist and colleague of Alexander's Yuri and his wife Vera (a sable trapper). This couple (alongside our Alexander) were featured in the wildlife documentary filmed by Gordon Buchanan *Amba*. After chatting with them and finding out about recent wildlife movements and sable trapping we headed back to our base camp for a late lunch. The sable trapping here is done on a permit system and most people are permitted to catch 10 sables per winter. Each pelt is worth around USD $200 and with around 40 sable needed to make one coat you can see how this little animal is so sought after by trappers. Since the 1800's over 1 million sable have been trapped from the wild for fur annually and so far we have not noticed a reduction or slowing down in their number. This is not sustainable indefinitely though and at some point even the vast expanses of the Russian taiga forest will surely notice 1 million of their sable being lost annually from the population. In the evening we checked the camera traps at Alexander's cabin including some nice footage from the Post Office from the last couple of weeks.

Day 6 Forest Reserve *Tiger Tracking*

This morning was slightly warmer than past days with a temperature of 19^{o}C, the lack of snow last night and increased the amount of shrew activity around the base camp. There were many tracks crisscrossing the pathways as they run back and forth from the snow banks. There were also many birds around the base camp this morning including the ubiquitous Eurasian nuthatches, marsh tits and an eastern great tit. After breakfast we went and explored the same road we went down yesterday in a bid to go further and find new tiger tracks. Relatively close to base camp we found fresh male tiger tracks from last night heading away from base camp. Following the tracks we came to a scrap just off the road, the soil underneath the scrap was still slightly warm, this was made less than 1.5 hours ago. There was also a spot of blood in the front left paw print, this is most likely blood still on the paws from a kill that was made last night but it could be from a wound on the paw. This was a confident male tiger from his way of walking in the middle of the road and sitting and lying down regularly. We followed him where he walked off the road and explored an Asiatic black bear hibernation tree and he disappeared into the forest. Carrying on down the road we found the male tiger's tracks again when he came out of the forest, we followed him until he left the main road and went down a small side road where we set a camera trap up yesterday. We walked further along down this road towards a 600 year old yew tree. This is one Alexander's favourite parts of the reserve and he is very proud to have a tree that has survived this long on his reserve. To have escaped the loggers, hit winds, landslides and flooding for so many centuries is impressive. Walking into the forest along the side road we found some scrapes made by the tiger that came along here yesterday. The pattern of tracks around here and the freshness of the scraps was a sure sign that this tiger had been and was likely to be still active in the forest whilst we had been here looking at the trees and tracks this morning. Whilst it is too risky to go heading into the forest with tracks this fresh and not knowing where the tiger is, it is very likely that we were within 100m of a wild Siberian tiger here and he was likely sat down and listening to us, waiting for us to go away before carrying on his business. They are so secretive and wary of people (a legacy of decades of being hunted and persecuted) that they tend to hunker down and listen to people in their vicinity and only move when disturbed. The amount of scrapes along the road is a sign that the tiger is scent marking heavily in reaction to our presence around here yesterday, trying to cover over our scent. We then went to check on the camera traps around the hill road again, this is once again the domain of Martin the large male tiger we found tracks on the road yesterday. After setting up some more camera traps around here in hope of capturing Martin on film we headed back to base camp for a late lunch. At 16:40 we headed out again, there was a lot of water on the road today and whilst it was frozen, it had been getting warmer today and the ice was not as thick as we would have liked it to be to support the car. As a result the ice was cracking loudly and so we left the vehicles and walked across the ice to see if we could find any fresh tracks before dark. We didn't find any new tiger tracks but did find fresh red fox tracks; but other than that it was a quiet afternoon. At dinner Marc told us of a shrew that had made its home in his cabin and was seen foraging for food. Shrews have such a high metabolism that they have to eat around 150-200% of their body weight per day, so they are nearly always hunting and feeding. They are often found

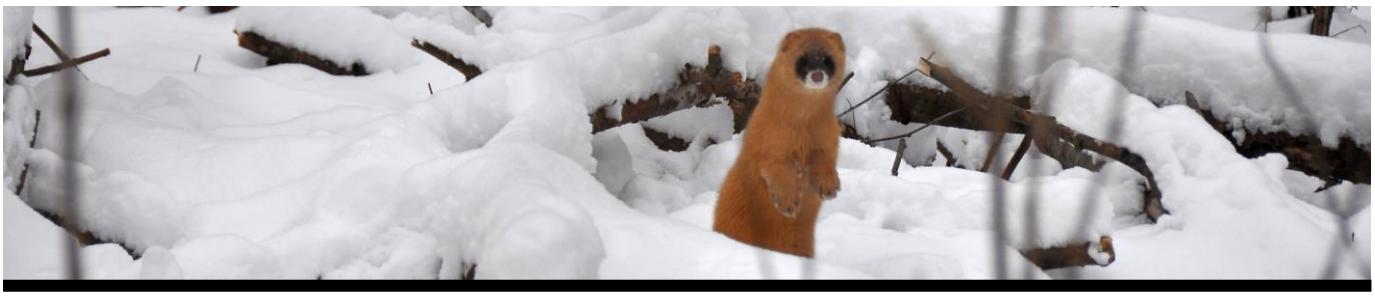
around cabins and humans habitation as their main food, insects, like to spend the winters in the cabins as they are warmer than the surrounding areas.

Day 7 Forest Reserve *Tiger Tracking*

Today was a very warm -8^{o}C and the sky was overcast with some light snowfall. Overnight around 5cm had fallen and once again there were lots of shrew tracks around the base camp. At breakfast we heard over the radio that there was a very strong blizzard in Khabarovsk, wind speeds of over 180kmph and huge snow drifts were closing many roads, the schools and colleges and we wondered if the storm was due to head in our direction over the next day or so. As we had breakfast the snowfall increased steadily and this morning we would walk the 3km from the base camp to a traditional hunter's winter cabin. These cabins are located throughout these forest reserves and are free for hunters and trappers to use during winter. The hunter or trapper will be given a permit for a certain number of animals they can catch; whilst out in the forest they are welcome to stay at these cabins and they are kept in good repair. The snow started to slow and then stop around 10am, the sun began to shine and off we went to the cabin in the company of Alexander, Igor, Sergey and Susha the dog. Along the way a Manchurian hare was spotted as well as recent tigers tracks on the trail, there are one or two large scent marking trees along the way to the cabin and we changed the camera trap memory cards on the way. There was another set of tiger tracks which were around 4 days old, showing this is a very well used pathway for tigers. At the cabin Igor and Sergey prepared a BBQ of wild boar and some fish soup for lunch. Sitting inside the cabin is a good way to experience some of the local birds as seeds are left on a window ledge that attracts various species. More often than not the area is dominated by the Eurasian nuthatches, but sometimes marsh tits, Eastern great tits, greater-spotted woodpeckers, oriental greenfinches, common redpolls and coal tits can all be seen here. Also here this afternoon was a Eurasian red squirrel busy in the trees foraging, collecting their nuts that they had stored throughout the autumn. At around 2pm it started to snow again and everyone headed back towards the base camp, arriving back at around dusk in a combination of walking, snow mobiles & sledges. By the time we all met for dinner the snow as falling quite heavily and it continued all night, with the possibility of the storm from Khabarovsk coming our way overnight.

Day 8 Forest Reserve *Tiger Tracking*

Today the temperature was marginally colder than yesterday but at -12^{o}C it was still much warmer than it should be for this time year. The snowfall over night was around 15cm and it was still very heavy this morning. We would wait and see what would happen with the weather this morning before decided on what to do. With the bad visibility and such soft powdery snow on the ground (and also with little chance of wildlife being active in this weather), we would not be driving around until the snow had cleared and we could assess the quality of the roads. So this morning we spent around the base camp, Martin and Natascha did some target practise with the base camps' rifles and Arkady instructing them, whilst everyone rested. As the snow finally began to clear in the mid afternoon Valeri, Alexander Ivan and Sergey went out to test the roads and clear away any snow and fallen branches (which is common with heavy snowfall). In the evening we all went to Martin's cabin and enjoyed another wildlife documentary filmed in the Russian Far East and specifically about the Siberian tigers and other wildlife around here.



Day 9 Utyos Rehabilitation Centre *Tiger Tracking & Sightseeing*

The snow had started to fall again overnight and was still falling today with a high wind too. There had been around 30cm overnight and the temperature was the same as yesterday -12^{o}C. There is now around 50cm of fresh snow on the ground from when we arrived in the reserve and most of this was compacted down now. At 10:30am we

departed for the Utyos Rehabilitation Centre, Ivan was to come with us in case we got stuck anywhere. At Utyos we would see the work being done by a handful of people in Far Eastern Russia (largely self-funded; although they do receive international support from various NGO's including the British based David Sheppard Wildlife Foundation and the Russian based Phoenix Fund), who dedicate their lives to protecting tigers that have come into conflict with humans, tigers that would ultimately face a certain death without any intervening help; and whilst here we would also be able to see one of these incredible tigers in the snow of the Russian Taiga forest. Along the way we would be visiting different tigers' territories and a couple of transects that are very valuable to the overall tiger censuses. We would be changing memory cards and also passing by the Post Office along the way, so we would of course keep an eye out for any evidence of tigers all the way along the route. There was lots of snow on the road and Valeri got stuck a couple of times early on, as Alexander continued in front we ploughed through the deep snow, with snow billowing onto the bonnet of the car and reducing visibility to zero in some cases. It was slow going until we reached the busier roads near the main logging reserves. These roads are used more often than Alexander's and as the logging companies pay to keep the roads opened they are cleared of snow (at great expense and damage to the ro-ad), but it did make our continued passage easier. Because of the huge amount of snowfall recently and the fact that it was still snowing this morning we didn't see any fresh tracks on the road and instead arrived at Utyos at around 14:30, after a short stop at the large village of Bitchoi to visit the shop. This is the largest village around here and we bought some drinks and snacks before heading off and travelling through several smaller and more traditional villages on our way to the rehabilitation centre, these villages were once thriving communities but since the fall of the Soviet Union the villages have been abandoned by the government and since then many of the farms have been bought by the Chinese, during the summer growing season the owners bring their own Chinese labourers in and so the local people are left with even less space for growing, as well as less job opportunities and the spiral continues to deepen. Most of the crops grown here are potatoes and corn however in the winter these fields are pristine and snow covered. During the winter the major source of income for the local people is selling the cedar cones that they can find during the autumn. Interspersed between the villages were small stands of forest and we searched these stands of forest for birds such as eagles, buzzards, hawks and owls. But with no luck today due to the heavy snow. When we arrived we were introduced to the staff and manager. The centre was established by Vladimir Kruglov in 1991, Vladimir used to be employed to catch Siberian tigers alive using nothing but ropes and a large sack. These animals were sold to zoos and circuses and during his life he caught over 40 tigers like this. Then he caught one particular tiger for a circus but this tiger had a missing canine and the circus refused to take him. He was caught as a cub after his mother was killed by poachers however his injuries and missing canine meant that Vladimir could not risk releasing this tiger back into the wild. So he built a large enclosure on his land, this was the birth of the rehabilitation centre and from this he started to rescue other animals (tigers, bears, foxes, lynx and deer) any animals that were reported orphaned or injured on roads or by hunters were taken in by Vladimir with the aim of helping them recover or grow to independence age before being released into the wild. Some of the animals however are too badly injured or too dependent on people to ever be released and so they are kept at the rehabilitation centre and given as good a life as they can provide. They also become very important ambassadors for conservation and education around here. The most famous of these was of course the tiger that started all of this, named Lyuti he was probably the most famous Siberian tiger in the world and also the most photographed, he also helped to raise much needed money for conservation and research into Siberian tigers during the 21 years he was kept at the centre. Vladimir himself died after a tree fell on him in 2005 and when Lyuti died in 2012 he was also buried with Vladimir and as is tradition in Russia the tombstones have pictures of the deceased on them. Vladimir's is probably the only tombstone in the world that has a picture of a Siberian tiger on it next to him. Before arriving at the centre we visited the small cemetery and saw the grave and beautiful tombstone. Since his death the centre is run by his son Erdo Kruglov, he was here with his wife to show us around and explain how the centre operates. Currently the centre is home to 9 Asiatic black bear cubs, which are being kept off display and away from humans as they hibernate, they will be released in the spring of their second year when they would be naturally leaving their mother. Last year they also has two Siberian tigers which had been caught as they were hanging around a village. They were caught at around 20 months old and were most likely orphaned by poachers. Without their mother around to make sure they take the correct prey (wild boar and deer) they are likely to take 'easier' prey such as livestock, dogs and possibly people. Being so close to a village the authorities decided that they are best captured and placed in the rehabilitation centre until they are old enough and conditioned to their natural prey and then released into a protected reserve far away from villages. This is where Utyos comes in, there are a couple of such centres in the Russian Far East but Utyos has the best record in terms of successfully rehabilitating tigers. It is always a risk when releasing a top predator into the wild, they sometimes get too used to people and seek them out, and they sometimes get too stressed out and do not live a normal wild life. However the alternative of leaving them involves a far higher chance of them coming into contact with people in a negative way. The general consensus with Siberian tiger rehabilitation is that is if it increases their chance of long term survival by a fraction of a percent then it is worth doing. These tigers (and all tigers that they are planning on releasing) are kept off display, they have the bare minimum human contact and are kept in enclosures around 1km away from the rest of the centre, the overall point is to make them hate people, the idea is that they do not have any happy memories about people and so when released they stay away from people as much as possible. Only by doing this will they stand a chance of living a good and long life in the wild. There is a

live video feed from their enclosures and they can see the tigers and they are monitored 24 hours a day. The tigers are provided with live prey around once per month, so that they can hone their hunting skills and remain as wild as possible. They are also provided food that contains vitamins, medication and things that the tiger needs to ensure it is parasite free and healthy before release. These two tigers where released in the spring time and by all accounts have been doing well and there has been no further reports of them causing problems. We then went to meet the famous tiger Zhorik. At nearly 6 years old this male tiger was a performing tiger in a the Kurgansksy circus when it got a chicken bone lodged in its cheek, this wound became infected and the circus could not care for the animal and so the centre took custody of the tiger. The odds were definitely stacked against Zhorik making it as the infection was getting gangrenous, however with funding from the David Shepherd Wildlife Foundation and WWF, Utyos was able to operate on the cheek and jaw. With the expert help of a veterinarian team led by Dr. Karen Dallakyan and 19 operations later Zhorik now has perfect health and a life. He will never be able to be released into the wild, having been hand reared and being far too comfortable around humans as well as not being able to hunt (the results of the operations meaning that most of the left hand side of his upper jaw has been removed including all of the teeth on the upper left quadrant – this was because the infection had spread this far); however Zhorik now has an important role to play as he follows in the footsteps of Lyuti as an ambassador for all Siberian tigers. School children visit this centre and Zhorik is probably the only tiger that they will ever see and hopefully they gain an appreciation for this incredible animal and through the hard work that Erdo is doing here the next generation of Russians grow to love the tiger and its habitat and continue the upward trend of tiger numbers in this part of the world. With increasing numbers of tigers in Russia (bucking the trend from elsewhere in the tiger's range) and the abundant space and prey populations in the vast Russian wilderness this is probably the last hope that tigers have for their long-term survival. We enjoyed our time with Zhorik, it is hard to see a tiger of this size and power in an enclosure (around 1 acre in size) and even harder to see the disfigured face of the beautiful tiger. But when you consider the alternative fate of this individual and the need for heightened education and awareness the ends do justify the means here. With Zhorik being an ex-circus tiger he is very friendly to people and mock stalks us, charges and then jumps at the fence. All a show and wanting to play he shows us the behaviours that make the tiger such a formidable predator in the snow. Their huge paws acting like perfect snow shoes and their senses all focused intently on the target, it is remarkable how anyone would want to kill such an incredible animal but with more people joining tours like this in the future we can start to buck the trend in poaching by making alive tigers more valuable to local people, communities and economies than a dead poached individual. This is a long process but one that can be done, it has worked with mountain gorillas, whales and certain species of sharks such as great-white sharks and it should work equally well for tigers as well as other mammals like rhinos, elephants, jaguars, polar bear and many others. After around 45 minutes with Zhorik we left and had lunch with the Kruglovs. Around the rehabilitation centre there were many bird species around including Eurasian bullfinches, marsh tits, eastern great tits, greater spotted woodpeckers, northern ravens and common magpies. Shortly after we left we came across an Ural owl perched on a branch just off the road, we had great views of the owl before it flew away into the forest and disappeared. A little further on we found another Ural owl perched in the forest, this is a mating pair of owls that tends to be found in this second of silver and yellow birch forest. There was a third Ural owl spotted on the way back, we went a different way, as to avoid the bad road conditions again and when entering the forest reserve again we found tiger tracks on the road. They were around 6 days old and were leaving the base camp and heading towards the village. Closer to the base camp there was a second set of tiger tracks, these ones from the last 24 hours, but it was quite dark by now and we didn't have enough light to fully see the tracks and assess what the tiger had been doing. Tomorrow we would investigate these tracks further.

Day 10 Forest Reserve *Tiger Tracking*

With around 4-5cm of snow overnight we awoke to temperatures of -15^{o}C and some light snowfall at breakfast. The skies here were clearing as we heard of worsening weather in Khabarovsk and were beginning to get a little concerned if we would be able to make it back to the city if the roads were continued to be closed and the weather not improving. However there is nothing that can be done from us to change this situation so we had our breakfast and then left to explore the area around the stream (where we went on our first full day here) and also check on the tracks we had found last night. We investigated the tracks which were from an adult female, she moved from the road where we found the tracks yesterday and then off into the stream pathway that we checked today and collected camera trap memory cards from. Snow began to fall around midday and this afternoon we would check the camera traps and see what tiger activity there had been. Near the beginning of the stream track there is a large yellow birch tree that has nearly been toppled and lies at an angle, up (around 3.5m up) on the underside of this

overhanging tree were tiger claw marks. We decided to leave a camera trap here as it appeared that whatever tiger made these scratches must be one of the biggest tigers ever! Valeri and Martin went into the village to use the phone and buy some supplies and on the way back they came across fresh tiger tracks, an adult male tiger walking along the road, he entered the forest and came back out twice, it appeared he was looking for something, maybe a female in heat. Going into the forest and back out was him possibly following scent or calls from a female or possibly prey. Then we came across smaller tracks, an adult female came out of the forest and the two tigers walked together towards the base camp along the road. They were fresh, and were most likely made within the last 20 minutes, certainly they were not there when Martin and Valeri left to go to the village only 1 hour prior. They walked together for several kilometres and also passed camera traps and so we hope for pictures and videos of this mating pair. There were many scrapes also along the way, a clear sign that the female was advertising her readiness to mate and then the male would scrape over them in an attempt to hide her receptiveness to other males who may come and challenge him for her. The tracks entered the forest around 1km away from the base camp, this is not unusual as there would have been much noise and human activity around the base camp within these evening hours and so any tiger would do their best to avoid such disturbance. On checking the camera trap pictures in Alexander's cabin today we only got one tiger on the cameras, the male Achkarik who was scent marking heavily along the trails, then the heavy snow came and stopped the cameras from working, the snow blocking the sensors.

Day 11 Forest Reserve *Tiger Tracking*

This morning the weather was -15^{o}C again and there had been another 2cm of snow overnight and it was still snowing this morning. The sky was overcast with the threat of continued snowfall all day, however it stopped at around 11:30am and the blue skies met us when we embarked to investigate the tracks that Valeri and Martin had found yesterday. We changed the memory cards in the relevant camera traps and in the process awoke a sleeping hazel grouse, sleeping in the snow before taking off and flying into the forest. After confirming the male and female tigers that had walked along the road and taking their paw print measurements we walked into the forest. Finding very fresh wild boar tracks, our presence had disturbed their feeding, as they rooted around in the snow for food buried underneath. The tracks belonged to one adult and 3 piglets. They were not too far from a mineral salt lick which we visited, nearby this natural salt lick is a small lean-to where Alexander leaves ashes and salt for the animals during winter. Around here we also found bear tracks, they looked like a male Asiatic black bear, this is very late in the winter for a bear not to be hibernating. Sometimes the adult male brown bears are so large that they stay active much later then the females, but it is unusual to see any activity of Asiatic black bears in December. The forest here is full of pine trees and also has a good diversity of plant life, we changed a camera that had been here for 3 months and hoped for some wildlife on it. We then went to a frozen over pond, this small pond is the site where a female and her two cubs were seen bathing in the hot summer by one of Alexander's students a couple of years ago. The hill regions are the chosen habitat of Siberian musk deer, this is a very seldom seen and poorly understood species and we found some tracks in the snow. Walking through this area of forest we came across a huge dead tree, the tree was being consumed by termites, their huge black nest had been ripped into and many of its inhabitants eaten by an Asiatic black bear, the claw marks on the tree and nest clearly seen. The hills are a good refuge for nay species during winter, the snow cover on the ground is lesser than the flatter areas and we came across tracks of another female wild boar and this time 4 piglets as well as sable tracks chasing a mouse in and out of the snow. They would disappear into neat round holes that plunged into the snow and through branches and roots and then back out and across the snow before disappearing again. This chase must be a great thing to see, the speed and agility of the mouse and of course the sable is wonderful. We saw more signs of life around here including more of the same bear tracks, an impression in the snow where a Siberian roe deer had been sleeping all night and tracks of more wild boar and two roe deer that were recently disturbed. We left the forest and carried on around the Big Ambine road and found tracks from a female tiger and red fox from last night walking along the road. Walking parallel with each other, in other parts of the tiger's range it is not unusual for individual jackals to follow tiger in anticipation of scavenging any kills the tiger makes and here we may be seeing a similar relationship between the red fox and tiger. However it may also be complete coincidence that the fox trotted up here after the tiger. Following this tiger we found scrapes and some scat, Alexander collected the scat to send over to his students in the Moscow State University for DNA and hormonal analysis. Following this female as she walked down the track we found many token scats. This is a sure sign that the tiger is readily advertising its presence, in the case of females (such as this one) it is a good sign that this means she is ready to mate, with males it is a new male marking the territory rigorously; perhaps in response to a new male in the area. We collected the scat and headed back to base camp as the sun began to set behind the hills.

Day 12 Forest Reserve *Tiger Tracking*

Today the temperature had dropped a little from the last few days and was -18^{o}C, and for the first time in a few days we had clear blue skies at breakfast. Today we would go around and collect many camera traps and see for tiger activity one last time. We first went to the Post Office and collected the camera traps along the way, down this mountain road there was lots of wild boar activity in the last 24 hours. As the weather begins to settle and the storms pass the animal activity around the roads and lowlands will increase. We hoped for increased tiger activity around here too as the wild boars come back. On the main logging road we found a very freshly killed mountain

hare, the body was still warm and the blood on the snow still liquid. A northern raven first alerted us to this and as we approached in our vehicles we must have scared off the sable that was responsible for the kill. We could see the tracks where the sable and hare came out of the forest and made the kill, the sable eat part of the ribs and organs before running off into the forest. We briefly visited another base camp to get any news from them on tiger and other wildlife sightings and news on poaching and logging activity (if there had been any). They explained that last month a tiger and a cub were seen on the road just nearby and that they see tigers regularly around here. At the Post Office, Alexander took Marc and Martin up to change the memory cards and batteries. Only taking three people was to reduce the impact on the area to a minimum as tigers are very sensitive to the presence of people and may not visit the area if the scent of people is everywhere. Up around the cliff there were fresh female tracks from the last 1-2 days. We hoped to get the identity of the tiger from the camera traps later tonight and we then left and headed back to the base camp. At the base we set up some camera traps overnight nearby the camp, to try and get pictures and videos of mink or Siberian weasel. Later that afternoon (before the final feast and farewell dinner) we checked the camera traps and found that many of them (including the ones at the Post Office) were white washed out by the heavy snow. But we did get the tiger returning to the overhanging tree near the stream, what we saw was not a giant tiger, but equally impressive as the huge male Achkarik (weighing around 300kg) climbed up the tree trunk, hanging upside down and using the incredible power of his forearms to support his bulk as he rubbed his cheeks against the bark. This is a great way to trick other males into thinking a huge male tiger is occupying this territory. What a great way to end the trip, this is arguably the best ever footage taken on camera traps and among the best ever footage of wild Siberian tigers and showing a behaviour that is so unlikely and unusual.

Day 13 Khabarovsk *Travelling*

With the temperature at -13^{o}C we had our last breakfast at the base camp and packed up ready to leave. We would leave shortly to avoid the possibility of getting stuck on the open marshy areas just outside of the village and hope that the recent bad weather had not closed the roads down getting in and out of Khabarovsk. The drive back was largely uneventful with the only sightings of note being the large colony of large-billed crows along the road, we watched as some of the crows took off and mobbed a large white-tailed eagle that had flown too close to the colony and chased it away. Once we arrived back in Khabarovsk, we met up again with Olga, said goodbye to Alexander and Valeri; we checked into our hotels as Viktor booked us a table at a nearby restaurant for tonight. The rest of the afternoon was free for people to rest, shower and explore the city and Amur River banks and then in the evening we met up again with Viktor and enjoyed a nice Russian meal before heading back to the hotel.

Day 14 Home *Departure*

This morning Rob and Kim left for the airport very early in the morning to fly to Valdivostok and then later in the afternoon Martin, Natascha, Marc and Martin all left for the airport together to catch their flight back to Moscow and then their onwards home.

Species List

Siberian Tiger Winter Tour / November 2015

Mammals (* = heard or signs only / CT = Camera Trap images)

	Common Name	Binominal Name	November				December									
			27	28	29	30	1	2	3	4	5	6	7	8	9	10
1	Siberian roe deer	*Capreolus pygargus*			1	*		*			*	*	*	*		
2	Manchurian wapiti	*Cervus canadensis*	*	*	*	*	*CT				*		*			
3	Ussuri white-toothed shrew	*Crocidura lasiura*						1	*	1						
4	Asian lesser white-toothed shrew	*Crocidura shantungensis*		1												
5	Manchurian hare	*Lepus mandshuricus*							1							
	Hare species	*Lepus* species					*					*	*	*		
6	Siberian weasel	*Mustela sibirica*		1†				*								
7	Sable	*Martes zeballina*		*	*		*	*	*			*	*	*		
8	American mink	*Neovison vison*				*		*	*					*	*	
9	Siberian musk deer	*Moschus moschiferus*											*			
10	Raccoon dog	*Nyctereutes procyonoides*			*											
11	Tiger	*Panthera tigris*		*CT	*CT	*	*	*	*		*	*	*			
12	Amur leopard cat	*Prionailurus bengalensis*														
13	Eurasian red squirrel	*Scuirus vulgaris*		2	*	*	*	*	1			*		1		
14	Long-tailed birch mouse	*Sicista caudata*		1	*	*							1			
15	Wild boar	*Sus scofra*			*		*	*	*			*	*	*		
16	Brown bear	*Ursus arctos*			*								*			
14	Asiatic black bear	*Ursus thibetanus*			*	*	*					*		*		
15	Red fox	*Vulpes vulpes*	1		*			*			*		*			

†Alexander & Martin only

Birds (* = heard or signs only)

	Common Name	Binominal Name	November				December									
			27	28	29	30	1	2	3	4	5	6	7	8	9	10
1	Long-tailed tit	*Aegithalos caudatus*		2		1		2	2		1					
2	Bohemian waxwing	*Bombycilla garrulus*											1			
3	Buzzard species	*Buteo* species											*			
4	Common redpoll	*Carduelis flammea*												~30		

5	Oriental greenfinch	*Chloris sinica*					1		1						
6	Feral pigeon	*Columba livia*	~100											~100	~200
7	Northern raven	*Corvus corax*			2						5		1	3	
8	Carrion crow	*Corvus coronae*	4											3	1
9	Large-billed crow	*Corvus macrorhynchos*	~100											~100	
10	Azure-winged magpie	*Cyanopica cyanus*		2			3								
11	White-backed woodpecker	*Dendrocopos leucotos*						1							
12	Greater spotted woodpecker	*Dendrocopos major*				1	1								
13	Black woodpecker	*Dryocopus martius*							1				1		
14	Rustic bunting	*Emberiza rustica*												~100	
15	Eurasian jay	*Garrulus glandarius*		1									1	2	
16	White-tailed sea eagle	*Haliaeetus albicilla*												1	
17	Eastern great tit	*Parus minor*			2		1	2	2			1			
18	Eurasian tree sparrow	*Passer montanus*	~50											~40	~75
19	Coal tit	*Periparus ater*							1						
20	Ring-necked pheasant	*Phasianus colchicus*												2	
21	Eurasian magpie	*Pica pica*	1							1	2			2	3
22	Marsh tit	*Poecile palustris*		3		1	1	6	4			2	2	2	
23	Green woodpecker	*Picus viridis*									1				
24	Eurasian bullfinch	*Pyrrhula pyrrhula*					1	1	1	3	2				
25	Eurasian nuthatch	*Sitta europaea*		2	1	2	2	8	4	1	9	1	4	3	
26	Ural owl	*Strix uralensis*									3				
27	Hazel grouse	*Tetrastes bonasia*			9		1	2			4		5	4	2	