











## Winter Wolves of Yellowstone

**Destination:** Yellowstone NP, USA **Duration:** 8 Days **Dates:** 29<sup>th</sup> – 6<sup>th</sup> Feb

-  Spotting at least 23 different Wolves from 4 different packs
-  Sighting 5 Bald Eagles and 8 Golden Eagles throughout the tour
-  Finding 4 Wolves from the Canyon pack on a Bison carcass in Elk Park
-  Having the expert guidance of Steve, lecturer of Yellowstone Ecology
-  Exploring the southern loop with Lisa in a 1966 original Bombardier Snow Coach
-  Finding a Moose calf on its own at Floating Island – very unusual for here
-  Seeing Old Faithful, Beehive, Grotto, Riverside & Grand Geysers erupt in succession
-  Having very close encounters with a large flock of Cedar Waxwings
-  Staying at the iconic Old Faithful Snow Lodge inside Yellowstone National Park
-  Finding nearly all the current Yellowstone population of Pronghorn in one drive!

### Tour Leader / Guides

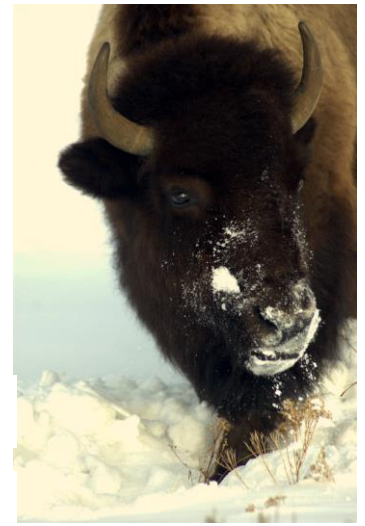
Martin Royle (Royle Safaris Tour Leader)  
 Steve (Guide & Yellowstone Ecologist)  
 Justin & Doug (Snow Coach Transfer Drivers)  
 Lisa (Snow Coach Canyon Tour Guide)

### Participants

Mr. Derek Howes  
 Mrs. Sally Howes

### Overview

<b>Days 1:</b>	Bozeman
<b>Days 2-5:</b>	Lamar Valley
<b>Days 6-8:</b>	Old Faithful
<b>Day 9:</b>	Home





# Day by Day Breakdown

## Overview

For 70 long years the hills, meadows and forests of the Yellowstone Ecosystem were an empty place without the howling and prowling presence of the Gray Wolf. In the winter of 1995, 31 individuals were introduced to the ecosystem with 16 in the Yellowstone National Park itself. Since then the wolves have established over 20 packs (some of which have dissolved and then regrouped or died off completely – leaving 13 packs as of May 2011). This reintroduction is widely regarded as one of the greatest conservation acts in the world over in the 20<sup>th</sup> Century; and with the number of obstacles the wolf team faced in getting them reintroduced their continued survival and acceptance was far from guaranteed. But with hundreds of thousands of people visiting the park specifically to see wolves the reintroduction can only be regarded as a success and their long term presence in the park and surrounding Wilderness areas seems to be in safe hands for the first time in nearly a century.

Since their reintroduction the wolves have changed the face of Yellowstone and have produced the first glimpse of a fully functioning ecosystem which would have dominated North America before Europeans came 200 years ago. They have brought a much needed balance to the park, with populations of their major prey (elk) unnaturally high during their absence the elk hindered the growth of quaking aspen, willows and other vegetation needed for beavers, moose, many species of birds and small mammals. They have also kept the elk numbers low enough for pronghorn antelope populations to reach recent highs (the elk out compete the pronghorn on the desert areas in the north of the park). All in all the wolves have restored a natural equilibrium to the park and the surrounding areas in ways that are obvious to even first time visitors and ways which are no where near understood by scientists.

Yellowstone National Park is approaching its 140<sup>th</sup> birthday and as it gets closer to the important date (1<sup>st</sup> March 2012) the true value of 'America's greatest idea' is being realised by more and more people every year. Whether it is the stunning views of the Rockies and the high altitude meadows covered in deep snow or the some 10,000 thermal features which dot the world's largest super volcano or even the tremendous amount of wildlife; you will no doubt fall in love with the place.

This trip was aimed at finding some of the 100 or so wolves here as well as visiting the world famous Old Faithful geyser and in between finding and observing as much wildlife and other thermal features as possible throughout the park. Using the expert guidance of Steve (lecturer of Yellowstone Ecology at the University of Montana) we were in safe hands as we explored the park. During the week a few of Yellowstone's secrets revealed themselves to us, but as with all great wilderness areas we left with an feeling that we were only just scratching the surface of this, the world's first national park.



## Day 1 **Gardiner**

### *Arrival & Transit*

This morning Martin and Steve met Derek at his previous accommodation in Gardiner at 11:00am and then we headed off to get a coffee and wait for Sally's flight to arrive from Minneapolis. Once we met Sally at the airport we headed to downtown Bozeman and ate at Ted Turner's (the founder of CNN) restaurant and ate some of his own private bison herd steaks. After lunch and getting to know each other a little bit we left to head towards Gardiner and the northern gate of Yellowstone National Park. Along the way we travelled through the Gallatin National Forest which is an area equal in size to Yellowstone and on the way spotted a bald eagle as it soared above us and then 3 golden eagles. One of which was very cooperative and battled against the wind just above a decent sized herd of mule deer. This herd of deer was completed with 2 nice sized stags and several fawns. This is the smallest species of deer area here and one of three we would see today. Further on we spotted a couple of white-tailed deer; being of the same genus as the mule deer they are very difficult to tell apart. In fact the mule and the white-tailed deer are sympatric and the mule deer replaces the white-tailed deer in the same habitat along the Rockies. This is one of the few places where both species can be found together. Later on as we headed closer to the park boundaries we saw our first elk as well as a small herd of pronghorn over the Yellowstone River from the hotel car park. Also in the car park and set into the light dusting of snow we found a couple of sets of wolf tracks; probably no more than 10m away from Martin's hotel room door! We had been told by Steve that 4 of the park's 13 wolf packs (Eightmile, Quadrant, Blacktail and Canyon Packs) were around the town of Gardiner at the moment.

After settling in and having dinner at the Best Western at Mammoth Hotsprings we got a good nights rest in preparation for our first trip into the park tomorrow.

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## Day 2 **Lamar Valley, Yellowstone NP**

### *Wildlife Watching*



This morning we awoke and headed into the park at 07:00am, just before dawn the park has a very atmospheric appearance. Driving through towards Mammoth Hotsprings the elk in the morning gloom and rising steam from the Mammoth terraces were the only wildlife we saw. We were told that there was an elk kill in the Mammoth camp ground last week, so we stopped and had a scan around for any movement but failed to see anything. We then headed further into the park where Martin had a false wolf sighting. In the thick lodge pole pine forests leading to the Blacktail Plateau; there he spotted the top of the rump and back of a mule deer; the right size and colour. Ironically spotting a mule deer inside the park at this time of year is even rarer than seeing a wolf. Once in Blacktail Plateau we spotted our first canid; a coyote hunting for voles underneath the snow. A little further still and we were treated to a coyote walking towards us on the road.

We breakfasted at the Roosevelt Lodge within view of a large herd of bison some 50m away. They carried on ploughing the snow away with big sweeps of their heads and grazed on the meagre vegetation underneath. After breakfast we continued along the road towards the Lamar Valley 'the Serengeti of North America' and saw scattered herds of bison and elk. We were lucky that the majority of the bison had not begun their migration out of the park and so we got excellent views of large herds (up to 100 strong) which included mostly cows and calves for also some huge bulls. As we drove through the Lamar Valley we got into our first bison-jam, the small band of cows and calves walked right past us and one inquisitive individual gave Sally and nice eye to eye experience.

Further into the Lamar Valley we spotted some bird activity and stopped to see if there was a kill, however it wasn't long until a snow shower hit the valley and a complete white out occurred for a few minutes. After the snow had passed we walked up to the spot where there were several ravens, but we couldn't make out a kill. Coyotes began to howl in the distance and we decided to head on to the end of the Lamar Valley for lunch; before we lunched we spent sometime with a handsome male bighorn sheep. He was around 25m above the road on a small cliff side close to where the (now-extinct) Druid Peak Wolf Pack had a den site.

After lunch we began the journey back towards Mammoth, stopping to spot for wolves again and running into the number one wolf researcher Dr. Rick McIntyre. Speaking to him and a couple of other wolf watchers we found out that we were 5 minutes late as 06 Female (F06 – and the most famous wolf in the park), the alpha female of the Lamar Canyon Pack, crossed the road. We looked for her again but found only her tracks.

Towards the end of the day we visited the lower thermal features of Mammoth Hotsprings (the Pallet Hotsprings). Here we spotted a couple of big bull bison who would make the hotsprings here the winter home, we also saw a varied thrush which is incredibly rare and with less than 20 records of this species in the Yellowstone National Park we were really lucky to see this colourful species feeding off the flies which make the edges of the hotsprings there home. Whilst here in the presence of the cascading hotsprings depositing yellowish travertine in wonderful terraces formations we were told by Steve about the wonderful and varied uses of some of the thermophilic microbes which live inside the hot water. Everything from DNA finger-printing to bio-fuel technology enhancements are being revolutionised by the microbes found inside these amazing thermal features; and with some estimates saying that only 2% of the microbes living in the 10,000 thermal features the ground-breaking discoveries are set to continue.

After we left the park we got wind of a herd of bighorn sheep on the highway just north of Gardiner, so we left to try and get photographs of these. We were in luck as a group consisting of 2 large old rams, 2 adolescent males and 7 ewes were close to the road and provided great photographic opportunities. We also found a large stag mule deer very close to the road which was very cooperative. So by the time we arrived at the hotel and sat down for dinner we had plenty of talking points from a great first day exploring the Northern Winter Feeding Range. After dinner we got some well deserved rest with our appetites whetted for more of Yellowstone's wonders and hopefully a chance to see some of its wolves.



### **Day 3 Lamar Valley, Yellowstone NP**

### ***Wildlife Watching***

This morning followed the same plan as yesterday, with a 07:00am start. As we headed under the famous Roosevelt arch (constructed in honour of the 26<sup>th</sup> President of the United States of America and a great ambassador for conservation), we saw a large herd of some 60 plus elk. As we carried on into the park we spotted a small group of elk acting nervous opposite the Mammoth camp ground. We scanned the hills in the morning light and spotted a canid. It is unusual for a coyote to cause this much unrest in elk but at the same time the canid did not look big enough to be conclusively called a wolf. My feeling is that it was a coyote. Anyhow we carried on and at Floating Island spotted a mammal which is just about as rare as any in winter. A moose, and not just any moose but a moose calf, seemingly on its own. The tracks around the virgin snow of Floating Island and the surrounding conifer trees suggested that he was on his own. This would be prime prey for wolves or even a courageous family pack of coyotes; being only around 6 months old he should remain with his mother for around 2 years for protection. We were beginning to feel lucky after this exceptional sighting and left towards Lamar Valley, as we approached the Slough Creek (home to one of the more famous wolf packs since the reintroduction but now a sort of 'black hole' which has not been claimed by any of the current wolf packs), we spotted a large group of people on a lookout point



a short walk off the road. Our senses began to tingle as we sensed that our first wolf sighting was minutes away. We pulled up into the Slough Creek car park and headed up the small knoll and set the spotting scopes up. Around 500-700m away was a bull elk kill in the slough creek, around the carcass were a couple of dozen ravens and a few black-billed magpies; but most impressive were the 5 wolves feeding on the carcass. We later found out that the kill had been made at around 08:00am this morning and as it was around 11:00am when we got there, there was still a large amount of meat on the carcass. The wolves were identified as the Lamar Canyon Pack; with 7 wolves in their pack (as of May 2011) we could only make out 5 at any one time. They were easy to identify due to the yellowish coat of their large alpha female the famous F06. The other adults which made up the pack were 2 black brothers, both collared and known as 755M and 754M (755M being the alpha male). These 2 were with F06 at the kill, along with another 2 greys (neither were collared and could be yearlings or puppies from last year). We spent around 45mins here and only left as our bellies were rumbling; the wolves would be there for the next couple of days as they removed all edible parts of the carcass and rested close to the kill to digest the huge amount of meat they are capable of consuming.

As we were having breakfast we once again spoke to Dr. Rick McIntyre who told us that a second pack has been spotted on the opposite side of the road. This is the Agate Pack (made up of 3 adult female wolves) they were reportedly joined by a black wolf (who was presumed to be a male from the Blacktail Plateau Pack – who was later identified as Big Black of the Blacktail Pack). This is the breeding season and it is not uncommon for wolves to disperse from packs to mate and possibly form new packs of their own. We scoped the wolves in the far distance (only visible through the scope) as they trotted out of view, we heard on the radio that the black and the white alpha (471F) were locked mating. Like domestic dogs when wolves mate the males penis (complete with a bony hook) locks into the female and they can remain in this tail to tail position for up to 30-40mins.

We moved around to the Lamar Valley to see if we could catch a glimpse of the Agate Pack as they moved this way, we didn't spot any wolves but did see 3 coyotes hunting in the expanse of the Lamar Valley. One of which caught a montane vole by listening intently to rustling underneath the snow and posing through to the vole's network of tunnels through the snow. We were told by a couple of other wildlife watchers that there was an elk carcass close to the Yellowstone Institute (just down the road), so we left to see if any carnivores were being attracted to this kill. We couldn't find what they were referring to so left and continued to where we saw the bighorn sheep yesterday. We stopped by an area of the Lamar River and had a walk around the pebble beaches, in between the American dippers, Barrow's goldeneyes and mallards we found a number of pieces of petrified trees (including a 9 million year old piece of giant sequoia), we were also on the look out for amethysts. This gemstone is made inside holes in tree trunks when the tree become petrified. The mineral crystals congregate in the opening and amongst the pressures from the fossilizing tree become the precious stone. We turned around at the lunch stop of yesterday and headed back through the Lamar Valley. There was a nice group of bison making their way through the snow close to the road and the Yellowstone Institute. It was here that in the early 1900's that the last 25 bison in the US were kept and bred back to the numbers which now live in the park (some 3,000-4,000). Close to here we found the 'elk' carcass which we were told about earlier. It turned out to be a dying bison calf. Probably hit by a car and seemingly with an injured rear leg. There was a large number of coyotes hunting in the Lamar Valley, none of which had spotted the dying calf as of yet. But we were not destined to stay here and wait, we heard through the radio that the Agate Pack was spotted closer to the road close near where we spotted them earlier on the horizon. We got great views of them as they moved down the knoll towards the road. They were about to cross and we carefully positioned ourselves as to be close enough to get good views but far enough away to allow the wolves to cross unhindered (around 50-70m away). Just as the wolves were preparing to cross another vehicle came and stopped right in front of the wolves and stopped them in their tracks. They left and went the other way; it is so important to abide to the rules when viewing any wildlife and unfortunately it wasn't the first time (nor the last) that this one group would disturb the wildlife and break the rules.

As the day was getting on we decided to head back to Gardiner, on the way Martin spotted a grey (715F) from the Agate Pack around 100m away as she headed away from us and up onto a knoll (probably waiting for the rest of her pack to join her once they had recovered from being spooked by that vehicle). The rest of the drive back was relatively uneventful with only a large male bighorn sheep spotted on the Yellowstone River bridge.

Once we arrived back at the accommodation we ate dinner and revelled in our first encounter with wolves and not just a fleeting glimpse but 2 packs and one at a kill! What a day and we couldn't wait for more tomorrow.



## Day 4 Lamar Valley, Yellowstone NP

## Wildlife Watching

Our plans today were a little flexible as the weather forecast had predicted a heavy snow storm to blow in and possibly force the National Park Service to close the road across the Blacktail Plateau. This road is prone to getting huge snow flurries blow across it and block the road. As a result we decided to head into the Lamar Valley in the morning and then if the storm threatened head out and search for pronghorn in the desert habitat around Gardiner. It wasn't long before we spotted the Agate Pack close to Slough Creek once again. The same 3 females (including



471F) and their black male escort, they were once again a little distant so we went on to see if the Lamar Canyon Pack were still on the elk carcass; they were. At first there was just one grey wolf feeding with around 15 ravens. There was not much left of the carcass after over 24 hours of feeding. The grey was a puppy and as we watched the puppy was joined by a black wolf (possibly a yearling). As they tried to gnaw into the pelvis of the elk some of the adults were spotted bedded down in the snow around 50m away from the kill. The alpha pair F06 and 755M as well as 755M brother 754M. Steve explained that this pack is a little unorthodox as the two males have little ability or desire to hunt, as a result the very experienced F06 usually captured the food for the entire pack on her own; Steve did not confirm this but I would also expect that a pack structure with 2 brothers at different ranks (alpha (755M) and beta (754M)) living in a peaceful coherent pack is also unusual. But one of the things that the wolf biologists are finding out since the Yellowstone reintroduction is just how fluid and dynamic the pack structure is. It is not as rigid and uniform as past studies with small sample sizes or captive animals would have us believe. One thing that is remarkable is that numerous packs have two or more litters in the same year. That females other than the alpha will mate and that some transient males and even males from other packs will court and mate with lower ranking females in packs is something new to science and one of the many findings unique to the Yellowstone wolves. Before we left the knoll and the view of the kill we saw a second black wolf join the 2 feeding at the carcass, no doubt polishing off any remaining scraps of tough sinew and tendon.

We followed the usual route to the Lamar Valley to see if we could find what had happened to the poor bison calf. The calf was still alive, but obviously not in good shape. The mother was in close attendance (separated from the migrating herd by around 200m now), the mother trying her best to nudge the calf to stand. Unfortunately the calf was far too weak and the forceful nudges by the huge adult's head probably only made the situation worse for the calf. We walked off the road and into the deep snow to get some closer pictures of the drama, the end was in sight and it hadn't gone unnoticed, 2 coyotes waiting eerily close to the struggling calf. Eventually we left the scene and we later found out that the calf died minutes after we left.

Further down the valley were another pair of coyotes hunting voles (the aggregation of coyotes in the Lamar Valley over the last couple of days, probably due in large part to the struggling bison calf). Today we decided to go all the way to the North East entrance of the park and the small town of Cooke City. The storm didn't seem to be arriving any time soon; in fact some of the best weather we had had so far was escorting us through, alongside Soda Butte Creek and the Absaroka Range. We were told about the gold rush which led to construction of the small towns of Silver Gate and Cooke City, but since the gold reserves here have been saved from mining by Bill Clinton during his term in office. One of his reasoning for leaving the US \$4,000,000,000 worth of gold along is due to the chemical process used to separate the gold from the rock. This led to very high levels of cyanide to flow down the Soda Butte Creek and effectively sterilising the once productive water course.

As we continued towards the North East entrance we found a small band of large bull bison who would settle down into this meadow for the winter, one of which was very cooperative and allowed Derek to get some great shots of his using his huge head to plough through the snow and collect the precious grasses underneath. After lunch in Cooke City we headed back through the park, as we descended from the mountain pass into Cooke City we came across an exquisitely camouflaged ruffed grouse standing on the middle of the road. We managed to get some great close up views of this usually skittish bird and it wasn't long before we spotted a couple of spruce grouse as well! The Lamar Valley didn't have anything new for us to stop at so we continued and made it the Blacktail Plateau when we found the one animal which had been missing from the trip so far; large bull elk. Two of these magnificent animals were feeding in the loose snow close to the Blacktail Deer Creek. One of the bulls was the famous No 10. This stag was so large, impressive and aggressive that we damaged so many vehicles in his rutting spot (in the middle of the Mammoth Hot Springs car park) that the National Park Services decided to cut his antlers off just before the rut for a couple of years. That seemed to do this trick and it would appear that he is past his best now and the testosterone levels have dipped as the authorities have left him to grow a full 7 prong set of antlers this year. A little further around the bend and close to the Blacktail ponds we spotted a coyote fending off a raven as both competed for the slim pickings at a very old elk carcass half covered in snow and ice.

Tonight before dinner Steve had prepared a tour of Dr. James Halfpenny's Yellowstone Ecology teaching facility at the other end of Garnier. This is where many an American and international student comes to get hands on with the life at Yellowstone and also where the national authorities come to verify livestock kills and possibly allocate compensation for a legitimate wolf kill (as opposed to a dog kill). Dr. Halfpenny has collated one of the most comprehensive collections of tracks, signs and data on Yellowstone's wildlife and many regard him as the number one large mammalian carnivore biologist and the number one track and sign biologist in the world. We were all very impressed with his collection of print casts (including a few bigfoot prints sent to him for verification), skulls and other skeletal parts as well as copious amounts of published and unpublished data. Martin for one could have spent a week in there reading through the articles and rummaging through the various prints and skulls; but alas the dinner bell was calling and off we went to a local family run BBQ style restaurant and Steve explained more about the research and conservation efforts going into Yellowstone everyday.





## Day 5 Lamar Valley, Yellowstone NP

## Wildlife Watching

Today was our last full day in the north of the park and with a nice couple of inches of snow cover in Gardiner and the promise of deeper snow in the park, the signs were good for more wildlife. It is much easier to spot the majority of wildlife in the snow, the tracks are easier to see (especially distinguishing the fresh from the old) and more to the point it is easier to spot dark shapes on the hills! Our drive started off the usual way, lots of female elk with their calves around the entrance and Mammoth. Then a couple of large bull elk at Floating Island (possibly No 10 and his friend from yesterday). We then had a possible wolf call; it turned out to be a large coyote so we watched it around Blacktail Deer Creek before moving on and spotting our first wolves of the day. It was the white alpha female (471F) from the Agate Pack and her new mate. They walked boldly past a group of bison in the direction of Blacktail Plateau. We tried to spot any other members of the Agate Pack but failed, but it wasn't that long before we heard through the radio that 7 of the Blacktail Pack had been spotted heading our way. They were still a way out but we could just make them out over a distant ridge, so we decided to head to the next pull out and stake them out and hope that they continue their route towards us. As we watched we saw 3 of the Blacktail Pack came into view, they stopped and howled, the haunting sound floating down the valley on the subtle wind. The 2 greys and 1 black (called Big Blaze) were joined by 4 more from the pack shortly after the howling. The 7 played around a while together on the slope, socialising and enjoying themselves blissfully. Of the 7 we could make out the 2 alpha greys (693F & 778M) as well as Big Blaze, Mrs Blaze and 777M. The other 2 wolves (1 black and 1 dark grey). We watched as the pack split up along the slope and socialised and howled. We were not sure what would happen as the this pack was invading the close to the territories of the Lamar Canyon Pack (which were still around the elk carcass only around half a mile away) and we knew that the Agate Pack were also in the area. We were waiting to see if there would be some can of interaction between the packs. As we observed them for around 1 hour we were enthralled with the pack behaviours and interactions of the individuals. Eventually they moved off and to a more distant location (unfortunately they did not come any closer) and we moved off.

So we went to see how the bison calf was doing today in the Lamar Valley. By this stage nearly all the bison had left had migrated out of the valley and were well on their way to their winter feeding grounds. The calf had died the day before and the carcass was almost completely stripped of all meat. Two pairs of coyotes loitered close by, having filled their boots with bison overnight. They were particularly lucky that none of the many wolves around here had discovered the carcass and they had it all to themselves. For us there was not a lot to see, the feeding had already occurred, one of the odd things about this carcass (and the Lamar Canyon kill) was the lack of any eagle activity; just a handful of ravens and magpies were scavenging what they could from this bison so we headed back towards Mammoth. On the way we got stuck in a couple of bison jams, the herds choosing to walk along the roads to get to their migration routes. They would traditionally follow the river systems to head to lower ground but when the park was made, most of the roads were made running next to the rivers. In the interior of the park some of the newer roads have been moved away from the rivers and research has seen that the bison (and other wildlife) here will move along the rivers, as of old, and not follow the road in its new location. This is valuable information as every year numerous animals are killed by cars on the roads, if we build roads away from river courses this number could be significantly reduced.

When we reached Mammoth we ate at the hotel restaurant and paid a visit to the information centre as well as the huckleberry themed gift shop. This afternoon's plan was to see if we could find any interesting birds along the banks of the Yellowstone River and then try and get some shots of the pronghorn, of which we had only fleetingly seen from distance so far. As we walked along the banks of the river we did not see many different species (in fact throughout the tour birds seemed to be thin on the ground), we did however get really nice views of an American dipper as well as a Clarke's nutcracker. The Clarke's nutcracker being a very important bird for the white-bark pine trees. During the summer they can collect up to 300,000 seeds, of which they cache in various locations around the park. The great news for the white-bark pine is that they tend to forget around 10% of their caches; some say that they are almost single handedly responsible for the growth of the white-bark pine forests. Although at the moment the trees are under threat from a European borne disease and the fate the Clarke's nutcracker is now in doubt.

After leaving the river bank we headed along the recently acquired land which extended the park's boundaries north to incorporate more land for the ungulate winter range. Our goal was to see pronghorn antelope. This ancient antelope evolved to outrun the ancestors of the cheetah, as a result they are the fastest animal in North America and second only to the extant cheetah. We were incredibly lucky to get great views of the pronghorn, seeing around 178 individuals (which is incredible since the most recent estimates were that there were only around 200 in the park). Many of them were very approachable as well and Derek and Sally both got some good footage and photographs of the pronghorns. Also on our drive around this part of the park we came across a large flock of cedar waxwings (which also included a lone Bohemian waxwing), this flock was equally obliging as the pronghorn and Derek managed to get some great shots, including a shot of one dropping its juniper berry. They were busy collecting the juniper berries as well as eating snow. This is very unusual behaviour (especially as Steve mentioned that they usually avoid snow), this may have been some aid with the digestion or maybe as simple as a water source. Tonight we ate at the hotel and packed our packs as tomorrow we would be heading through the park to stay at the iconic Old Faithful Snow Lodge.



## Day 6 Old Faithful, Yellowstone NP

## Wildlife & Geyser Watching

### Accommodation:

Old Faithful Snow Lodge (3\* Hotel)

### Food:

Breakfast was a packed lunch en route to the snow lodge, with lunch and dinner eaten at the snow lodge.

### Transportation:

Snow Coach and Walking.

Today we left for the Mammoth Hotsprings early today so we would be in time for the snow coach. These specially modified vehicles have caterpillar tracks instead of the wheels and this enables the vehicles to travel effectively (if not efficiently) over both groomed and ungroomed snow. The journey through the interior of Yellowstone would take us up into the Yellowstone Plateau as well as down into the caldera and onwards to the Old Faithful Geyser Basin via numerous other thermal features. With seemingly endless forested areas, large expanses of deep snow covered meadows, meandering rivers which remain ice free with the thermal runoff and of course the billowing steam issued from numerous geysers, hot springs, fumaroles and mud pots along the way; we were sure to see plenty of sites along the way. Once we made it over the first pass and further into the interior of the park we were met by stunning vistas as far as the eye could see. We were blessed with wonderful weather throughout the trip and the blue skies over the Gallatin, Washburn and the Beartooth Ranges were truly spectacular. We shared this huge plateau with 6 large bull bison which will choose to stay here all winter long in the deep snow. We continued onwards and found our way into large lodge-pole pine tree forests, these monotypic forests are very aesthetic as they grow along the sides of the roads and high onto the mountain sides. However they are not necessarily the most bio-diverse forests in the park but they are great news for at least a couple of species. The dozens of snowshoe hare tracks seen running around the trunks of these trees is testimony to this animals preference for this forest type and this has greatly benefited the snowshoe hares predators, such as the Canadian lynx, red fox and bobcat. Whilst seeing any of these animals is hit and miss, actually spotting a perfectly camouflaged snowshoe hare is one of the hardest activities to occupy yourself with in the whole of Yellowstone. Even Steve (with decades of experience of wildlife watching the Yellowstone Ecosystem he doesn't recall ever seeing one of these elusive mammals. Onwards we continued to Roaring Mountain, named in the early 1900's for the loud roars produced by its numerous fumaroles which back then could be heard for miles. Nowadays the noise is more of a hiss but the plumes of steam issuing from the mountainside are awesome to see.

We then continued through Gibbon Meadows and Martin spotted a hunting red fox next the road, so close to the snow coach that the angle most people were seated at it remained below the window line. It was a beautiful site, its thick and bushy red coat glowing against the pure white snow all around. The fox walked back down the road the way we came, ears pricked and waiting to hear the tell tale rustle of a vole or mouse underneath the snow. We didn't want to disturb the hunt so carried on and our next stop was Gibbon Falls; this waterfall originally flowed over the volcano crater rim. It is not uncommon for this water fall to freeze or have most of it frozen in winter however when we were there the falls were flowing freely (another sign of the mild winter that Yellowstone was experiencing at the moment). Just around the bend from here we came across a large nursery herd of bison as they travelled though a pre calved pathway in the deep snow. We parked close to the pathway and sat and watched the magnificent females and bounding calves as they ambled their way along and onwards to their winter feeding ranges. The next stage of our journey was to follow the Firehole River almost up to Old Faithful. This river was famous for inspiring comments from the legendary mountain man Jim Bridger when we told people about a river that ran so fast, that the friction from the water on the river bed caused the river to burn! Of course this is not the case but the steam coming off the river is impressive but solely caused by the hot water pouring into the river from various geyser basins.

Once we arrived at Old Faithful we lunched and then checked into our rooms just in time for the next predicted Old Faithful eruption. We found a perfect viewing place close to the most famous geyser in the world and saw it erupt. Although not to its full 40-45m height the volume of water and huge steam clouds were nevertheless very impressive. As Old Faithful began to die down we realised we were in real luck as people started to talk about Beehive's Indicator erupting. This small geyser is the sure fire way to know when one of the most erratic (in winter anyway) and tallest (~60m) geysers in the basin is about to erupt, Beehive. We barely had time to walk from Old Faithful to Beehive before the huge column of water began to rise from the small (beehive shaped) geyser cone. The cone made up of geyserite, a mineral deposited by the water was it rushes from the geyser and flashes into steam. We watched this incredible geyser erupt for a few minutes before heading off down the snow covered boardwalks towards Morning Glory Pool (1.4 miles away). The next geyser we saw was Grotto Geyser and we were in luck as this one was also erupting. The modest 3m high bursts of water sprinkled the wonderfully sculpted



geyserite formations and added a unique charm to this geyser which is lost on most of the other ones which powerfully erupt dozens of meters into the air. Grotto Geyser can erupt from 1 hour to 10, but eruptions of up to 26 hours or more are not unheard of. Well after watching the water spurt and pour from the various spouts and spray the arches and terraces for a few minutes we continued onwards. Walking past Chain Lakes, Fan, Mortar, Spiteful Geysers (none of which were erupting) and onto Morning Glory Pool. The dazzling colours of this hot spring have been diluted and by people throwing rubbish into the hot spring and clogging the plumbing underneath the spring. Whilst the colours may not have been at their most glorious they deep blues of the centre turning to turquoise and then yellows and oranges around the edges of the pool. These colours are produced by the different thermophilic bacteria which live at different temperatures in the hot spring. Whilst we sat at Morning Glory Pool we were told of an imminent eruption at Riverside Geyser. This geyser is one of the most predictable geysers due to it not being close to any other geysers. Once we arrived at the location of Riverside Geyser there was one other person waiting, on inspection we found out that she had been waiting for an hour already and that the predicted time was in 45 minutes. One of the best indicators for Riverside is that around 1-2 hours before an eruption, water begins to pour over the side of the fountain and into the river. This was happening and so we waited, and almost exactly on the predicted time the geyser erupted. It was amazing, reaching heights of 23m and producing 2 beautiful rainbows. We watched the whole 20 minute (or so) eruption and began to walk back towards the Old Faithful Snow Lodge after an excellent introduction to the geyser basins and Yellowstone's thermal features. With around 60% of the world's thermal features inside Yellowstone National Park we fully immersed ourselves in the wonders of this very special place. But our first afternoon walk was not going to end here as we headed back to Old Faithful we noticed that a huge geyser was erupted on the other side of the river (about 50m away). It was Grand Geyser; this is the tallest predictable geyser in the world (61m) and we were blown away by the huge steam clouds issued from the geyser. When we returned to the snow lodge we relaxed and then around dinner we marvelled at another incredible day in Yellowstone. To put in context how lucky we are you must understand that whilst the geysers we saw are all predictable and rough timetables for their eruptions are known, to get all the geysers to erupt in sequence in one 3-4 hour walk is incredible. The predicted intervals for the 5 we saw are: Old Faithful = 90mins; Beehive (in winter) = 10-20 hours; Grotto = 8 hours; Riverside = 5.5 – 7.5 hours and Grand = 7-15 hours.



## **Day 7      Southern Loop, Yellowstone NP      *Wildlife Watching & Sightseeing***

This morning we boarded the cosy 1966 bombardier and with the expert guidance of our driver, Lisa, embarked on our full day tour of the southern loop which would take in the Grand Canyon of the Yellowstone as well as many other brilliant sites. We departed north towards Madison and shortly after leaving the Upper Geyser Basin we found a large herd of bison deep in the snow. They were the perfect photographic subjects as they were very frosty. With ice and snow clinging to their thick fur all over their face and neck, their breath being exhaled in huge clouds, making the stereotypical image of a wintering bison. We stayed longer than maybe a normal bombardier snow coach tour would here, this is because we were lucky in getting Lisa as a guide (she runs the photography tours out of Old Faithful Snow Lodge) and we shared the bombardier with a photography group so we developed the Canyon day tour into a wildlife photography tour.

But we were about to really cash in on our luck as we arrived at Elk Park (part of Gibbon Meadows); here we saw 3 wolves of the Canyon Pack eating a bison calf. The bison calf had died during the night and the wolves had picked most of the best parts of the carcass by now but there was still a large amount of meat on the carcass. Probably the most amazing part about this was that it was only about 30m away from the road and we got out of the bombardier to have exceptional views of pack. The 3 wolves at the carcass were the alpha female (a beautiful white wolf), the alpha male (712M) and a grey puppy. We watched them rip more meat from the carcass and interact with each other and as we watched we noticed that a fourth wolf was approaching from the distance. This grey was very weary and originally we thought that it belonged to another pack and was keeping its distance until back up arrived. We continued to watch as the alphas took turns in cleaning themselves on the snow and more feeding. But after about 20 more minutes we saw 712M pick up a huge piece of meat and head off in the direction of the 4<sup>th</sup> wolf. We were not sure what to expect, a fight, confrontation, retreat from the 4<sup>th</sup> wolf or, well it was anyone's guess. But as 712M approached the 4<sup>th</sup> wolf (a grey) acted very submissive, lowering its body close to the snow, tail firmly between its legs, raising its front paws one after the other and sliding slowly and carefully over to 712M. Meanwhile 712M met this approach with face sniffing (the grey responded with face licking – a very submissive behaviour) and then dropped the meat (which looked like a piece of liver) close to the 4<sup>th</sup> wolf. From then on they both ate some of that meat. After a few minutes interacting with the 4<sup>th</sup> wolf (or which we decided must be a sibling of the other grey and belonging to the same pack), 712M came back towards the carcass. We then began to hear howling from a north easterly direction and it was followed by harmonised howling from the wolves at the carcass and the 4<sup>th</sup> wolf (still holding its ground further away). Whether this was a rival pack, transient lone wolf or more of the Canyon pack





was unknown at this stage. We carried on watching for a while longer before deciding to carry on as a large crowd was now developing and the wolves were looking more and more likely to bed down and move away from the carcass. But it was not just the wolves that held our attention here during the time spent watching the wolves eating the bison we saw numerous ravens scavenging as well as a bald eagle who came swooping down and grabbed a piece of the meat with 712M had taken over to the 4<sup>th</sup> wolf. We also spotted a red fox walking along the tree line at the edge of Elk Park in the distance. What a fantastic hour or so spent watching this awesome natural interaction occur so close to the road.

Well we had driven for about 5 minutes before a black wolf crossed the road in front of us. This wolf was travelling from where we heard to the howling and was moving in the direction of the carcass. Without a Yellowstone wolf expert with us in the bombardier an accurate identification of the wolf was out of the question; but the behaviour of wolf, howling and then hearing other wolves (knowing it would be out numbered) and still moving towards the other wolves, would suggest that this is a lone male on the look out for a female and willing to risk his luck in trying to separate a yearling or puppy from a pack for mating; or (probably more likely) the wolf was another member of the Canyon Pack. As of May 2011 the Canyon Pack was 5 wolves strong but with puppies being born since then we were quite confident that this would be one of the missing Canyon Pack trying to locate the rest of them and scavenge what ever was left.

Due to the amount of time we spent with these wolves we decided against visiting the Norris Geyser basin and instead headed around to Canyon Village. Our first view point was along the north rim of the Grand Canyon of the Yellowstone and this was the perfect spot for dinner. So with benches dug out of the snow and covered with the seats form inside the Bombardier we sat in the sun eating lunch with one of the best views in Yellowstone. Onwards we went once again to the main view point over the Grand Canyon of the Yellowstone itself and the Lower Yellowstone Falls, which are the largest waterfalls in the park at 94m tall (almost twice the height of Niagara Falls), but arguably the most impressive thing about the falls is the snow cone which is made from frozen spray created by the waterfall and when we were there was around 50-60m tall!

We continued around the Canyon roadways and stopped at another couple of beautiful viewpoints, before departure south again and beginning our journey back to Old Faithful. We headed through Hayden Valley, which is widely regarded as the second best wildlife watching area inside Yellowstone National Park, the number one being the Lamar Valley. However it would seem that we have used most of our luck up on wolf encounters and incredible weather. What we did see where numerous herds of bison in the distance, a hunting red fox and then a pair of coyotes. One of which was very close to the road and we watched as this one (the male of the pair) rested and then moved along the road to his partner (scent marking along the way). This sighting was the one we were looking for and made today (amongst other things) a three dog day. A great record for Yellowstone and just about the perfect way to end this day trip.

When we got back to the snow lodge we ate dinner and prepared for our last day in the park and a long day of travelling as we would head back to Bozeman.



## Day 8 **Bozeman**

## *Wildlife Watching & Sightseeing*

This morning Derek and Martin decided to get up early (06:30am) and have a walk along the geysers to see if we could be lucky enough to spot a snowshoe hare. As it turned out we only saw a coyote and a flock on cedar waxings during the 2 hour walk. But the atmosphere, serenity and 'other-worldly-ness' (anyone who has experienced the Upper Geyser Basin at dawn in winter without another human around will know what I mean), was marvellous. The rising steam clouds over the frosty trees, the gurgling of the Firehole River with sleeping Canada geese warming themselves, the constant threat of an eruption and the stillness of the air is so enchanting it is impossible not to fall in love with the place. After we arrived back at the snow lodge and had breakfast we visited the visitor centre and went to watch Old Faithful erupt one more time. This time the eruption was far taller and impressive compared to the eruption we saw on our first day in the geyser basin. Well not long after this and lunch it was time to board the snow coach and head back north to Mammoth Hotsprings. We were in the capable hands of Doug who was working his 29<sup>th</sup> year in Yellowstone, so he was the perfect guide to take us around some more of the thermal features on our way out of the park. The first stop was at the Fountain Paint Pot features at the Lower Geyser Basin. We saw Jet Geyser erupting, this smallish geyser is linked to the large Fountain Geyser but eruptions are usually every 7-30 minutes and can reach a height of 6.1m. We also saw Spasm Geyser erupting, however there is no luck in getting this timing right as it continually erupts (except for when Fountain Geyser is erupting) before carrying on around to the Fountain Paint Pots themselves. These bubbling pools of mud in shades of reds, yellows and browns are hypnotic to watch and wonderful to listen to with the pops, bubbling and splatter of mud falling on the sides of the pots and building up the rims of the paint pots. We also continued further around to the Silex Spring, this hotspring is rich in microbial life and the colours of the overflow are beautiful to behold. But this



spring is one of the best places to see one of the strangest animals in Yellowstone National Park. These are the many ephydrid flies which feed on the bacteria mats growing in the shallows of the hotsprings.

Further onwards and as the road followed the Firehole River course we slammed the brakes on as a black wolf ran across the road in front of us and went to lie down in the forests about 15m away from the road. The wolf positioned himself perfectly on the slope and stared right us for around 10 minutes, we managed to get some great shots (of this presumably transient wolf) before leaving it in peace and heading to our next stop which was the bison carcass that the Canyon Pack were eating yesterday, today the carcass was hardly even visible as everything was eaten, there was a lone coyote and some ravens close by but the wolves had moved out of sight to sleep and digest their meal. The rest of the journey was relatively uneventful and we arrived back at Mammoth Hotsprings pretty much on time. Here we met Steve again and he drove us back into Gardiner for our last evening meal on the tour. Following this we drove the 2 hours or so back to Bozeman and checked into the hotel for a short rest before the very early flight home tomorrow.

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## Day 9      **Home**

## *Departure*

This morning Steve and Martin dropped you off at the airport for around 04:30am in time for you to catch your return flight home.

# Species List

Winter Wolves of Yellowstone / Jan – Feb 2012

## Mammals (\* = heard or signs only)

	Common Name	Binominal Name
1	Moose	<i>Alces alces</i>
2	Pronghorn	<i>Antilocapra americana</i>
3	American bison	<i>Bison bison</i>
4	Coyote	<i>Canis latrans</i>
5	Gray wolf	<i>Canis lupus</i>
6	Elk	<i>Cervus canadensis</i>
7	Snowshoe hare	<i>Lepus americanus</i>
8	Montane vole	<i>Microtus montanus</i>
9	Mule deer	<i>Odocoileus hemionus</i>
10	White-tailed deer	<i>Odocoileus virginianus</i>
11	Bighorn sheep	<i>Ovis canadensis</i>
12	Mountain cottontail	<i>Sylvilagus nuttallii</i>
13	American red squirrel	<i>Tamiasciurus hudsonicus</i>
14	Red fox	<i>Vulpes vulpes</i>

JANUARY			FEBRUARY				
29	30	31	1	2	3	4	5
		1					
11	10		3	181			
	~700	~470	~440	~160	89	166	232
	5	13	10	4		3	3
		8	5	9		5	1
~100	~110	100's	~400	~325	~30		5
					*	*	*
		1					
~50	9	10	4	18			12
27							
	34	~20	23	9			
	1						
			*		*	*	*
					1	2	1

## Birds (\* = heard or signs only)

	Common Name	Binominal Name
1	Mallard	<i>Anas platyrhynchos</i>
2	Golden eagle	<i>Aquila chrysaetos</i>
3	Cedar waxwing	<i>Bombycilla cedrorum</i>
4	Bohemian waxwing	<i>Bombycilla garrulus</i>
5	Ruffed grouse	<i>Bonasa umbellus</i>
6	Canada goose	<i>Branta canadensis</i>
7	Common goldeneye	<i>Bucephala clangula</i>
8	Barrow's goldeneye	<i>Bucephala islandica</i>
9	Rough-legged hawk	<i>Buteo lagopus</i>

JANUARY			FEBRUARY				
29	30	31	1	2	3	4	5
3		2			16	3	7
3	1	1	2	1			
		~100		~50			~50
	100's	~100		1			
			1				
~100					11		10
	8						
	9	10	42	10	17	35	8
1							

