Yellowstone in Winter: The Recovering Wolves of the Northern Range

By Jonathan G. Way

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 - <u>http://www.easterncoyoteresearch.com/store</u> or <u>MyYellowstoneExperience.org</u>
- Previous books by Jonathan Way:
 - Way, J. G. 2007 (2014, revised edition). <u>Suburban Howls: Tracking the Eastern Coyote in Urban Massachusetts</u>. Dog Ear Publishing, Indianapolis, Indiana, USA. 340 pages.
 - Way, J. G. 2013. My Yellowstone Experience: A Photographic and Informative Journey to a Week in the Great Park. Eastern Coyote Research, Cape Cod, Massachusetts. 152 pages. URL: <u>http://www.myyellowstoneexperience.org/bookproject/</u>
 - Way, J. G. 2020 (Revised, 2021). Northeastern U.S. National Parks: What Is and What Could Be. Eastern Coyote/Coywolf Research, Barnstable, Massachusetts. 312 pages. E-book. Open Access URL: <u>http://www.easterncoyoteresearch.com/NortheasternUSNationalParks/</u>
 - Way, J.G. 2020 (Revised, 2021). The Trip of a Lifetime: A Pictorial Diary of My Journey Out West. Eastern Coyote/Coywolf Research, Barnstable, Massachusetts. 561 pages. E-book. Open Access URL: <u>http://www.easterncoyoteresearch.com/TheTripOfALifetime/</u>.
 - Way, J.G. 2021. Coywolf: Eastern Coyote Genetics, Ecology, Management, and Politics. Eastern Coyote/Coywolf Research, Barnstable, Massachusetts. 277 pages. E-book. Open Access URL: <u>http://www.easterncoyoteresearch.com/CoywolfBook</u>.
 - Way, J.G. 2021. Christmas in Yellowstone: A Dream Come True. Eastern Coyote/Coywolf Research, Barnstable, Massachusetts. 208 pages. Ebook. Open Access URL: <u>http://www.easterncoyoteresearch.com/ChristmasInYellowstone</u>.
 - Way, J.G. 2021. Mud, I mean April, in Yellowstone: Nature's Transition from Winter to Spring. Eastern Coyote/Coywolf Research, Barnstable, Massachusetts. 330 pages. E-book. Open Access URL: <u>http://www.easterncoyoteresearch.com/MudIMeanAprilInYellowstone</u>.
 - Way, J.G. 2021. Yellowstone Wildlife during Summer. Eastern Coyote/Coywolf Research, Barnstable, Massachusetts. 467 pages. E-book. Open Access URL: <u>http://www.easterncoyoteresearch.com/YellowstoneWildlifeDuringSummer</u>.
 - Way, J.G. 2022. A Yellowstone Summer with the Junction Butte Wolf Pack. Eastern Coyote/Coywolf Research, Barnstable, Massachusetts. 481 pages. E-book. Open Access URL: <u>http://www.easterncoyoteresearch.com/YellowstoneSummerWithJunctionButteWolfPack</u>.

Pay it Forward

Dear Reader,

Winter is the time of year in Yellowstone for bone-numbing cold temperatures and peace and solitude in the world's first national park. It is also a battle of survival for many of the creatures who call the park their home. Due to the relative lack of traffic and visibility of wildlife against a white backdrop, winter is an excellent time to observe wildlife. My weeklong trip from February 23 to March 1, 2022 was no exception.

I was particularly interested in observing the Junction Butte wolves since I have observed them so often over the past several years, especially <u>during the previous summer (2021)</u>. I was greatly concerned about them, and the other wolves, due to what the states of Montana and Idaho have done to aggressively reduce their numbers for no legitimate reason. Livestock losses to wolves are minimal in the region and elk and deer are over "objectives" set by the states. In addition, I also was psyched to simply be in the park during mid-winter and observe how other more visible animals, namely bison and elk, behaved.

In this e-book, I share with you, the reader, my experience out in the world's first national park during the winter in a photographic journey intended to awe the reader. If you enjoy it, all I ask in return is that you *pay it forward* by sharing and please consider a donation of \$10.00 to support my research and education efforts, as well as supporting the book's Open Access format. That is about the price of one movie ticket and you get to own this book, and all of its pictures, forever. If you do not want to donate from <u>my website</u>, you are welcome to email me and I can provide you with a physical address: jon@easterncoyoteresearch.com or easterncoyoteresearch@yahoo.com.

Thanks in advance! Jon Way

Dedication

To my friends Steve Cifuni and Bob Crabtree! Without your continued involvement, this book would not be possible. Thank you!

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Prologue: Death at the Park Border

As detailed at the end of my most recent book, <u>A Yellowstone Summer with the Junction Butte Wolf Pack</u> (2022), the hunting seasons in the surrounding states had a terrible effect on Yellowstone's wolf population from September 2021 to February 2022. Legislation was introduced in Montana allowing people much greater latitude in killing wolves, such as setting higher bag limits per hunter, essentially creating bounties for killing wolves, and extending the already long hunting season on them. Additional techniques were legalized too, including night hunting, baiting, and snaring. A Snare is a wire loop that captures and strangles to death any animal that places its neck into the torture device. No other species, besides coyotes, is treated this harshly, and certainly no formerly endangered species has ever been subjected to these tactics. It seemed to be a political jab at people who supported wolf recovery, mainly 'liberals'. This legislation has been deliberately partisan because the vast majority of people on both sides of the aisle support wolf recovery, and most certainly don't hunt them. What is true, however, is that most people who hunt them tend to be hyper-conservative, so this dividing supports their narrative. Others even call it a cultural war against progress.

Perhaps most concerning of all for Yellowstone wolves was that the quotas surrounding the park were removed. Thus, no concessions were offered to the much more numerous wildlife watchers around Yellowstone and Glacier National Parks, who collectively spend millions of dollars on tourism per year. The latter legal change was most pronounced for Northern Range wolf packs that occasionally travel north out of the park and into Montana even though they spend the vast majority (over 95%) of their time in the park. These wolves are those that live at the northern tier of the park, between Silver Gate and Gardiner, Montana. Every social group lost vital pack members during the season.

Formerly, there were quotas of 1-2 wolves in the two tiny hunting areas, known as Units 313 and 316, bordering the north side of the park in Montana. With the quotas removed, 25 wolves that used Yellowstone the majority of the time were killed, with 80% of those killed in Montana, literally just over the park border in 313 and 316. The rest were killed in Idaho and Wyoming on the west and east side of the park, respectively. Tragically, 8 wolves from the world-famous Junction Butte Pack were slain. Those were wolves, including 4 of their 8 pups, whom I – and thousands of others, from all political stripes – watched the previous summer. They were no doubt the world's most viewed wolves!

Wolf Management Units in Montana. Units 313 and 316 are shown at the bottom of this diagram and represent well under 1% of huntable land (not including national parks and Native American Reservations) in the state. Next page: Units 313 and 316 zoomed in. Both maps courtesy of Montana Fish, Wildlife, and Parks.

Wolf Management Units (WMU)





The 'Junctions' were formerly one of the largest packs on record, numbering 34-35 individuals during my <u>Christmas in</u> <u>Yellowstone</u> trip in December 2020. They were remarkably accepting of each other, even with multiple females having pups each spring. During that expedition, around 10 wolves, mostly males, split from the group and joined two females from the 8-Mile pack. This number varied, topping out at 12, as some of the youngsters continued to travel between this new group and the Junctions, often visiting their natal homestead and then going back to the new clan. They eventually became known as the Rescue Creek Pack in 2021. During my summer 2021 trip, the Junctions were *down* to around 20 adults and yearlings plus their 8 new pups of the year. They traveled, like most wolves do, in smaller groups during the summer so it was exceedingly difficult to obtain an accurate count. The split of the pack, along with a few possible dispersals of uncollared yearlings, caused this decline. By the early fall, 27 was the official park count for the Junctions. They were often observed together in September when the pups began nomadically traveling with the pack within their territory.

The other Northern Range packs also held steady through the summer and early fall until human hunting reduced all of them during that fall and winter. By the time of this current trip, and after the hunts ended, the Junctions were down to a much lower 15 members. And two of those were temporarily not traveling with them during my week there. One of those was wolf 1229F who is on the cover of my <u>book on the Junctions from summer 2021</u>. In addition to the human-caused deaths, some wolves permanently dispersed and left the pack, including gray colored 1228F who found a handsome melanistic mate. The pair was often observed in Soda Butte Valley and Round Prairie during winter 2021-22 and spring 2022 at the eastern edge of Junction territory. Due to all of the events described above, the maximum group size that I counted was 13 Junctions together in February 2022.

In addition to the Junctions, the Rescue Creek wolves numbered 12 once most of the younger wolves permanently stayed there. (Note: This group did not produce any surviving pups during summer 2021.) The 8-Mile wolves, according to the Yellowstone Wolf Project, maxed out at 14 when all were together. I knew less about this pack, mostly because they aren't observed as often as the other Northern Range Packs, mainly the Junctions. They lost 4 pack members to the hunt. They are a cohesive group that live in and around the Blacktail Deer Plateau. While these are all certainly healthy-sized wolf packs, the Junction pack in particular was nowhere near the record size, super-cohesive group that they were before the hunting season took place.

What the future holds for the Junction Butte Pack and the rest of Yellowstone's wolves, nobody knows. Wolves are a resilient species and often recover from human-caused killings. However, people have never had the comprehensive knowledge of individual canids as we do in Yellowstone, so time, and many detailed observations by numerous wolf watchers and biologists, will help tell how they recover from these unneeded actions against their families. This story is my attempt to document how these wolves, as well as a host of other animal species, fared during late-winter 2022.

Map of wolf pack territories in Yellowstone. My book focuses on the Junction Butte, Rescue Creek, and 8-Mile Wolf Packs in the northern tier of the park. The Wapiti and Mollies packs occasionally travel to the Northern Range but did not during this trip, except for one individual briefly spotted. Map © National Park Service, Yellowstone Wolf Project.

2021 Yellowstone Wolf Pack Territories

(95% minimum convex polygons of aerial locations)



Lamar River (frozen) and Lamar Canyon at dusk.



Preface and Acknowledgements

Winter is the time of year in Yellowstone for bone-numbing cold temperatures and peace and solitude in the world's first national park. It is also a battle of survival for many of the creatures who call the park their home. Due to the relative lack of traffic and visibility of wildlife against a white backdrop, winter is an excellent time to observe wildlife. My weeklong trip from February 23 to March 1, 2022 was no exception.

I was particularly interested in observing the Junction Butte wolves since I have observed them so often over the past several years, especially <u>during the previous summer (2021)</u>. I was greatly concerned about them, and the other wolves, due to what the states of Montana and Idaho have done to aggressively reduce their numbers for no legitimate reason. Livestock losses to wolves are minimal in the region and elk and deer are over "objectives" set by the states. In addition, I also was psyched to simply be in the park during mid-winter and observe how other more visible animals, namely bison and elk, behaved.

This project, like many of my previous e-books, came about, in part, because many of my Facebook friends (including family members) – and as of April 2022, Instagram friends @easterncoyoteresearch – continue to be absorbed with the pictures that I post when I travel. I appreciate their comments and support – both emotionally and financially – over the years which has given me the motivation to publish many of these manuscripts. I have found that e-books are the easiest and by far cheapest way of producing these attractive, pictorial tomes. The social media posts gave me the outline for this endeavor, including many of the captions, albeit with some edits herein. Additionally, I originally published the links of many of those images on my '<u>My Yellowstone Experience</u>' website on April 5, 2022:

- My flight was delayed on Feb. 22 and I was able to pivot and go take some pictures in urbanized MA of an eagle before I left for this trip: https://www.facebook.com/jonathan.way.3/posts/10160236627095016
- Day 1: https://www.facebook.com/jonathan.way.3/posts/10160238921795016
- Day 2 Feb 24: https://www.facebook.com/jonathan.way.3/posts/10160241011575016
- Day 3: https://www.facebook.com/jonathan.way.3/posts/10160242742570016

Day 4 Feb 26 Videos shared: <u>https://www.facebook.com/jonathan.way.3/posts/10160244768250016</u> Day 4 pics: <u>https://www.facebook.com/jonathan.way.3/posts/10160246631975016</u> Day 5 Feb 27: <u>https://www.facebook.com/jonathan.way.3/posts/10160248298990016</u> Day 6 Feb 28: <u>https://www.facebook.com/jonathan.way.3/posts/10160248330065016</u> Day 7 Mar 1, posted March 5: https://www.facebook.com/jonathan.way.3/posts/10160256068860016

Herein, I detail those 7 days from start to finish in complete and greater detail than those previous sources. This expedition was my 26th visit to the world's first national park. After all of these visits and 234 total days in the park, I have gained a detailed knowledge of the area which helps to put my experiences into context. In fact, I have published the following previous works based on those trips: <u>My Yellowstone Experience</u> (2013), <u>The Trip of a Lifetime</u> (2020), <u>Christmas in Yellowstone</u> (2021), <u>Mud, I mean April, in Yellowstone</u> (2021), <u>Yellowstone Wildlife during Summer</u> (2021), and <u>A Yellowstone Summer with the Junction Butte</u> Wolf Pack (2022). This current book marks the 7th in my Yellowstone Book Series.

Steve Cifuni, my good friend and frequent travel companion, went with me. He has been instrumental in keeping me motivated to visit all of the places that we do during our many excursions to the park and elsewhere together. In fact, he has been to Yellowstone with me on 15 of my trips, totaling 118 days! Due to some personal issues I had to deal with, Steve handled most of the logistics while planning for this vacation, which ultimately made the excursion possible. We had the fortunate, like we do on all of our trips, of leaving our vehicles at Steve's parents' house just outside of Boston, Massachusetts, and were driven to Logan Airport in the early morning of February 23 by his father.

Similar to our previous trips, Dr. Bob Crabtree, Founder and Chief Scientist of <u>Yellowstone Ecological Research Center</u> (YERC), let us use one of the vehicles from his fleet. His Honda CRV is as old as I can remember, yet it keeps on moving along. It has become my unofficial second car as I know it so well! I/we greatly appreciate Bob's continued generosity, as well as Melissa Todd's, also of YERC, who coordinated to get us the vehicle.

While I've noted the following in previous books, I see it prudent to continue reiterating the information here: I've been to Yellowstone many times, but it has been a relatively short period of time to obtain all of the images, especially of wildlife like wolves, that I have shown in my books. Yellowstone is one of the best places in the world to see and photograph wildlife on a consistent basis. It might take years to obtain similar images in other locations. As you'll notice in these pages, I go all out to make the most of my time when I am there. That doggedness helps to give me enough pictures and experiences to be able to create a worthwhile book, such as this one. I want to also thank all of the visitors to and employees of the park who continue to aide me with important wildlife sightings and information. Chief among them is Rick McIntyre, wolf watcher extraordinaire and former National Park Service employee, who I have featured in all of my other Yellowstone books. Rick has amassed over 100,000 wolf sightings in Yellowstone and continues to venture into the park every day despite being supposedly 'retired'! Wolf Project technician Jeremy SunderRaj, who is essentially Rick's protégé, was also instrumental as a source for this book. The two of them, both of whom I consider friends, provided a mountain of information on the park's wolves and other wildlife. My story would not be nearly as complete and accurate without their sharing of knowledge. Many wolves are radio-collared in the park and their signals facilitate where to look for them which ultimately allows us to view them and others. In addition, I also spent considerable time on this past trip wolf watching with Dan and Laurie Lyman, Susan and Reve Carberry, Doug McLaughlin of <u>Optics Yellowstone</u>, Taylor Bland (formerly a wildlife guide, now a full time technician with the Wolf Project), Michael Sypniewski of Yellowstone Wolf Tracker (a well-known guiding company), and Calvin and Lynnette Johnson. They are all expert spotters and greatly enrich my (and many other peoples') experience in the park.

There is a great website, Yellowstone Reports: <u>https://yellowstonereports.com/index.php</u>, which details the daily activities of the wolves and other Yellowstone flora and fauna. Laurie Lyman, a retired teacher from California, and a friend of mine, summarizes the happenings of the wolves between her observations and her acquaintances' reports when she is not in the park. Quite amazingly, she writes a daily report of wolf activity on that website to keep folks like me up-to-date when not in the field. When I am there, including during this past trip, I do my part by reporting to Laurie what I see to keep others up-to-date of exciting happenings in Yellowstone. These reports keep wolf watchers appraised of current pack dynamics and numbers, as well as where to look for them. (Note: Because some hunters troll the website to learn where the wolves venture, hoping to kill them at the park border, locations near the boundary are not mentioned. Therefore, locations discussed in this book are well inside Yellowstone and safe from people harming the animals.)

During my stay, I took 934 images with the majority being pictures, but also including 50 videos. I am increasingly finding that the videos I take of distant wildlife, especially wolves, come out fantastic and are much better than still pictures. And they clearly do a better job of showing animal behavior. To show my Yellowstone experience during the winter, I use my top 452 pictures here, which also includes some of Steve's best shots. In addition to those Facebook posts, to better tell this story I also referred to the 16 pages of journal notes I took while in the park and the accounts of my observations I sent to Laurie to help her with the daily wolf report.

My mother, Robin Way, copy-edited the text to make it more professional, as she always does. Her comments and support over the years have been crucial to my ability to publish quality, accessible books. Jeremy and Laurie responded to my numerous emails while I was writing this book and helped fact check some of the stats discussed herein. In addition to their wolf watching companionship, I appreciate their efforts to make this book more accurate, and hence, better. The National Park Service and Carol J. Scopinich, creator of the 'Yellowstone SPOTR' app, provided useful maps to help direct readers to important locations that I visited.

It is vitally important to realize that my connection with the people mentioned in this book, especially Laurie's daily wolf reports, help ground my observations into context. Without them, this book would not be possible. Rather, it would merely be a collection of pictures with no coherent story. Therefore, due to the generosity of everyone mentioned in this section, I truly regard this and my other books as collaborative efforts.

I hope you enjoy it and are able to donate to support my research which will help keep these e-books in Open Access format. Please see the *Pay it Forward* page at the beginning of this document if you want to support my work. Thank you!

We arrived to frigid temperatures in the park. In actuality, it was colder in the park than forecasted on nearly all of those days, dipping down to -35° Fahrenheit on that Tuesday night going into Wednesday.



Maps of Places Visited

During winter, the majority of the park is closed with only the road from Gardiner (where we stayed) to Mammoth to Silver Gate/Cooke City open. We were spread out on this expedition, spending time on or at the Blacktail Plateau, Hellroaring Overlook, Elk Creek area, Little America, and Slough Creek. The wolves weren't based in one location unless they had a kill, as they nomadically traveled their vast territories searching for prey. Due to lack of wildlife activity, most notable wolves and prey, we did not spend much time in Lamar Valley, except at the 'Confluence' of the Lamar River and Soda Butte Creek to look for otters.



GALLATIN NATIONAL FORES A more detailed map of GALLATIN NATIONAL FOREST Yellowstone. Due to sporadic wolf activity, we spent time at Blacktail Plateau, Hellroaring Overlook, Elk GALLATIN Creek/Petrified Tree, to Slough MATIONAL BUCC Si+Ostirotii HOREST ANDINAS Creek(see oval below) during winter POMAST. 2022. Map © of the National Park Service. Hellroaring Mountain 9363 ft 2549 m MONTANA rellowston WYOMING Marrie 1 Slough Creek Tower-Rooseve Old Faithf West Thu Pebble Creek 74 Vellowstone Grant Villag Drukf Peak* VSR3 ft 2921 m **Roosevelt** Lodge Tower Fall CABILICIU LAMAR VALLEY Prospect Peak" 9525 % 2903 m TARGHEE NATIONAL 000 FOREST hittende Nount Wa 0243 R 122 m 63 -Observation Feak ACCREMENTED COLOR GRAND TETON DATEDHAL DARK

A close-up view of the northern part of Yellowstone that is open during the winter. Note Hellroaring Mountain in the middle of this map and the light (open) area south of (below) it. Map © of the National Park Service.



A topographical perspective of major areas visited during the trip including (from west to east) Blacktail Deer Plateau and the 7 mile one way ski trail (in winter); Floating Island Lake and Petrified Tree is where the Elk Creek area is (notice Elk Creek on map); Garnett Hill Loop Trail (8 miles); Tower Junction is where the Road goes south or east (notice Tower Fall 3 miles to the south); Slough Creek Campground Road (Little America is the area to the west); Lamar Valley; and Trout and Buck Lakes just west of Pebble Creek. Map © National Geographic and Yellowstone Association: Trails Illustrated Outdoor Recreation Map.



Place names of locations in northern Yellowstone in more detail. Purple indicates pullouts/overlooks where I and others stop to observe wildlife. The Blacktail Plateau is to the immediate west of this map. Notice Hellroaring and Bob's Knob here.





A list of pullouts, including a close up of the Hellroaring area to Elk Creek (left) and then past Tower Junction to the western part of Little America (right). Maps © of Carol J. Scopinich, Yellowstone SPOTR app.





69%









View from Hellroaring O/L (aka Upper Hellroaring), facing North N44.95431° W110.48000°

View from Helloaring Pullout with descriptions of local names. Note the wide open grass area in the center left of the picture; that is where we observed most of the wolf action. Panorama © of Carol J. Scopinich, Yellowstone SPOTR app.







Browse









View from Hellroaring O/L (aka Upper Hellroaring), facing North N44.95431° W110.48000°

View #2 (further to the west) from Helloaring Pullout with labels of local names. Panorama © of Carol J. Scopinich, Yellowstone SPOTR app.



© 2020 Carol Scopinich



2

3



Browse









View from Petrified Tree East P/O, facing North N44.92164° W110.43847°

View from Petrified Tree with landmarks from our trip. Panorama © of Carol J. Scopinich, Yellowstone SPOTR app.







A list of pullouts, including a close up of the Slough Creek area (left) and the Blacktail Plateau 15 miles to the west (right). Maps © of Carol J. Scopinich, Yellowstone SPOTR app.







1

Maps

Search



View from Slough Flats, facing North N44.92583° W110.31861°

Panorama © of Carol J. Scopinich, Yellowstone SPOTR app.



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About

Preferences

Day 1: Arriving to a Deep Freeze

Our original itinerary was to leave Boston, Massachusetts late on Tuesday, February 22. But, at the time, the country was experiencing cold weather throughout its borders and many flights were delayed or canceled on that day. I arrived to Revere, Massachusetts (an hour and a half from my house) and met up with Steve at his parents' house at 3:00 PM. Shortly thereafter, he received a text from Delta Airlines informing him that our flight was delayed leaving Boston and that interruption would cause us to miss our connection in Minneapolis, MN. Steve searched online and realized there was no way to get to Montana that evening. Hyped to get out west, we were disappointed being stranded until early the next morning.

With a few hours left before dark, we decided to enjoy the rest of that day and drove into Saugus in Steve's car, which is a very urban town/city bordering Revere and 5 minutes from his parents' house. There, we searched for a bald eagle pair that had been frequently visible all winter in and around the salt marshes that dot that landscape. Amazingly, and within 10 minutes, we found one of them as it flew away, exiting a large white pine tree where the duo was making a nest above a busy intersection. It flew less than a mile to a large evergreen tree above a house next to the marsh where it stood perched at the top of the tree. This vantage pointed offered us many great images as I clicked away on my camera like I was already in Yellowstone. Many locals, who we briefly talked with as they walked by, were amazed that such grandeur wild nature was living amongst them in urban Saugus. This was a good precursor for our trip to Yellowstone, I thought.

We woke up at 3:30 AM the next morning, February 23rd, at Steve's apartment along popular Revere Beach. Our flight was scheduled to depart at 5:40 AM and we had to drive his car to his parents' house. (I had left mine there the previous afternoon.) Once there, Steve's father brought us to Logan Airport. We arrived with plenty of time to pre-board and go through security.

We had an odd connecting flight which went out of our way to Atlanta, before ultimately going to Bozeman. Normally we have connecting flights in Minnesota, or somewhere near there, which has us flying west, not south! The two flights eventually got us to the Bozeman airport at 12:45 PM, which was the earliest arrival time that we could find for that day. Therefore, the extra flying time was worth it for us since our goal was to get into the park for a few hours that evening.

It was the second day of a frigid cold front in Montana. It was -7° Fahrenheit in Bozeman in the middle of the day, having been -20° the previous night there and nearly -40° in the park. Fortunately, after a frigid 36 hours, it was starting to ease a bit. It was supposed to 'only' be -5° that night in Gardiner, and then gradually warm up.

On our hour and a half drive from the airport to the park (not including a grocery store and gas station stop in between), we saw many small groups of mule deer (average size was abut 6), 2 white-tailed deer near the road at the Yellowstone River, and a few elk herds. Most of the animals were seen in the area called Paradise Valley, which is a human-populated agricultural area on both sides of Route 89 halfway to the park. It is good winter habitat for ungulates as it is low in elevation and mostly snow-free. Unfortunately for the animals, humans have taken over this pristine valley. It works out well for the ungulates, however, as it provides them food during the toughest time of the year, and refuge from predators who are normally reluctant to enter human-dominated areas.

We arrived in Gardiner around 4:00 PM, where we quickly found the cabin that we rented for the week. We unloaded our supplies and then had a bite to eat. We were staying less than a mile from the park boundary. After unpacking, we went into the park for dusk, entering around 5:00 PM and staying there until 7:10 PM. We saw many elk in the park and 12-15 on the Gardiner football field which is right at the park border. Knowing that we would likely see them all week, we drove past most groups, including 15-20 right by the entrance station, a bull on Blacktail Plateau, ~30 on the steep slopes north of Phantom Lake where I saw many during our <u>April trip to the park</u>, a few near Tower Junction, a bull on the side of the road at Elk Creek, and others. We also spotted some spread-out bison in small groups and, similar to the elk, also drove past most of them due to lack of time and light. I didn't see as many as I normally do during my summer trips but enough to know that I was back in Yellowstone.

The steam above the village of Mammoth at the Hot Springs was pretty cool on this evening, aided by the frigid temps. The Lamar River in Lamar Canyon was mostly frozen and provided a beautiful view at dusk, with the late rays of the sun reflecting off the snow. We made it as far east as Lamar Valley, which was also beautiful at dusk. Unfortunately, we did not see nor look for wolves on this day, mainly because we didn't find any wildlife watchers looking for them. Plus, we didn't know where to look for them on this particular day.



The drive into the park in Paradise Valley.

Next page: Picture of a white-tailed deer near Route 89 and the Yellowstone River (behind brush) as I drive by at ~65 MPH.





Left: The Roosevelt Arch at the North Entrance to Yellowstone.

Below Right: Arch Park which is a small area between the Roosevelt Arch and Gardiner K-12 School (next page).



The new and improved North Entrance Gatehouse in Gardiner. There was heavy (and very aggravating) construction when I was in the park over the summer. It caused long delays. It was smooth sailing during this trip!



Very cool steam above Mammoth. This is the most I have ever seen from this geothermal feature.



Blacktail Plateau.



Bison on the park road.

The frozen Lamar River in Lamar Valley. It takes very cold temperatures to freeze a major river.
There was less light than there appeared in some of the photographs.

Leaving Lamar Canyon and entering Lamar Valley at dusk.

Lamar Valley at dusk, looking east from the western part.

M. ARMER

Day 2: Day of the Ungulates

February 24th was the day of the ungulates! It actually got down to -12° Fahrenheit at night in Gardiner, which was colder than predicted but warmer than the -30 in and around the park the previous day. We knew it was cooler in the park since it is higher in elevation and nearly always colder than the lower lying, desert basin region of Gardiner.

We started at sunrise using our spotting scopes on the cold Blacktail Plateau. There was a new group of wolves observed the previous evening which we didn't know about until reading Laurie's report early that morning before we left the cabin. This new assemblage consisted of 2 female members of the Wapiti Pack (that pack inhabits the central part of the park in and around Hayden Valley) and two 8-Mile wolves (the pack which resides right there on the Blacktail). There was a 'tie' witnessed which means that a pair bred and, as is the case with dogs, they become attached (literally stuck together) for about 15 minutes. I didn't know much about these guys, but knew the area and where to look. Unfortunately, despite a solid half hour of searching, using my 20-60 power optical lens in frigid temps, we were unable to find them.

We saw many small groups of bison, ranging from 10-40 members, throughout the Plateau. It is noteworthy that bison live in considerably smaller groups in the winter than during the summer. During the warmer months, I'll see over 1,000 buffalo on the wetland flats of Lamar Valley, while in the winter most groups are around 10-20 animals with larger assemblages being noteworthy. They are focused more on survival than on social interactions and breeding during the colder months.

It was a slow morning. When we saw Rick McIntyre for the first time, he had driven west all the way to the Blacktail Plateau. That meant there wasn't anything notable seen for about 30 miles to the east. We searched Blacktail one more time then drove east, hoping to see something. We decided to bypass Hellroaring Overlook because visibility was bad on the cloudy morning, and because the lot was mostly full of cars. The viewpoint gives one a commanding view to the north for about 3 miles of the mostly open Hellroaring Mountain area. It turns out that folks there briefly saw some members of the Junction pack in and out of the cloud and fog cover fairly low down by the trees. We saw many elk and bison all over the park, and also found 3 moose. The bison continued to be in small groups, similar to what we observed on the Blacktail. Also noteworthy was the fact that there were not many in Lamar and Soda Butte Valleys. I found that interesting since I see so many of them there during the summer. There is a real possibility that they ate themselves out of house and home and needed to wait until the spring and summer for the grass to grow back there. The elk were in many of the same general areas as the previous day. The moose, however, were in areas where I typically don't see them, including one bedded in some low-lying willow shrubs at the Geode Creek area. That area is a windy stretch of road between Blacktail and Hellroaring Overlook. It is not the most conducive area for spotting wildlife due to the twists and turns and lack of pullouts. A cow-calf pair was slightly further to the east of the first one being near Floating Island Lake. They were also in a thin patch of willows. Places like Round Prairie host many more willow shrubs, and thus moose. It is always happenstance seeing them where we did.

After watching the moose for a few minutes each, we continued east to the 'Confluence' of the Lamar River and Soda Butte Creek. There, we searched for otters where they had recently been reported by watchers. We actually saw one briefly very close to the road after a good half hour wait, but there was a big, noisy group of people and their loud voices caused the otter to scoot away, disappearing in the open patches of ice to the east along Soda Butte Creek. It turns out that it was resting in a culvert below the road, until it bolted into the water no doubt terrified of the humans talking above it.

We spotted 4 dippers there too. They are aquatic songbirds that literally 'dip' into the frigid, fast flowing water to eat insects. They were concentrated in the ice-free gaps of free-flowing water. We also had 7 bighorns directly above us on a steep slope above the Confluence. That area is typical winter habitat for the wild sheep. Three of the animals were mature rams with huge, curled horns. With that sighting, I had by then already seen 6 of Yellowstone's 8 ungulate species with just pronghorn (who leave the park for lower, more snow-free elevations in the winter) and mountain goats left. I had observed white-tailed deer, mule deer, and elk outside the park, and elk, bison, moose, and bighorn sheep inside. Not bad since it was only our first full morning there!

After our Confluence stop, we continued east into Soda Butte Valley and saw a coyote trotting north from the valley bottom to upslope on the foothills. I lost sight of it about a half mile away as it went west into a small, forested stand of trees, but managed to take a few pictures beforehand. A good perspective of the moose in the center left of the picture bedded down. You can clearly see the importance of having a camera with good magnification.

Left: Moose from previous page down a steep slope at Geode area.

Below right: The same moose close-up in a willow clump (also on the next page from a different angle).





Moose cow and calf near Floating Island Lake.

Below: Moose cow grazing on willows.







Elk above Phantom Lake. These guys were on a steep ridge so I appreciate this close-up of these nine.

Elk above Phantom Lake area zoomed out for better perspective.





Elk calf feeding on dried grass, aka hay!

Large Bighorn Sheep ram.



Left: Bighorn sheep ram on left with large, curled horns (different individual from the previous page) and ewe ahead of it.

Below: Bighorn ewes.









American dipper, a song bird that feeds on aquatic insects in frigid waters





This and next page: Very cool sequences of 2 dippers diving in the frigid Lamar River that Steve took with his new camera. On the next page, you can see a small aquatic invertebrate that it captured. All photos on this and the next two pages © Steve Cifuni.















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You know it is cold when 'The Confluence' of the Lamar River and Soda Butte Creek is nearly frozen.

Next page: Animals like dippers (pictured) and otters use the openings in the ice as places to hunt since they need to be able to surface the water to breath air.







Cliffs north of Hitching Post pullout where a bighorn sheep died. It was suspected it may have been diseased and was scavenged, rather than killed by a predator. This coyote was a good half mile away, and a random spot while driving through Soda Butte Valley. I first got my lens on it while it was defecating!



The coyote then crossed a slope in the falling snow. It was very cloudy so was difficult to see, and I suddenly just lost the animal and couldn't find it again after these pictures were taken.

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Round Prairie in heavy clouds.

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Bison in Round Prairie. They are hearty survivors of Yellowstone's harsh winters.

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Left: Wildlife watchers looking for otters (and dippers) in the river and bighorn sheep up on that steep slope.

Top right: Golden eagle, facing away, above the bighorn sheep on the slope above Confluence (top left of picture on the left). At noon, and with the weather still only 10-12° F, we tried to hike the 8+ mile Garnet Loop. This is a hike that I have done on each of my past several trips. The snow was crusty and deeper than expected. After a quarter mile, I had to go back to the car to put on my snowshoes. In Pleasant Valley, about a half mile north of the trailhead and Tower Junction, we scattered a large bison herd on the hike. There were about 100, easily the biggest group we had observed during the trip so far. They were spread out on the valley floor until we arrived. The metal frame of our snowshoes made considerable noise on the crusty snow. I had the feeling that not many people had been back there all winter as the bison were on edge.

Despite us going uphill and off-trail to the east as we hiked north, I felt horrible when 50-60 of them used unnecessary energy to run away from us even though we had given them a wide birth. The herd followed the hiking trail uphill through a natural draw, and while it was exhilarating having to cross through a gap of wild bison as we went north and they traveled east, I also legitimately felt badly as we caused them to burn precious calories during the middle of the winter. After about 20 minutes of negotiating the large bovines, we finally were clear of their company and could hike without looking over our shoulders.

There was about 2-3 feet of snow covering the sagebrush, the dominant ground cover over the first couple of miles of the hike. It was difficult to follow the actual hiking trail given the snow cover and low-lying vegetation. Thus, I led mostly based on memory and knowledge of the area.

We also pushed 10 elk three different times as we hiked north. Clearly the elk didn't know where we were going since they kept running in front of me (I was leading) instead of just moving off our path and letting us walk by. I noted in my journal twice that it was tough and frustrating to both follow the largely unmarked trail and cause the large ungulates to move off as we hiked. It seemed obvious that the ungulates were not used to humans there during the winter. Similar to the bison encounter, it was a special up-close sighting of the wapiti, but I was conflicted given their need to conserve energy in the winter.

We made it about 2.75 miles according to Steve's fit bit watch when it became too much of a chore to do the entire hike in deep snow. As we were mostly off trail going line of sight to the north, I reasoned that if we continued around Garnet Hill it would be a very long day. So, we decided to turn around to make it a 5.5 mile out and back hike.

It was literally half the effort for me on the way back as I mostly followed our trail out, except when I took a few shortcuts. I also didn't have to chart our course or really think. All I had to do was backtrack our snowshoe prints. The remaining ~50 bison were still on the north part of Pleasant Valley near Tower Junction. They had never left when the other half of the group ran from us. We returned back to the car at 3:00 PM and, shortly thereafter, headed west toward our cabin in Gardiner. We stopped a couple of miles to the west at Petrified Lot and took pictures of a hibernating black bear sow. It was frustrating to see the bruin with the light producing tough-to-see-through shadows at that time of the day, but people had been observing this bear, only about 100 meters from the parking lot. There were signs preventing people from disturbing her, so the situation offered an unprecedented opportunity to view a bear in her den. The plump female blocked the entrance to the den like a plug, but there were also two small cubs-of-the-year (called COYs) with her. Folks would occasionally see them on mild afternoons.

On our drive west, we saw many bison in similar places as in the morning. We also had 10-12 on the bendy part of the road near Phantom Lake. It was our first mini-bison jam of the trip. We saw a moose about a half mile from where we saw the first one in the morning. No doubt it was the same one, I reasoned. It was in a steep, poor viewing area so we decided to continue on and not stop. We did have one brief angle from the road with a bison on the pavement and the moose and an elk feeding behind the bison. A 3-ungulate photo shot! We also saw a single mule deer in the woods when we got to Phantom Lake. It was less than a half mile from the other three species of ungulates. I have seen buck deer there before so wondered if it was a male again. It was in the woods and I didn't have a good angle, so we kept driving past it.

On our way to Mammoth and just after (west of) Lava Creek, there were cars haphazardly parked on the road in a terrible area with lots of winding bends and a steep drop off at the edge of the road. I dropped Steve off so he could walk while I figured out how to park. It turns out a Wapiti wolf was bedded very close to the road but must have just moved away when Steve was looking for it, because he never saw it. He only saw some elk moving among the trees near where the canine was supposedly observed. Meanwhile, I had to drive about 2 miles west to finally turn around right near the Mammoth High Bridge. Ultimately, we never saw the wolf and struck out on this day for wolves, managing to only see the one coyote earlier in Soda Butte Valley.

As we were leaving the park, we saw two different groups of around 30 elk by the North Entrance station with more down by the Gardner River and up by the Rescue Creek Trail. We arrived back to the cabin at 5:00 after a full day. I noted on Facebook and echo that statement here, "Hoping for wolves tomorrow."

Bison on Tower flats on the Garnet Loop hike. This was the biggest group of bison I saw this winter. They actually live in larger groups in the summer and usually fragment into smaller ones in the winter.

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Elk on ridge on Garnet Loop hike.


We tried to hike, using a lot of energy to hike up a hill in the process, around the bison to give them space but they didn't seem to like the sound of the snowshoes on the icy snow. Next page: They ended up leaving the flats and traveling on the actual Garnet Trail, defeating the purpose of us moving around them.





Basalt cliff area viewed to the north of the Garnet Loop Trail and the Yellowstone River, which is down by the line of trees in the middle of the picture. The basalt cliff is a good reference mark when wildlife, mainly wolves, are in that area.



Group of elk the first time we moved them.



and were crossing the Yellowstone River. I was very surprised how much they moved just because two people were hiking by them on the trail.



Part of the group of 10 elk on the Garnet Hill hike, the third time they ran from us.

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Discreet trail marker a good two miles out on the Garnett Trail. During my <u>Christmas 2020 trip</u>, this 'sign' informed me that I was not lost and helped me navigate the poorly (during the winter when snow is on the ground) marked trail. We did a worse job following the trail during this trip, largely because of the snow depth, and decided to turn around about a half mile after passing through this area.

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A black bear den amazingly visible from a parking lot off the park road (the area is closed to people beyond the lot). The den is dark but you can just make out the outline of the mother in there. Two cubs have been observed on sunny, warmer days at the mouth of the den.





Bison on the park road near the steep slopes where I often see elk in the winter to the east of Phantom Lake.



Bison cow with a moose between her legs feeding on willows and an elk over her left horn browsing on aspen twigs! The moose (left eating willows) and elk (right eating aspen stems) from the previous page that were behind the bison.



Elk in Gardiner. As you can clearly see, wolves clearly haven't killed all of the elk despite the claims of detractors, including Montana's new governor.

Elk in Gardiner. This is a second, different group from the previous picture.





My room at the cabin. This small living room, including a cooking area, was half of the cabin and where I slept. My favorite sports team, the Boston Celtics, were playing live that evening.



Day 3: The Wolves are Back in Town

It was minus 5 degrees Fahrenheit in Gardiner at daybreak and -12 to -14° F in the park on February 25, 2022. It only rose to 5-10° during the middle of the day. It is amazing to stand still and watch wildlife in insanely cold conditions. But that is what many of us do all day every day we are in the park, including on this day. We use hand warmers and multiple clothing layers and that does the job. Being in a place where you want to be, like in Yellowstone, always mentally helps with extreme conditions.

After multiple stops to scan the landscape as we drove east after entering the park, we ended up at the Slough Creek area at 7:15 AM. The Junction Butte Pack had made a kill just below (west of) Bob's Knob, where we often watch wolves and other wildlife. The knob is a short walk from a parking area on the Slough Creek Campground Road, but the gravel road is closed in the winter and there is limiting parking at the restroom parking area at the beginning of the road. So, we parked alongside the edge of the main park road which is slightly under a half mile hike to get to the viewpoint.

Bob Landis was at his namesake landmark early. He radioed to some people who had walkie-talkies and asked the group to wait a few minutes until the wolves moved off from the carcass. Those of us there obeyed and waited about 10 minutes near the bathroom then hiked out to the observation area. There, we watched 13 members of the Junction Pack as they were traveling west toward the Marge Simpson Tree area over a mile away. This is a well-known tree above Slough Creek that is shaped like the hair of the famous cartoon character. Eight of the wolves were black and 5 were gray colored.

The wolves were 27 strong in the early fall. After 8 pack members were killed during the hunting season, the pack was now at 15 members. This count also included a few wolves, like 1228F, who left the pack via natural dispersal. I had observed 1228 up close a few times over the summer and had an affinity for her. She found a mate at the eastern end of Junction territory in the Soda Butte Valley and Round Prairie areas. In addition, 2 wolves (black 1229F and collared gray 1340M) were temporarily not with the pack, as they were possibly seeking out mates. I knew 1229F much better than 1340M, as I had seen her many times on previous trips because she was collared for a longer period of time than the robust male. Luckily, the Wolf Project helps fill in the gaps of knowledge of these individuals. Most pertinent to this discussion is Jeremy SunderRaj, who is out nearly every day in the park. His friendly interactions with wolf watchers really augment our experiences in the field.

(Note: 1229 and 1340 would rejoin the Junctions a couple of days after I left the park, hence raising the count of the pack back to 15).

The Junction Pack traveled west and lounged around the immediate area of the Marge Simpson Tree, bedding down on both sides of the tall Douglas Fir at about 8:00 AM. They clearly were full having devoured most of the small carcass by the banks of Slough Creek.

While the wolves were resting, I spent more time scanning the area. We found the carcass near a bend in the creek. It was about 1/3 of a mile away which wasn't quite as close as some of us initially suspected it was to Bob's Knob. With Bob's request that we wait to walk out there, we assumed it was literally right at the base of the knob or close to there. Nonetheless, it was near enough to get a good view of it.

Everyone assumed it was a small elk that they seemed to completely finish when we arrived, as we mostly just saw the vertebral column. But a coyote visited the carcass at 8:30 AM and managed to move it around. Most people had walked back to their cars to warm up by then. The animal had very dark fur and thick bones; no doubt it was a bison calf. The coyote took a chunk of meat and fur and cached it about 200 meters away. Caching in canines involves digging a hole (in this case, in the snow) with their forepaws, and then burying the dug-up substrate with their nose. I've observed the same thing with domestic dogs and <u>eastern coyotes/coywolves</u>. In theory the 'cacher' will visit the food item at a later time when food is scarcer.

After covering the meat, the coyote went right back to the carcass site. There, it was joined by 10 ravens and 10 magpies who were constantly on and around the meat pile. I observe these two avian scavengers at every single carcass I have ever found in Yellowstone. It is amazing how they always locate them. They must follow wolves on their hunts and then key each other in when the kill is made.

Steve and I stayed at the observation spot later than most people as we clocked two straight hours of wolf watching, not departing until 9:15 AM. It became beautifully sunny despite being below 0°, even by mid-morning. We left Slough at about 9:30 AM, after walking back to the car and grabbing a quick snack.

Elk Creek at dawn. The arrow points to the lone conifer in the area that many of us call "One Tree Hill".

'One Tree Hill' zoomed in.

View to the east at dawn from Elk Creek. This is an area where we often see wolves, but not on this morning. The next batch of pictures are of 13 members of the Junction Butte Pack. It was minus 12-14° F when we arrived to the observation spot. It was freezing but well worth it. It was great to see them again following <u>my amazing summer spent with</u> them, even after the tragedy of what humans did to them at the park boundary.



Slough Creek viewed from Bob's Knob. The arrow denotes the 'Marge Simpson Tree' near where the wolves were on this day.

Wolves (bottom right) and the 'Marge Simpson Tree' (left tree).

And Witness Trees.

A zoomed in view of the wolves near the area from the previous page.



My best pic of the Junction wolves on this day, howling away.



Here are 12 of the 13 Junctions in one frame (the other was nearby just out of view).



Initially we thought the ravens were on an elk carcass until the coyote came in later and moved the carcass exposing the dark body of a young bison. View of the Slough Creek den area from Bob's Knob. Wolf watchers are hopeful the Junction Pack dens there again despite what humans did to them this past year. The arrows represent the 'Western Trees' (left) and 'Eastern Trees' (right) with the two dens in the immediate area. 'X' marks the location of the carcass. The Marge Simpson Tree is just to the left of this frame.

Slough Creek

Bob's Knob

A close-up view of the den area with the 'Western Trees' (left) and 'Eastern Trees' (right) denoted by arrows.



Fresh red fox track on Bob's Knob. I never saw the fox which would have made it a 3-dog day of seeing a wolf, coyote, and fox.




Coyote near the Slough Creek carcass.





Coyote running off with a prize! It soon cached it in the snow past that frozen creek at the bottom of this picture.



This and next page: Coyote at Slough on the bison calf carcass with ravens and magpies.



Junction Butte from the park road. This is the landmark where the wolf pack was first observed and hence how they acquired its name.

We then drove back to the west where we found many people at the Petrified Lot west of Tower Junction. Initially, we believed they might be watching the hibernating black bear in her den. The light was good, and this time I could clearly see the ursid sleeping at the mouth of the den. I felt so privileged to get to see a wild bear sleeping through the winter.

However, most people were in the parking lot to view wolves. The Rescue Creek Pack was the 2021 offshoot of about 10 members of the Junction Pack dispersing and finding two 8-Mile Pack females. Black 1154F and uncollared 'Gray Male', formerly of the Junctions, are the breeding/alpha pair. The pack was nearby. They had made a kill just west of the bend in the road by Elk Creek about a half mile from our location. It was in a gully so was impossible to see. I saw two groups of 2 black wolves as they walked uphill from the location of the carcass where ravens would flush from when the canids walked by. Then, a collared gray walked uphill toward the others. Only 1 black of the four stayed in view as the others went out of sight in the woods. Wolf Project Volunteer Taylor Bland, formerly a wildlife guide, was a few days from officially starting a paid technician position with the project. She has an expert eye for finding and identifying individual wolves. Before we arrived, she had observed a few more members of the pack and was pretty sure she had watched most of the group of 12, consisting of 8 blacks and 4 grays when they are all together.

There was a bedded bull elk and 4 grazing cows a couple hundred meters north of us. They were very calm, especially when considering that they were just across the ravine from the wolves, and above the steep slope from where the bear was hibernating. We watched them peacefully eating dried blades of grass knowing that wolves were less than a half mile from them. After watching the bear in her den for a second time, we left the area at 11:30 AM after wildlife watching there for an hour and a half.



Sleeping bull elk at Petrified Tree area.

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This and next few pages:

Hibernating black bear. An amazing scene and safe from people as area is closed. Arrow denotes the den hole. The light was good during midmorning to see the bear clearly (next 3 pages).











Members of the Rescue Creek pack in a difficult to observe area. While these aren't the highest quality pictures, they accurately depict what we saw with wolves in and out of view in the trees and ridges.

Raven at Tower. It has a transmitter on its back which allows biologists to track it.





We drove a few miles back to the east to hike the Yellowstone River Trail, parking at the Yellowstone Picnic Lot. There, we walked the ~0.75 miles east on the road to the Specimen Ridge Trailhead. This would allow us to complete the ramble in a ~4 mile loop, and it got the road part of the trip over first, rather than having to do it afterwards. About a mile into the hike, the Specimen Ridge Trail diverts to the left (east) of the Yellowstone River Trail, which follows the ridge of the canyon.

Having done the nearby Garnet Hill Loop the previous day better prepared us for this trek. We immediately donned our snowshoes and mostly broke new ground all the way to the top of the hill, which overlooks the Yellowstone River north of the Grand Canyon of the Yellowstone. It is a spectacular view of the bending river across from the Tower General Store. After about a mile further northwest, one gets a great view of Calcite which is a geologic activity with moderate amounts of hydrothermal features in the form of steam coming off its yellowish-brown river bank. Once we reached Calcite, there was much more human activity as most people did an out and back hike from the picnic area. Therefore, the last 1.5 miles was very easy going as we snowshoed over a packed, established trail. The Yellowstone River Trail is a relatively easy but highly rewarding hike!

After getting back to the car at 2:05 PM and having a late lunch, we drove west expecting to get back to the cabin soon thereafter so we could settle in and get caught up on downloading and naming our pictures. I was hoping to go to bed early to get caught up on sleep. We had a small, two-room cabin. Steve slept in the bedroom while I was in the living room on the couch. It was cozy but worked fine for us. The cabin had internet, a full-size fridge, a shower with hot water, and satellite TV – all of modern life's amenities!

We didn't spot the enormous numbers of bison or elk on this day, but did see some of them of course. We also saw a group of 6 mule deer north of the road about a mile east of Phantom Lake. I always like watching them grazing with their rope-like tails, which are so different than the white-tailed deer of the eastern U.S.

The beginning of the hike on the Specimen Ridge Trail which veers up the ridge to the left of this picture and goes for 18 miles to the eastern part of Lamar Valley. The Yellowstone River Trail heads to the right at the top of the ridge in the middle and then right side of this picture.



Next few pages: Beautiful vistas of the Yellowstone River from the Yellowstone River Trail. In these images, Specimen Ridge is on the left side, the river in the middle, and Tower Fall area on the right.



This is probably my favorite image of the area!







A close-up view of the Yellowstone River. Last view of the Yellowstone River corridor to the south before we hiked to the north.





Cliff above the park road near Tower Fall.



Calcite from the Yellowstone River Trail.





Calcite





View of Calcite as I continued to hike north, eventually passing the beautiful landmark.



View to the north of Calcite and into the Tower area while along the Yellowstone River Trail. Yours truly on the Yellowstone River Trail. Those are elk antlers behind me, which were shed by a large bull. Mule deer grazing near Geode Creek area where I often see elk in the wintertime.

Next page: Perspective of those deer on the slopes.





We noticed a good number of cars on the Blacktail just west of the ponds and decided to pull over. There, only about a half mile away, were 12 members of the 8-Mile Pack, consisting of 9 gray and 3 black wolves. The Wolf Project reports that there are 14 members of the pack, with 11 grays. The number of light-colored wolves makes it easy to identify this pack as 8-Miles, given that the nearby Junctions and Rescue Creek wolves have many more blacks in their clans.

There was a bison carcass out of sight in a gully. Visitors had seen them chasing an injured bison earlier in the day, so others knew to look there even though the carcass was out of sight behind a ridge. Most of the wolves were sleeping when we arrived, but they were all visible which was fantastic. This was the third pack we had observed today and this one required no extra effort than simply stepping out of the car!

Three grays stayed active with one of them going to the carcass site while the rest of the clan was resting upslope to the northeast. The single gray chased, then got chased by 2 coyotes. I was excitedly switching between using my spotting scope to watch them and my camera to take pictures and videos. It had warmed up to the mid to high teens by that point in the day and it felt downright warm after the past two days, even with a stiff wind. Having spent almost 9 hours in the field up to that point, it was comical when people got out of their cars and complained how cold they were. I almost told them to try getting up at dawn in negative temperatures and stand there for hours at a time, but was too busy focusing on the wolves to bother.

The combination of the cold and the fact that I had already taken 175 pictures on this day caused my camera to turn off twice. I would turn it back on and get a couple-few more pictures and then it would turn back off. I knew I needed to get back to the cabin to charge the battery since I did not have a spare one with me.

In addition to the canids, a bald eagle was in a dead tree and 5-6 other eagles were on the ground. They were either golden eagles or immature bald eagles, but we suspected goldens. None had the white heads of mature bald eagles. I had never seen so many together before. Initially, I thought they might be turkey vultures because of the numbers but they usually don't migrate back to Yellowstone until later in the year. I verified that using my spotting scope and fully zooming in on them. Of course, I couldn't take many pictures of them because of my battery issue. I needed to save it for good canid action. There were also many ravens in the ravine where the carcass was. They would occasionally fly in and then back out of view.

We watched the 8-Mile pack for 35-40 minutes before continuing on, getting back to the cabin at 4:15 PM. After being shut out yesterday, this day was a bonanza, as we saw 3 packs and 30 wolves! This doesn't even count the other members of the packs that I didn't witness myself, even though some were no doubt close by, especially members of the Rescue Creek pack. 'Amazing', I thought.

It was so nice to see wolves after the devastation caused by the expanded hunting statutes in Montana, mainly eliminating protections to park wolves that leave the park. This was done all to appease a tiny minority of people who want to kill them. The regulations ignore the vital importance that the research on these wolves accomplishes and the ecological importance of a top predator. After my experience with the authorities in Massachusetts (see Part 2 of my book *Coywolf*), this special interest focus didn't surprise me even with the world-wide fame garnered by these wolves and the national (and local Montanan) opposition to these hunts.

Enjoy the pics. It was a rewarding, exhausting day!

The next few pictures are of the 8-Mile pack on the Blacktail Plateau. There is a lot of light because we saw them in the afternoon. It warmed up to 15 degrees but the wind was brutal and made it feel much colder, especially after being out in the park all day. This view is a perspective of the area with the arrows pointing to where the pack was.


Here are 6 of the 12 8-Mile wolves sleeping away after a nice meal. Arrow denotes the hardest to see wolf. Next page: Four of the wolves closer up.







A single gray walks west toward the carcass area and is soon joined by a second gray (see next page).





One gray howls while the other does its doody, literally.

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Bald eagle perched in a dead tree near the carcass area.



Two coyotes chasing a member of the 8-Mile pack. I was outside for 9 hours at this point and took 170 images. My camera literally turned off after this picture, so I'm very lucky that it saved it! Notice the size difference between the two species.

Two golden eagles (one flying) with a raven and magpie watching them to the right. My camera's battery was pretty much exhausted at this point, as it turned off after this picture too.



While I was having problems with my camera, Steve was able to get some good shots of the eagles and wolves. Here a bald eagle (the same one as three pages ago) watches a gray wolf lounging around the area.

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Next page: An amazing shot of 4 eagles, with 2 goldens on the left and a bald on the right. I am not sure about the one that is second to the right. I am guessing it was another bald eagle but don't remember since so much was happening in that area when that image was taken.





The eagle from two pages prior left the tree and soon returned to move the raven pair that immediately took the vantage point after the eagle left. Pictures © Steve Cifuni.



Next page: As the bald eagle took its perch (far right, circled), the golden eagles really started arriving (see arrows).

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Ultimately, we saw 5 golden eagles at the site with 1-2 bald eagles. Here all five are in the frame with that same wolf that hung around while most of the canids slept. The carcass is just below the hill in the center of the picture. Photo © Steve Cifuni.

Day 4: Getting Jiggy with Wolves

February 26 was another cold start with 2° F degrees in Gardiner and -5 in the park. Yet it was another absolutely fantastic, marathon day.

Figuring that the 8-Mile pack would still be in the western part of Blacktail Plateau we headed straight there, arriving at first light at 6:40 AM. 'First light' is generally about a half hour before official sunrise. Dedicated wildlife watchers generally try to enter the park well before sunrise while it is still dark out. Therefore, they are able to see wildlife, mainly wolves, as early as is physically possible. We, along with a couple of other early arriving wolf watchers, could barely make out the wolves but they were there, above the carcass location. We quickly saw 10 grays and 2 blacks, and Jeremy SunderRaj from the Wolf Project said he likely had seen all 11 grays from the pack.

They were mostly lying down, no doubt having fed at night. There were a couple of rallies where pack members greeted each other, and then there was an early howling session just as it was becoming light. It was a great sighting from only a half mile away which is pretty close to watch wild wolves for a significant amount of time. They stayed in the area until 8:00 AM when they headed uphill and into the trees, likely going to the top of the south side of Mt. Everts. They were tough to follow up there as there were lots of rocks and dirt camouflaging them. Ultimately, they disappeared into the trees a bit higher in elevation.

There were also 2 coyotes, likely the same ones as the previous day, that hung out southwest of the wolves and the carcass. They were a ridge away from the action. They clearly wanted a meal but were keeping their distance from their larger cousins. While the wolves were heading up hill, I lost the coyotes but Laurie Lyman said she saw the duo aggressively chase a single coyote away from the area. I was disappointed I missed that sighting and wondered who the lone coyote was.

At 8:15 AM, we departed our Blacktail observation spot and headed east to Hellroaring Overlook. Almost immediately after we arrived there at 8:30 AM, we had 11 Junction wolves, 8 blacks and 3 grays, traveling west across the open slopes. Thankfully other wolf watchers had found the wolves and they quickly helped us locate them based on landmarks that I recognized from our vintage point. The pack clearly finished off the young bison at Slough Creek the previous evening and was on a territorial patrol many miles to the west. They were spread out but all seemed to know the general direction to travel.

Dawn on the western part of the Blacktail where the 8-Mile pack spent two days on a bison kill (see arrow for kill location).

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Two (right) and four (left) members of the 8-Mile wolf pack at first light on a -14 F degree morning.

Next page: Three grays of the 8-Mile Pack wondering around the kill area at dawn.





Two wolves standing up after apparently bedding for much of the night.

Stare off: Coyote in foreground and two wolves in the background. There is a gulley between them so they aren't as close as they may appear.

These wolves (and the bison kill) were an estimated half mile away which is about as close as they get for such a detailed view. Simply an amazing experience.

Coyote howling near the 8-Mile wolves. It's mate was nearby but out of view. Five gray members of the 8-Mile pack lounging around and exploring a hole. On the next picture, the image quality improved because the day became lighter.



Then they rallied, which is a vigorous greeting session followed by howling.

With some wrestling and playing (see next two pages) too.

As you can see in this batch of pictures, they are very close to each other. It is hard to imagine the pain they feel when some members (4 this season for this pack) are killed in the hunt just beyond the park border about 10 miles from that location.





Then, a sixth gray enters the fray (top right).

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Frozen Undine Falls. It takes frigid weather to freeze a 100 foot plus waterfall. Next page: Close-up of Undine.



Bison on Blacktail Plateau with North Butte in the background.
Bison crossing the road on the Blacktail Plateau with 'South Butte' behind them.



At 9:02 AM, I took video of some of the Junction wolves crossing the frozen Hellroaring Creek at the 'S bend', which is a well-known landmark from the overlook. The pack stalled out for about a half hour and then continued west where they chased a big group of ~100 bison, who were subdivided in 3-4 groups just east of the 'Tornado Drainage'. This area is at the western part of where we can see from the pullout. The large bovines ran, which prompted the wolves to follow them. For a minute it looked like the wolves were going to get serious about trying to bring one down, but the bison soon stopped and pushed the wolves back. That caused the wolves to hesitate and eventually stop their pursuit, instead choosing to lie down in the open right next to the bison at 10:00. I captured a video sequence of them surrounding one but that bison easily chased them off. The view was from about 2 miles away, but the .mpeg still came out great!

We remained at Hellroaring until 11:00 AM, watching resting canids and buffalo. After talking with folks in the lot, we then left and drove east. The temperature had risen to about 0° by then! We drove the ~20 miles to Lamar Valley since we hadn't spent much time in one of our favorite parts of the park yet. I couldn't believe our relatively short trip was already half-way through by this point. There continued to not be many bison in Lamar with only a few small groups in the northern part of the valley where the sun hit the area rendering it relatively snow-free. I also didn't see any bison in Little America which would be nearly impossible in the summer since they are seemingly everywhere every day I am there. Most buffalo continued to be spread out between Blacktail Plateau and Tower Junction, which is where I don't see many during the summer. 'Interesting seasonal patterns', I thought.

At 11:30 AM, we found a coyote out on the flats of Lamar south of the Institute, which is also called the Buffalo Ranch. It moseyed around and we didn't stay with it long with our spotting scopes, being sort of burnt out from watching wolves all morning at that point. Steve really wanted pictures of otters, since we have never obtained images of them in the park, so we went back to the Confluence. We spent a good half hour there but didn't see any of the large mustelids, nor any bighorn either. We only saw 1 dipper out on the ice, jumping into the frigid water to fill up on aquatic invertebrates. By that point, the temperature had risen to 15-20° and it was beautiful. I unbuttoned my outer jacket and was almost ready to take off a layer as it felt so much warmer.

Hellroaring Overlook. The Junction wolves in the proceeding pictures were about 2 miles away.



We saw 11 members of the Junction Butte pack on this day; here they are all in the frame including part of a gray (see arrow) on the bottom left.

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They were relatively spread out as they traveled to the west. Some played on the way, while the adults (next page) traveled with purpose.





Junctions approaching frozen Hellroaring Creek. They soon walked over the ice and crossed the river at the 'S bend' (next page).





Members of the Junction Butte pack having just crossed Hellroaring Creek which can be seen in the upper right of the picture. Junction wolves relaxed before they went over and tried to attack that bison.

They surrounded and squared off with the bison.

This bison was way too healthy and the wolves soon gave up on it, especially when two other bison arrived as backup to the first one.







Top: Lamar Canyon with park road and sun. I am still amazed that the river was frozen. It takes very cold temps to do that. Bottom: Lamar Valley viewed to the east from the west end.



The Lamar River in Lamar Canyon.

Lamar Valley with Jasper Bench in the center right of the picture.

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Top: Cottonwoods lining the park road in Lamar Valley. There is a small stream (Rose Creek) that allows these trees to take root there.

Bottom: Lamar Valley from the Institute. Amethyst Mountain is to the left and Jasper Bench is the center right with ridges and hills above it.





A lone coyote in Lamar Valley. It looks very small in this enormous landscape.

Those same Cottonwoods from the other direction (facing east) into the sun.

-11

Golden eagle (circled) flying above Confluence.

The Confluence of Soda Butte Creek (left) and Lamar River (middle of picture, frozen). At 12:10 PM, we hiked to Trout and Buck Lakes. As is the case for all hikes, even in really cold weather, I have to remove a few layers of clothes before hiking or I would sweat through them which would get my insulation wet. Wet clothes aren't good and can cause one to get cold when their activity ceases. Thus, I usually remove one of my two layers of long johns as well as my fleece sweatpants, keeping only a thin layer of long johns and my outer water-resistant pants. I basically do the same thing with my upper layers, removing my sweatshirt, one of two upper long johns, and my down jacket, keeping only a T-shirt, light long john layer, and my outer rain-resistant jacket on. This works well for me, even on really cold days like when we hiked the Yellowstone River Trail in single digit temperatures a few days previously. I wear gloves and a winter hat about half of a given hike, often taking them off to cool my body, and putting them back on when my extremities start to feel the outside temperature again.

This trail is at the eastern part of Soda Butte Valley. It is about a mile to complete the main loop to Trout and back, but we also take a spur trail south of Trout Lake to view Soda Butte Valley, then we also hike uphill and visit Buck Lake. It is one of my favorite areas and I always explore this area at least once every time I visit the park.

The trail was packed all the way up to Trout Lake. We really didn't need snowshoes to do that part of the hike but they come with mini-crampons, which gave me better traction on the hilly climb up to the pond. The trip up to Buck Lake was a different story. The snow was at least 3 feet deep and there was only a coyote trail crisscrossing the area and an old bison trail up there from a lone bull. It would have been miserable without snowshoes, since it was difficult even with them. While I didn't see any bison during that hike, I had often seen a bull or two up there on other trips, especially during the summer. The ponds were frozen making it a true winter wonderland.

We returned back to the car at 1:53 PM and immediately ate lunch. I was hungry from all of the physical activity and I had also done a 41.2 hour fast a few days before the trip. I only drank water during that time. Sometimes I become really hungry a few days after the fast, not immediately afterward. The peanut butter and fluff sandwich didn't last long. Neither did the half sandwich I made immediately after that one.







Southeast part of Trout Lake heading over a bridge on the trail.



Soda Butte Valley from the spur trail off the Trout Lake Trail. Notice how the park road bisects the valley.

Trout Lake from the south side after hiking the spur trail to the overlook of Soda Butte Valley.





Buck Lake (bottom), which involved a snowshoe trek from Trout Lake (top) in 3 feet plus of snow!









Left: My favorite Douglas fir from a new angle. Below: Steve on the Trout Lake Trail on our way back.



Next, we drove to Round Prairie. The same ~50 bison from earlier in the week were on the east side of the valley. I found that curious as there still weren't any bison at all in Soda Butte Valley, just to the west of there. We also spotted a coyote out on a frozen stretch of Soda Butte Creek to the southwest of the long extinct Soda Butte Cone, a former geyser. This creek continues west for a few miles where it joins with the Lamar River at the 'Confluence'. It is a major tributary for the river system.

On our drive back west, we had a really cool sighting of 2 bighorn rams bedded on rock cliffs just above the road at the very western part of Confluence, a good quarter mile west of where we had previously looked for the otters and observed the 7 bighorns. The sheep were directly above us, making for interesting angled images.

Fifteen miles later, we stopped at Petrified Lot again to look at the black bear den. Wildlife watchers had seen a cub out earlier in the day and we were hoping that we would luck out and see it, but fate wasn't on our side this time. Plus, the afternoon glare made it too hard to see inside the den. We were realizing that mid-morning was the best time of the day to see the sow sleeping. The shadow that cast over the hole after that made the contrast too difficult to observe anything.

We saw small groups of elk and bison at the usual places we had been seeing them and then stopped back at Blacktail at ~3:00 PM. I wasn't sure if the wolves would be there given their movements just after dawn but, to our delight, they were. The carcass was now visible, with the vertebrate on top of the hill. I quickly counted 11, with 9 grays and 2 blacks. The other three from the pack easily could have been there and I just missed them. There was a lot of feeding going on and I reasoned that they were likely finishing up this bison. It was very sunny there, but the wolves didn't seem to mind. They had two great howling sessions, which I captured on video. I was psyched.

It was amusing listening to visitors stopping and complaining of the cold yet again, when it was sunny and 22 degrees. After standing outside in -5° for most of the morning, this literally felt like spring to me. It was also interesting listening to a couple of amateur photographers who were disappointed that the wolves weren't closer. I told them that of all my trips to the park, this was a top 5% sighting, if not better! While I've been closer to wild wolves, those are usually fleeting sightings like when one crosses the road in front of me. This was a sustained sighting from at least twice as close as a normal viewing distance. In fact, the only better sighting that I can think of was back in July 2019 when a bison died ~150 meters from the park road and I obtained images of wolves and grizzly bears on the carcass. However, the Junction pack was skittish because it was so close to the road, and I only obtained daytime images of select individuals who were bold enough to approach the site. Most of the pack visited the carcass at night when humans were not there. In other words, this observation at Blacktail was real and spectacular!

Taylor B. was out on this late afternoon day as well, and agreed with this assessment. She came out a little earlier than me and had seen a 10th gray, and thus had 12 pack members nearby. So, there were only two members of the pack missing and they easily could've been in the trees out of our view. It is believed that 4 members of the pack were killed in the hunt. This is not too surprising given their relatively close proximity (about 10 miles) from the border. Below: Round Prairie. Next page: Bison in Round Prairie.






Coyote (below) in the western part of Soda Butte Valley (left). Bighorn ram enjoying the sun. It was 15-20 degrees but the sun made it feel beautiful outside.





It surely was an interesting angle where the bighorns were, directly above the road.



Jasper Bench from Dorothy's Pullout on our drive back to the west.

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Gorgeous Lamar Valley draped in sunlight.





Petrified Tree Lot. It was a beautiful day but the angle of the sun prevents seeing the bear at this time of day due to the shade.

Next two pages: A gray wolf of the 8-Mile pack dragging what looks like the vertebrae of their kill from the previous day. Many ravens and a few magpies were there eating leftovers.







A couple of grays near the previous one attempt to rally the others. Notice all of the tracks!

8-Mile wolves howling. What a day it was.

One of my better all-time pictures!

Fantastic view of the 8-Mile pack in the afternoon from *only* about a half mile away.







The 8-Miles then re-bedded and relaxed in the sun. It was apparent that the carcass was finished and they were ready to start traveling throughout their territory again.

The pack standing up. We left them soon after this picture, exhausted from 9.5 hours of being in the field. I rarely have ever left wolves while in full view. It seemed that they were going north to bed down in the shade, or maybe I tried to justify that so I wouldn't feel as guilty leaving the area!



Perspective of the area where the wolves were (denoted with the circle).

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Exhausted from a long day, we left the 8-Miles while they were still in full view. It was a difficult decision but 9.5 hours of straight activity can become exhausting after only a few days. Normally I wouldn't hike so often and could rest during that time to get energy for the dusk sessions.

We made it back to Gardiner at 3:55 PM, continuing to see many scattered elk, especially in the 5 miles between Mammoth and Gardiner. There were 5 mule deer right near the boiling river, which is a stretch of the Gardner River that is thermally warmed. People used to bath in the river but it hasn't been open since pre-Covid 2020; it seems that the government is using that as an excuse to keep it closed even though the chance of passing on the illness outside is slim.

The big sighting of the return back to the cabin was a group of ~30 pronghorn right near the Roosevelt Arch. They were on the flats close to the road and near some elk. These were our first pronghorn of the trip and our 7th ungulate species observed. I wondered where they were all trip; it is like they just parachuted into that area from wherever they were!

We returned to the cabin after 4:00 to a shock of the trip: 6 mule deer were surrounding Steve when he stepped out of the passenger seat of the CRV. It happened so quickly, I didn't even notice anything until he calmly said, "Hey Jon, check this out!"

"What the hell?", was my first reaction since I was so surprised. We hadn't seen them all trip, then all of a sudden they were best buddies with him. Our next door neighbors hand fed them sunflower seeds, which would explain their conditioning to people. It was just odd, I thought, that we hadn't observed them until our fourth day in the park.

We hung out with the deer for about a half hour, figuring there wasn't much we could do either way to influence their habituation to people. It is never a good idea to feed wild animals, especially creatures the size of a human. I wondered if this affected their survival, or altered their interaction with predators, such as wolves and mountain lions.

By the time 5:00 came I was tired and anxious to process all of the pictures I took from the day. I had taken over 200 each of the previous two days. That alone was a lot to process before bed, let alone doing other chores like eating, showering, and getting caught up on email and Facebook posts. Because we were having such full days in the park, we had no energy to head back out at dusk, which was around 7 PM. If we got back to the cabin earlier, say 1-2 PM, we no doubt would have headed back into the park. But we were both satisfied with resting up to start the next day fresh.

An

afternoon stop at Undine Falls to get a different perspective with the shining sun.





It was still frozen!





Next page: Pronghorn by Roosevelt Arch, with elk in the distance. These were the first pronghorn observed during this trip. They winter in low elevation desert-like areas, mostly out of the park.

Pronghorn by the North Entrance and Roosevelt Arch.





Elk in the flats and sage of Gardiner.

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Roosevelt Arch viewed from inside the park while leaving it. The elk and pronghorn from the previous pictures were just to the left and behind this picture.



Pronghorn grazing with the town of Gardiner behind it.



The cabin we stayed it and the Honda CRV we used for the week.



The deer were does and fawns and likely all related based on their association with each other.

A very unexpected sighting when arriving back to the cabin: 7 mule deer (who we had not seen all week prior to that) looking for handouts and receiving sunflower seeds. It was quite a shock to see them so tame knowing that mountain lions and wolves are literally just outside of town.





Steve surrounded by 7 mule deer as he stepped out of our vehicle.





I would never suggest feeding wild deer, and had no idea that this occurred in Gardiner until seeing it firsthand. It seemed foolish not to take pictures of this, however, since it was literally in process and I could not stop it. Feeding wildlife is generally considered a bad thing as large animals can become dependent on humans, they might pass on diseases easier given the close contact with people and other animals, and they might become dangerous when not fed (think of a bear).





This and next page:

After feeding for about 5 minutes, the deer moved on past us and into our backyard where they feed on the dried grass (hay) and other more natural food items.





Day 5: A Slow Wolf Day

February 27 was a slower day than normal for wolves. It was 8 degrees at pre-dawn in Gardiner but -12° F in the park based on peoples' car temperature gauges (our car did not have one). It would get up to about 30° on this day, the warmest of the week so far, but I was surprised how cold it was to start the day in the park given the forecast from the day before predicting warmer temperatures. And when the warm front came it also brought wind with it for most of the afternoon. So, it was still chilly for much of the day, especially when standing for hours at a time.

Many of us started the morning at first light on the Blacktail Plateau, but the wolves were not there anymore. We did see two sleeping coyotes and many ravens near the carcass site that was surely consumed. Because the dead ungulate was mostly out of sight in a gulley, we couldn't be positive with this assessment even though it was no doubt true. As we were looking for wolves, some people heard howling to the east so we moved further along on the Blacktail, and after two stops ended up at the Nature Trail parking lot a couple of miles to the east. This area is higher in elevation and offers a commanding view of the surrounding area.

A dozen or so cars ended up at the parking lot. We eventually spotted what was probably a trailing member of the 8-Mile pack in some nasty heatwaves to the south. It quickly went out of sight behind some hills and entered a wooded area. Some believed that it was possibly a coyote, so it was hard to know for sure. I did later hear a coyote pack 'group howling' near South Butte, a prominent hill in the area. That was closer than the canid sighting, so it was tough to piece it all together and know if the wolves were in the area or not. While searching for the canines, I also saw 4, 2, 1, and 7 bull elk through my spotting scope. The Blacktail is a known wintering area for male wapiti, so these observations were consistent with long-term trends.

We departed the Nature Trail lot at 9:40 AM after taking a break from our spotting scopes and walking the short half mile boardwalk. We went to the Hellroaring area and searched for wolves with expert wolf spotters Calvin and Lynnette from Kansas. The couple spends months each year in the park and are renowned for making difficult spots of wolves, bears, and other Yellowstone wildlife. We never found any wolves during that bout, with just a few bison and 5-8 bull elk seen. The wapiti were moving so it was difficult to tell if 3 were repeats from a previous sighting as we scanned the immense landscape.
Dawn on the beautiful Blacktail Plateau with the Blacktail Ponds at the middle left of the picture.

This was our last morning starting at the bison carcass near the Blacktail Ponds.

Blacktail Plateau from the Nature Trail.

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Four bull elk on the Blacktail Plateau.

Mountains west of the Blacktail in the heart of the park, including (from left to right) Trilobite Point, Mount Holmes, Dome Mountain, Three Rivers Peak (which is the small triangle shaped peak after a gap in the dark forest), Antler Peak, Bighorn Pass (the flat shape at the right center of the picture), Bannock Peak, and Bunsen Peak.



Bunsen Peak (in the foreground) above the town of Mammoth is one of my favorite peaks in the park because I regularly hike the accessible 4.5-7.0 mile trail system. It's length is variable depending on if one goes out and back or completes the longer loop.

Blacktail Nature Trail path with a solid foot of frozen snow over the boardwalk.

Despite the amazing scenery, one can get burnt out looking through a spotting scope for hours at a time and not seeing the intended target. Therefore, we stopped at Petrified Tree lot at 10:20 AM to have a guaranteed sighting. The light was definitely much more favorable in the mid-morning as I could clearly see the hibernating bear's entire back end. It was still too cold for the cubs to be out and about, however. If they do come out, I was told, it was nearly always later in the day.

We hadn't been to Bob's Knob in a few days so decided to spend 20-25 minutes out there, hoping we might luck out with wolves. The cards weren't in store for us on this day, but we did have two groups of 20 and 50 bison on the flats by Slough Creek. On our way back west, we saw a coyote moving east in the western part of Little America. After a summer of not seeing many, it was nice to see coyotes at least once per day on this trip.

By 11:30 AM, we hadn't observed any additional wolves elsewhere nor heard any reports of any others being seen. So, we drove back to the Blacktail and decided to hike up South Butte after having lunch. This is the general area where we thought the 8-Miles were from earlier in the morning. It is a ~1 mile one-way hike up to a prominent observation spot at the eastern part of the plateau. I brought snowshoes but much of the area was windblown so I stashed them in the woods and retrieved them on my way back.

There was bison activity everywhere, and it was clear that this was a main wintering area for the species. When Steve and I reached the top we immediately had a large group of 75-80 buffalo directly below us on a windswept ridge. There were also 4 elk cows with them. As we did a 360° scan of the area, we found many scattered, smaller bison herds all over the Blacktail Plateau, including ~50 on the west side of the butte and another ~50 to our immediate east and close to us, less than 100 meters away. We were literally surrounded by them which was really cool, given that it was just the two of us in the area. We also found scattered bull elk and suspected that most of them were repeat sightings from earlier that morning.

After about an hour of watching, it became super windy and frigid with a SSW wind that blew right into our faces. Surprisingly, even the hike downhill back to the car did not warm me up. It took my last cup of tea and sitting in the turnedoff, but wind free, car to warm up while I waited for Steve to return. Location of the hibernating black bear at Petrified Tree area on a beautiful winter day.



Hibernating black bear sleeping away.







Top: Panorama of Slough Creek area. Bottom: Panorama of Little America near 'Aspen Pullout'.





Coyote in Little America.

The view while hiking up the steep South Butte.

Watching bison from South Butte, a prominent hill on the Blacktail Plateau.

Bison and elk graze on windswept ridges with less snow which means it is often very windy in those areas.

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Elk on the Blacktail Plateau.





Panoramas of the Blacktail Plateau from the top of South Butte.



The view from South Butte.



Painted Hills from South Butte. A cool angle of these normally more colorful hills.

















We then drove back to Mammoth, seeing more bison by the Mammoth High Bridge and then some elk right after them. We parked in town and spent some time in the visitor center. With Covid, it had been a couple of years since I had been there. I always like going during the non-summer months when it is less busy. The displays were the same as I had previously seen, but the lack of people gave me the opportunity to read more of the informational placards.

After a good half hour there, including me finding a magnet that I purchased of wolf 302 in the small gift shop, we drove up to the Upper Terrace Road at Mammoth Hot Springs. In the summer, it is a 1.5 mile one-way, scenic road of some off-thebeaten-path geothermal features. But in the winter, it turns into a cross-country ski and snowshoe trail. When I was there during <u>Christmas 2020</u>, I saw many mule deer near the cedar and juniper trees at the back (western) part of the loop. I suspected that this was important winter habitat for them, so I was surprised when I didn't see any on this trip. My guess was that as the winter wears on, the deer continue migrating north and to lower elevations in and around Gardiner, possibly even traveling further north into Paradise Valley.

While waiting for Steve to return from the loop, I also walked some of the upper part of the Lower Terrace, which is all on a boardwalk. Canary Springs is the most prominent feature there and I never tire of taking pictures of this travertine terrace. Travertine is a type of limestone deposited by mineral springs, like those at Mammoth Hot Springs, through a process of rapid precipitation of carbonate minerals. It often settles in a stepped, terraced formation when the water of a mineral spring cascades down a hill or cliff. The pictures in this chapter clearly show this type of terrace formation.

After leaving the area, we slowly drove the 5 miles downhill back to Gardiner. We saw many elk and some bison on the way. Mt. Everts offers a commanding view to the east of the road so it is nice to enjoy the scenery and scan for ungulates on the slopes of Everts. We reached the cabin at 5:05 PM, exhausted from another busy, fulfilling day. On my Facebook post, I noted that "Hopefully tomorrow will bring more wolves." And, oh boy, did it indeed!

Blacktail 'S curve', a cool stretch of road (and next page, left).



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Right: Wolf 302 magnet and other related magnets on my refrigerator.

Mammoth Hot Springs from the park road.





Mammoth Hot Springs and Mount Everts in the background. The town of Gardiner is to the left of Everts about 5 miles away.



The town of Mammoth viewed from the Upper Terrace.




Orange Spring Mound which is on the Upper Terrace Drive in Mammoth. It is a paved road that turns into a ski/snowshoe trail in the winter. Orange Spring Mound. The color is from the bacteria and algae that live in the hot water. Hence they are called thermophiles.



White Elephant Back Terrace off the Upper Terrace Drive. Mount Everts is in the background again.

WHITE ELEPHANT BACK TERRACE



Hiking the boardwalk from the Upper Terrace shows a clear step-like travertine terrace, the geothermal feature characteristic of Mammoth Hot Springs. Terraces form when <u>water rises through</u> <u>limestone</u>, which then allows the water to carry high amounts of dissolved calcium carbonate.





Above: The view from the boardwalk to Canary Spring. Below: Canary spring, a part of Mammoth Hot Springs.







Day 6: The Junctions Kill a Bison

The last day of February started out with 20 degrees or warmer in most of the park, a veritable heat wave after considering the previous five days. It was a slow start with much driving back and forth. We went all the way east into Little America, and saw 2 coyotes right at the Lamar Bridge west of the Slough Campground entrance road. One crossed the road from south to north, while the other – I suspected a female – pooped on the ice of the Lamar River. She then climbed the slope northeastwards to where the first one crossed and they both headed north into the sage covered hills of Little America.

Next, we parked at the Slough restroom area, which was surprisingly free of cars. We walked the 1/3 of a mile to the 'Knob". Bob Landis was the only other person observing from his namesake. He often begins his day there, and over time the prominent observation spot overlooking Slough Creek was named after him. The three of us scanned for a while and didn't see anything, so it was a good thing we decided to drive back to the west.

Calvin and Lynnette were watching from Lower Hellroaring and, after much effort, found the Junction pack on the wideopen slope of Hellroaring. We saw them scanning at the edge of the road when we drove by, but we ultimately settled in at Upper Hellroaring around 8:15 AM. Not long after we arrived to the overlook, Lynnette reported via radio that they had wolves. I once used a radio in the park but do not currently have one so I have to rely on other wolf watchers who use them. Luckily, some folks at the upper lot had one. That area doesn't have cell phone service which precludes the use of more modern texting and phone call communication.

It took us a while to locate the wolves from our angle at Upper Hellroaring. When we found them they were about 1.5 miles away in the middle of chasing a small bison, either a calf or a yearling, across and down the wide-open slope. Initially, 3 wolves (2 grays and a black) of the Junction pack were most involved with another black wolf following them. An uncollared gray was very involved in the process. They made contact 3 times that we saw and likely at least another time or two based on reports from Calvin at Lower Hellroaring. Excitedly, I alternated between videoing the chase, photographing it, and switching optics to watch through my spotting scope. The spotting scope provides by far the best view, especially at a distance, but using the camera, of course, provides the images vital for this book.

Perspective of the coyote's location (circled) next to the Lamar River Bridge.



Coyote that just crossed the frozen Lamar River and is walking through sagebrush up to cross the park road to the north (see next page). This is the second one, we guessed a female.







Legendary cinema-photographer Bob Landis. He has filmed and produced many of the famous Yellowstone documentaries, especially the wolf-related ones.





Bison grazing above the road in Little America. This was a cool angle and perspective of what we usually see when we are out there. Specimen Ridge is in the background.



Aspens and view of Little America.

Perspective from Hellroaring. The arrow marks the general direction of the wolves chasing the young bison, which is about 2 miles from our observation spot (see proceeding pages). Also, notice the trees in the foreground. They often get in the way of our view when the animals are moving.

Four wolves chasing this young bison with a gray and black doing most of the work.



Contact being made with the bison. The gray grabbing the bison's rear leg was the most involved in the chase and attack.

It appears that they have the bison subdued, but then it gets free and runs further downhill (see next page).



It was heart wrenching to see the canines stop and surround the little bison in its tracks. Each time it appeared that they were going to bring it down right there, but something caused the bison to gain the strength to continue running downhill. During this action, I wondered where the other bison were. Typically, buffalo are aggressive with wolves. They defend the youngsters by forming a circle around them and belligerently chasing wolves away. Something clearly happened that allowed the canines to separate that individual. I believed it was a yearling as its face looked older when I saw it running; others assumed it was a calf.

The wolves ultimately brought the bison down at 9:02 AM in the wetland immediately east of the bend in Hellroaring Creek, right where we saw them cross the ice two days earlier. The final take-down occurred behind some shrubs once the majority of the pack caught up and surrounded the poor creature. I was a bit frustrated that I witnessed so much of the chase but mostly missed the final battle. One has to often move their optics when watching from Hellroaring since trees and bushes in front of the observer can obstruct their view when creatures move. I had to do that just before they made their last contact with the young bison.

Eventually we saw 13 there, 8 blacks and 5 grays, which was the current count of the pack until wolves 1340M and 1229F rejoined the group, just a couple of days after we left the park, to bring the pack back up to 15 members. I watched beta male 1048, whom I have observed for years, submissively greet the uncollared gray-faced black alpha (breeding) male. I have developed a strong affinity for the tenacity of the old male, 1048, who was well beyond the average age of 4-5 for wolves in Yellowstone. I also saw the old gray female 907F, who was a month short of turning 9 years old, and 1276F, who was almost 4 year old. It was great observing wolves whom I (and many others) have had the fortune to watch and get to know over the years. I was happy that they were still alive following the hunts that occurred at the park border until the season ended in February 2022 due to the quota being reached in southwestern Montana (also see this article). Over a quarter of the wolves killed in that zone were in the tiny hunting Units of 313 and 316 representing only ~0.20% of the state of Montana.

The Junctions had a good rally after feeding and howled three times, which was barely audible from our location. They then bedded down on a knob to the northeast, overlooking the carcass from about 100 meters away. One gray kept feeding. I suspected it was the one who did most of the chasing and made contact with the bison multiple times. It was no doubt tired from the hunt and needed to rest before eating. There were also ~50 ravens, flying all around the area. I always marvel at how quickly ravens and magpies find wolf-kills. They were literally everywhere; collectively, the avian scavengers can eat a prodigious amount of meat.

A semi-zoomed in view of the edge of the bend in Hellroaring Creek and the carcass area on the right (east) side of that marsh. 'X' marks the carcass location (see next few pages).



For most of the chase, 4 wolves were way ahead of the rest of the pack with three only really involved in most of the action until they had slowed it down. Then, other pack members arrived to help finish off the calf. After watching the chase for ~5 minutes, I had to move my scope because a tree was obstructing my view. By the time I refocused on the animals, the wolves had already surrounded and doomed their prey.

The Junction pack surrounding and bringing the hapless young bison down. This area is just east of the 'S bend' in Hellroaring Creek, a well known landmark to wolf watchers.





Wolves relaxing after a full meal.

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The wolves then had a rally about an hour after they made the kill with 12 of the 13 pack members who were there on this day. One gray, I guessed to be the one who did most of the chasing of the bison, stayed bedded while the others interacted. Notice the ever present ravens. After greeting each other, some ran back down to feed on the carcass.

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Others stayed resting, until eventually going back to eat (see next two pages).







The two previous pictures zoomed way in for detail.


This and next page: After getting a good meal, the wolves went up on the knob and had a great howling session. It was barely audible from our location, but still awesome to observe through our spotting scopes. Notice the ravens near the carcass area at the bottom left of the pictures.



The previous picture zoomed in for detail.

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Right after this picture was taken, we left the wolves and drove a mile to the west to a new observation location to view the Rescue Creek Pack.

- Alex

The wolves all soon bedded up on the knob above the carcass. It seemed that they would be like that for a while, so we left at 10:20 AM and joined others on a hill about a mile west of Hellroaring. This steep climb provides a nice overlook of the Cottonwood drainage area. The handful of wolf watchers had all 12 members, 4 grays and 8 blacks, of the Rescue Creek pack on a knob only about three-quarters of a mile away. They were only a couple of miles away from the Junctions but were on our side of the Yellowstone River while the Junctions were north of it. The 'Rescues' had been bedded for a while before we arrived, but 10-15 minutes after we started to observe them, they slowly got up and went north over the ridge that they were lounging on. We lost them after that despite Steve and my attempts to see them from multiple angles. We even hiked another quarter mile around a bend and could see the Junctions on their carcass, and where the Rescues had just been.

After a half hour more of looking we hiked back to the car to eat. It was a truly National Geographic day up until this point! I felt so fortunate to see two wild wolf packs doing what wolves do in nature. By mid-morning, we had observed 25 wolves on our penultimate day in the world's first national park. The specialness of this day did not escape me.

At noon, we drove the roughly half hour east to Confluence to look one last time for the otters. There still were not many bison east of Tower Junction, which surprised me. I did see some up on the slopes of Specimen Ridge in the southern part of Little America, and a group in the north part of the Lamar Valley north of Coyote Pullout in the west-central section of Lamar.

We did not see any otters on that day, but did see 12 goldeneyes. They are attractive, medium-sized ducks with large heads and very mesmerizing, amber-colored eyes. They were swimming up and down open sections of the Lamar River. I had to wait from a few angles along the park road to obtain decent pictures of them. There was a report from the previous day of an otter capturing and killing one. It is likely that they were on edge and alert for the submarine-style hunting tactics of the aquatic weasels.



The Cottonwood Creek area requires a short, but steep hike to obtain this pretty view. Next page: A slightly zoomed in perspective of where the wolves were, marked with an 'X'.





The Rescue Creek Pack, bedded only 1-2 miles away from the Junction wolves, consisted of 12 wolves, 8 blacks and 4 grays, during winter-spring 2022.



Another quarter mile walk past where we watched the Rescue Creek pack sleeping provided a different view of the Hellroaring area. The Junction wolves were still at the bison kill area, with most of them sleeping on the hill above the frozen marsh where the carcass was (see top of pic). Many ravens were still in attendance all over the area. View of the Hellroaring area from around the bend of Cottonwood Overlook. 'X' marks the Junction pack's location. Perspective of 'One Tree Hill' at Elk Creek.

'One Tree Hill' over at Elk Creek, a favorite view of mine.



Little America drive-by pic with Specimen Ridge on the right.

Lamar Valley as viewed from the car.

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View to the west of the Confluence with the Lamar River in view, and the merging of the two water bodies just behind this photograph.

View to the east of the 'Confluence' of Soda Butte Creek (top) and the Lamar River (right).

A composite of the above two pictures of the Confluence.



Goldeneyes at the Confluence.



Close-up of two male goldeneyes. There was a report of an otter capturing one the previous day in this immediate area.

We stayed at the Confluence until 1:30 PM and then headed west toward Gardiner. It was an uneventful drive until we approached Lower Hellroaring. Apparently, the animals decided that would be where all of the major action would take place on this day, as ~50 bison jumped onto the road two cars in front of us. They started traveling west on the pavement, in our direction! It seemed to take forever as it was very difficult to get around the bison with no road shoulder and a decent amount of snow just off the road. In addition, cars were coming from the west which gave us only about 12 feet to work with. The buffalo were 5-6 wide on some stretches to the point where cars coming from the other direction had to move to the very edge of the road and let the large bovines pass within a foot or two of their vehicles. Their astonished faces told it all.

After about a mile and at least 20 minutes later, there was finally a gap in traffic from the other direction which allowed me to scoot by the ungulates. I was curious as to where they were headed and knew that if they continued for a few more miles they would reach an already bison-filled Blacktail Plateau.

We saw many bison again on the Blacktail, but interestingly the largest group was in the western region right near the 8-Mile pack's kill from just a few days ago. This area was just west of Blacktail Ponds. It was extremely windy on the plateau with snow blowing onto the road creating drifts. In some sections the precipitation then froze to ice seemingly instantaneously. There were a couple of places where we almost slid off the road, giving me that panicked pit in the stomach feeling as we hydroplaned on the pavement.

Needing a break, we stopped at Wraith Falls at 2:49 PM and did the short half mile, one-way hike to the section of Lupine Creek that falls down a rock cascade. It had been such of a busy day, we wanted to get in some exercise before heading back to the cabin. A mile ramble was certainly better than nothing, and it gave me a mental break from the driving conditions.

We arrived back to Gardiner at 3:33 pm with 3 mule deer *waiting for us* by the cabin. A doe, a likely yearling, and a fawn were right in our driveway. There was no feeding today as they grazed on dead, dried grasses in our tiny backyard. We packed and organized the cabin while watching them, then ate and worked on our pictures and videos.

This was our last evening in the park. I couldn't believe how quickly the trip went by, and was already moderately depressed knowing we would be on a plane the next day leaving such grandeur. However, we still had one more morning in the park and intended to make the most of it.

'21's crossing', a spot between Soda Butte and Lamar Valleys just east of the Confluence, where the famous wolf used to cross the road in the early 2000s. The name stuck despite 21's death many years ago (2004).



Western Lamar Valley and the frozen Lamar River. It has to get absolutely frigid for this river to freeze over.





View of Little America on the drive to the west.

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Floating Island Lake. People often see wolves here but I never have. I dream of the day when I might.



There weren't many bison jams while I was in the park on this particular trip. Bison live in smaller groups in the winter and there are less people in the park compared to the summer. However, this jam was in the Hellroaring area and there was no good way for the bison to get off the road, so it was difficult to navigate around them.





It is hard to describe the special feeling of having the privilege to be next to these behemoths. You can literally smell and hear them breathe as they walk along.



Frozen Blacktail Ponds. It is amazing that there is water there, and that bison fall in and drown in them every year presumably because they can't tell they are standing on ice and not the ground. In the spring, wolves, grizzly bears, and other animals scavenge the carcasses that were previously frozen in the shallow ponds. Note: The 8-Mile wolves were seen earlier in this trip on the hill on the left side of the top picture.





Left: Nearly frozen Wraith Falls. The water formation is an easy half mile walk from the park road

Below: Wraith Falls amongst the trees. Wraith is part of Lupine Creek.



The mule deer were back for the second day of our trip. Apparently, they are friendly with people and just roam the neighborhoods, literally coming up to front doors (see next page).





Not your typical view of 2 mule deer! Deer are in the background, I am in the foreground.









It is hard not to want to be close to a wild animal like these mule deer, even though giving them their space and staying away from them is really the best thing to do to keep them wild.



Day 7: Our Last Day with the Junction Wolves, For Now

Our last day in the park on this 6 night, 7 day trip was March 1. That coincided with the park's 150th anniversary, the birth of the world's first national park in 1872. It is an idea that has spread across the world and, in our very divided times, across both political parties (well, at least with most of our politicians).

The day started warm in the mid-30°s in Gardiner with a dusting of snow overnight. As we drove into the park it became a little colder, which made the roads a bit hazardous as the precipitation met freezing temperatures. With the cold temperatures most of the week, it was very telling that we had spring-like weather on our last day in the park.

We drove into Hellroaring pullout at 6:35 AM, right at first light. Rick M., Jeremy S-R., and Taylor B. were already there and had spotted the Junctions resting above the carcass from the previous day. I quickly found them, looking at dimly lit blobs on the landscape, trusting that they were wolves. As it became lighter, they rose and had a rally howl at 6:50 AM. The breeding female, an uncollared black with a grayish face, was the first to stand up. The others followed her lead.

Having finished their meal overnight, the alpha female led them to the east and uphill, traveling diagonally across Hellroaring slope. The train followed her in a spread out, non-cohesive group. All 13 from the previous day were there. The youngsters were playing and inefficiently chasing each other back 'n forth in both directions. There were only 4 surviving of the 8 pups from the previous year, but some of the yearlings (who were 1 year and 10.5 months old) played with them.

A gray had a piece of meat or hide (probably a combination of both) and repeatedly tossed it in the air as it climbed the mountain. At the eastern part of the hill, the breeding female and 1048M stopped as they encountered a group of 26 bison. The 5 leading wolves, including 1048 and the lead female, briefly tested the buffalo, but none were vulnerable, so they quickly moved on. They didn't appear to try too hard and were likely satiated after their meal from a day ago, including eating overnight, so they continued on. The bison barely moved as if they knew they were not going to be chased.
Wolf watchers at Hellroaring Overlook, with Rick McIntyre in the foreground. He is a famous wolf watcher and author of three, going on four, Yellowstone wolf books.



Perspective of location at Hellroaring Overlook with Hellroaring Creek 'S bend' in the middle of the photograph. The wolves, marked with an 'X' were just to the right (east) of there and above their bison carcass from the previous day.



Location of the Junction Butte wolves at dawn right next to Hellroaring Creek (which is surrounded by the conifer trees in the previous page), the following day after they killed the young bison on the right side of the marsh. There are 13 above the marsh. Two days later, and after I left the park, two additional wolves joined them to get back to 15 members.

This is the Junction wolves rally howling at dawn in low light conditions. Shortly after these pictures (also see two next pages), the uncollared black (with aging white face) alpha female stood up and led the pack east and out of this area.



Junction wolves rallying.

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The alpha female of the Junctions (on the far right), following the group rally howl (see previous pages) at dawn, led the pack away from the consumed carcass and up across the open Hellroaring slope.

The alpha or breeding female (top right) leading the Junction wolves up an established and long-used trail.

A great perspective picture of the spread out wolves traveling left to right (west to east) up Hellroaring slope with the dominant female in the lead (circled).



An even more zoomed out position to give one a better perspective of how small they actually appear on the landscape. They are between the two patches of sagebrush. Route the Junction Pack took while in view on March 1, 2022. Little Buffalo Creek is the treed drainage at the top right of the picture where the arrows stop, which is where I lost them. Junction wolves testing a group of 26 bison. They quickly realized that the tightly grouped herd was not vulnerable to a predation attempt.



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Great image of the Junctions giving up on the bison and walking away uphill. All 13 are in this frame. They were probably still full and no doubt the bison were too healthy to attempt to kill.

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The Junctions moved up hill to the north for a few minutes after departing the bison and were at about mid-slope of Hellroaring Mountain. They then continued traveling east at a decent clip toward Little Buffalo Creek, passing by 3 big bull elk and 4 additional wapitis after them. Just as the canines went around the trees at the edge of Little Buffalo Creek, we drove east to Petrified Lot to try and watch them from a better angle. We were looking north from that new vantage point but didn't have any luck finding them.

I did hear and then see 3 coyotes at Elk Creek, however. They were right where we saw the Rescue Creek Pack a few days ago in the steep, mostly forested ravine west of the park road and our observation spot. They didn't seem to want to go into the gully where the carcass was, out of our view. I was surprised to see them there as I assumed that carcass, whatever it was, was consumed when the wolves left the area a few days previously. Two coyotes sat on a ridge looking downhill, then a third appeared below them halfway down the slope, occasionally moving a few ravens in the likely carcass area. There was a bald eagle perched in a dead tree just left (south) of the coyotes, making for a great final sighting before leaving the parking lot to head back to Gardiner.

Losing time, I took one last look at the hibernating black bear at 8:38 AM, and then we drove back to Gardiner to pack and collect our belongings. There were more elk and a few pronghorns just before the North Entrance gate as we left the park. 'What another great trip, and a treat to be in Yellowstone during her 150th birthday', I thought!

We left the cabin with the car packed at 10:06 AM, and then headed to Bozeman where we met with Bob Crabtree, Melissa Todd, and a few interns for over an hour at <u>YERC</u>'s (Yellowstone Ecological Research Center) office. They were amazed with the images I had obtained, especially the videos of the Junctions chasing the young bison down Hellroaring slope. I downloaded the best ~500 Megabytes of files to one of their computers so they could use the clips in their media relations. We then drove the CRV to the airport, arriving there at 1:28 PM Mountain Time. Our flight left at 2:55 PM and arrived back to Logan Airport in Boston at midnight Eastern time.

It was another fantastic, productive, and epic trip. I wouldn't have it any other way. I hope you enjoyed the book!

Three bull elk way out on Hellroaring slope. This view, cropped from my camera when zoomed in at 83 X, was about 2.5 miles away.

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This is a good perspective photo with the 26 bison (bottom left oval) the wolves (circle just above the bison) encountered and the 3 bull elk in the upper right of the picture. Note that these animals were not visible with the naked eye and required binoculars to distinguish them and spotting scopes for a good view. Zoomed out perspective from Petrified Lot. The bear den is in that gully by the low trees. Notice the signs prohibiting people from disturbing the area.



Two coyotes overlooking the Rescue Creek wolf pack's old carcass from 2-3 days before.

This bald eagle was in a tree over the carcass where the coyotes were observed at Elk Creek. The Rescue Creek Pack was there 2-3 days before this sighting but the presence of the scavengers signaled there was food remaining, even though we couldn't see the carcass from any location. The coyotes were alertly looking below them.

Then a third coyote showed up (bottom), presumably from the carcass area.



Our last day in the park and final view of the hibernating black bear sow. Reports throughout the week was that the 2 cubs occasionally came out to the mouth of the den and were visible on warm afternoons when the sun hit the area. We never stayed long enough to see them.



Left: Perspective of the black bear den under the tree with a fresh coating of snow.

Below: The sow was visible on our last day in the park. Thankfully the clouds provided a clearer view of the chamber.



Gardner River next to the park road near North Entrance station. I frequently think of this view when I am not in the park.



Notice that the spelling of the Gardner River is different than the nearby town of Gardiner.

Perspective of area where pronghorn and elk were (see middle right of the picture).

Elk and pronghorn from near the Gardiner entrance booth.



All ungulates during this time of year are desperately trying to obtain as much snow-free grass as they can to put some calories in their bodies.



Postscript

I finished writing and making this book in early May 2022, then completed the final editing during late June. The wolves and wildlife watchers continued to do their thing while this document was in production. Laurie Lyman and her colleagues <u>reported</u> that the Junction Wolf Pack successfully denned in April at their traditional site north of Slough Creek and in view from the park road. In addition, subordinate females 907F and 1276F had their pups south of the Slough Creek Campground Road, also in view for wolf watchers. This unprecedented opportunity for people to observe wild wolves raising offspring has become a regular occurrence in Yellowstone, particular in that area of the park. We were all so grateful for this given what humans had done to 8 members of their family just a few months before. We thought they might be too skittish to den near people, even from 1.5 miles away and across a river. If only humans could be as adaptable and forgiving as wild creatures are.

The big event for the pack was in late May when the 'New Mother', a 2-3 year old black wolf and likely mother of some of the offspring at the traditional den, moved most of the pups to the south den. She was observed multiple times crossing the Lamar River Bridge with one wolf per trip in her mouth. While speculative, most veteran wolf watchers thought that this behavior was a strategy to get away from the alpha female, an uncollared gray-faced black wolf, who regularly disciplined the other adult females by aggressively pinning them to the ground. Both den sites originally had around 10 puppies each, making for a total of about 20 juveniles for the Junction Pack. In early June, the 'southern den females' moved all of the youngsters up and over the 'Southern Divide' and eastward into Lamar Valley at the western edge of Jasper Bench. Two offspring of different ages (i.e., a big and small one) remained at the northern den with the alpha female, but shortly after the move only the larger one was observed with her. Most of the 14 adults in the clan spent the majority of their time at the new den area in Lamar. Around 10-12 juveniles were observed there with numbers varying seemingly each day. The viewing wasn't as good from that angle and it was difficult for wolf watchers to tell where the rest of the young were since there should have theoretically been in the high teens at that site, assuming that the adults kept them together.

Less was known about the other wolves in northern Yellowstone. The 8-Mile and Rescue Creek Packs localized and likely had pups too, but I was not aware of any official news on these groups by the time this book went into production. If you find the saga of these wolves fascinating, I highly recommend you subscribe to <u>Yellowstone Reports</u> where you will receive daily updates of wolves and other wildlife.

But the colossal incident of the summer, and possibly since the park's creation 150 years ago, occurred in mid-June when record floods devastated the park, especially the Northern Range where all of the observations in this book took place. Numerous stretches of the park's road system washed away and it took significant time to repair the area. It was predicted to be months before the northern part of the park would re-open. Most national press outlets picked up the story, including the <u>New York Times</u> (detailed story), <u>CNN</u>, <u>AP News</u>, and <u>Newsweek</u>. Sadly, <u>tourism</u>, including wolf watching, would be greatly affected. Yellowstone officials worked diligently and opened the southern part of the park on the day I finished this book, June 22, 2022. It was pretty remarkable that it <u>took just over a week to repair those roads</u> (also <u>see this story</u>) in the southern half of the park. The hardest hit areas, though, were between Gardiner and Mammoth and Silver Gate to Lamar Valley. Wolf watching and other activities on the Northern Range was immediately halted. Those places are where my friends and colleagues from Yellowstone live, and the closed sections will greatly affect their access to the park and their ability to watch the Junction wolves.

To complete my <u>Yellowstone Book Series</u>, I was hoping to take a trip to the park in Fall 2022. This timeframe would enable me to complete the major seasons and events for wolves and most wildlife. Unfortunately, the flooding events might delay or curtail this trip. It is a good time to visit as tourist numbers have decreased dramatically, the weather is beautiful, and the 5-6 month old wolf pups start traveling nomadically with their families. Whole pack counts can be obtained between then and early spring when they den again in April. After wolves have their new litters it becomes much more difficult to keep track of them, as they travel in smaller groups regularly going back and forth to their homesites. I look forward to sharing future expeditions with you, and to updating the reader on park happenings from that period, in due time.

Happy Howls, Jon Way