Best Little GUIDE/BOOK

YELLOWSTONE



This guide book is for you, the Yellowstone traveler. Its purpose is to assist you in making good use of your limited time in Yellowstone. At 2,200,000 acres, there are a lot of sites and features that will be vying for your time. I have spent parts of the last 25 years wandering in Yellowstone and what follows are my favorite hikes, fishing spots and sites, the ones I go back to over and over again. Yellowstone Park is often referred to as America's best idea, and my hope is that this guide will help you find the Best of Yellowstone for you.

Happy wandering,

Honry

ALL WHO WANDER Out not lost



THE BEST OF YELLOWSTONE

Introduction

THIS WAS THE EASIEST AND THE HARDEST section to write — easiest for what to include and hardest for what not to include. If you missed these things, I would say that you missed something special in Yellowstone. That said, everything in Yellowstone is special. So you see my dilemma. Still this is a good start on the "Best" list.

Boiling River (more like a creek) is a hot spring that flows into the Gardner River. Where the two come together, bathers stack rock walls in the Gardner River to facilitate proper mixing of the hot and cold water. During each spring snow melt, runoff from the Gardner River washes many of the stacked walls away. During the runoff (which lasts about a month), no swimming is allowed at Boiling River due to high water and the danger of drowning. Usually, during the first week of July, the Gardner's waters recede enough to allow dipping. Slowly, as the season progresses, the bathing pools become more formalized as rock walls are rebuilt or become more visible as the water reaches its normal level. The water from the hot spring varies in temperature anywhere from scalding to "warm to the touch." Some days scalding, some days warm to the touch. So be careful getting into the mixing pools. The Gardner River always seems cold except on the warmest summer days. Never get into the Boiling River itself; it is against park rules. Please do not harm the plants and bacteria mats that grow and form around the hot spring or swimming area. Never take soap into the hot springs, like I did my first time in the spring. I found a note on my car upon returning to the parking lot, educating me as to proper hot spring dipping etiquette. It is a real treat to see a mother elk and her young calf cross the Gardner while you are soaking in water that is as relaxing as it gets. Read the warnings posted at the trail head that tell you about the risks associated with swimming in Boiling River. Do not bring soap, dogs or glass containers. Do bring something to swim in and a towel, no nakedness allowed. Park at one of the parking lots near the Wyoming/Montana state line below Mammoth and walk about a half mile upstream. The trail is handicap accessible. There are two main areas to dip in; one area only requires the bather to go down two rock steps leading into the mixing pool. The other area is not as easy to access but is well worth the effort. The "best" tip I can give you is to go early in the morning. No crowds!



Grand Prismatic is the largest geothermal feature in the park. It is arguably the most beautiful geothermal feature known in the universe. Trust me! Grand Prismatic is part of the Mid-Way Geyser Basin. Most people will park in the Mid-Way Geyser Basin parking lot and look at Grand Prismatic from ground level. And this was the "best" view, except to birds and people in airplanes, until the 1988 fires. The fires burned a heavily wooded hillside and opened up a view shed not previously available. To find this hillside, take the Fairy Falls trailhead ¾ mile to the south of the Midway Geyser Basin parking lot. There is a small parking lot at the trailhead right next to the Fire Hole River. Cross a small steel bridge and continue down the path/bike trail for about a half mile. When you see a large amount of steam 100 or so yards to the right of the trail and a few smaller trails going up the hillside to the left, you have reached the spot where you will leave the main trail. You take one of the trails on the left to a bald spot on the hillside about 60 ft up above the main trail. From the main trail to the bald spot, the hike is only about 150 ft. You do not hike to the top of the hill. "Best" tip; Go on a sunny day or partly sunny day. The colors of Grand Prismatic will simply take your breath away.

2 Trout Lake is the locale for one of the great shows put on by animals in Yellowstone. Trout that live in the lake spawn from around June 10 until July 25. Otters feed on the trout. If you can walk up 300 ft in elevation and hike for about three quarters of a mile (one way) then you should go. 'Nuff said. The Trout Lake trailhead is located about 1 mile west of Pebble Creek campground.



- Lamar Valley is the place to watch wolves in Yellowstone. Not the only place, just the "best" place. Get to Lamar Valley around fifteen minutes before light. Look for people and/or cars. There are almost always wolf researchers along the road somewhere between Pebble Creek campground and Tower Junction. This is because there are almost always wolves somewhere along the road. The "best" reason to get there early is that this is when the wolves are most likely to howl. Other good reasons are that it may be easier to find parking places, watch the sun rise and quite possibly see things you never, in your wildest fantasies, imagined seeing. You will not just see wolves but probably also grizzly bears, pronghorn, bison, eagles, osprey and many other animals. You should have a spotting scope and binoculars with you. They can be rented or purchased at the "best" store, Silver Gate General Store, located in the "best" town and state of Silver Gate, Montana.
- Old Faithful Most people who go to Yellowstone will go to see Old Faithful be faithful. Be warned that this is the most crowded place in Yellowstone National Park. Park near the Old Faithful Inn in front of the inn's main entrance or in the parking lots by the store and gas station just to the northeast of Old Faithful Inn. Enter the inn through the main entrance and look for a display board that estimates the next eruption time. Be on the observation deck (located on the deck right above the entrance) fifteen minutes before the next estimated eruption. The fifteen minutes is to

- make sure that you don't miss the eruption and have to wait another eighty minutes for the next one. Also you should be able to get a good seat on the deck. As an added bonus, there is a coffee bar and a "bar" bar next to the observation platform. If time allows, wander around the lodge or the geyser basin. Enjoy!
- From Artist Point, 2.2 miles south of Canyon Village you can view both the Grand Canyon of the Yellowstone and the Lower Falls of the Yellowstone. Try to be here before 2:00 pm; otherwise, the falls will be in shadow and your pictures will usually not be their "best." Be prepared for the sheer beauty that will surround you once you get to Artist Point. An artist friend of mine told me an interesting story that happened to him at Artist Point. My friend, Jim, was painting just to the side of the main trail when a bus load of Asian people started to walk towards him. There were thirty or so people, who one-by-one stopped and kind of hogged their way into Jim's "space" trying to get exactly same view that Jim was painting. To no avail, Jim tried nicely to rearrange the photographers to prevent them from leaning over or in front him, almost pushing him out of the way. After this ordeal, Jim left Artist Point and went to paint elsewhere in the park. Later expressing his frustration to some of his friends, to Jim's surprise, they told him that those thirty people had just given Jim the biggest compliment that could be given to an artist. In their culture, the view from the artist's spot is the "best" view.

Standing here at Artist Point you might want to reflect for a moment that if it weren't for a few courageous United States legislators voting, over the objections of others, for the establishment of and the protection of Yellowstone National Park, you probably would not be standing here.





Animal Introduction

THE MAPS ON THE LAST PAGES OF THE BOOK show the areas in Yellowstone that, year after year, have been my most productive spots for watching and photographing animals. Be aware that you can see almost any of Yellowstone's animals, anywhere in the park, so wherever you are, be on the lookout. Always inquire with the local park rangers/employees or other travelers about current animal viewing possibilities. The most important advice I can give you is to be out early and late in the day. The second most important advice is to look for people looking at Yellowstone's wildlife. If most of the people in a group are all looking in the same direction, they have spotted something of interest. Use good judgment when stopping and parking along Yellowstone's roads. Do not stop on curves, and do not damage vegetation when pulling off the road. Again, drive slowly through the park and always keep a constant lookout.

Yellowstone's animals are wild. People are injured and or killed by many different kinds of animals in the park each year. Please do not be one of them. The Park rules are to keep at least 100 yards from bears and 25 yards from other animals. While in Yellowstone, you will probably see things that you have never imagined. Speaking from experience, under these circumstances, you must be extra careful not to throw "caution to wind." Or as the saying around here goes, "Don't check your brain in at the Gate."

That said, if you are in Yellowstone long enough, you are going to find yourself in a situation with some of Yellowstone's wildlife that you would rather not be in. How you handle yourself will determine, to a great extent, whether you and/or the animal are harmed. Since every situation will be unique, there will be many different ways to handle the particular place and setting in which you find yourself. Try not to get into these positions but, if you find yourself in one, as a general rule, first survey your surroundings and then identify any hazards that will block your escape, i.e., other animals or terrain obstructions. Then slowly back away from the animal. In spring 2010, I was hiking backcountry in Yellowstone (just 1/8 mile off a paved road) and topped a small ridge to find a griz sow and small cub only 150ft in front of me. The sow saw me but did not act aggressively. Instead she was devoting her attention to turning over rocks and watching her one cub. I started to back up, retracing my steps, while keeping my eye on the griz. As I backed down the ridge, she lost sight of me and stood up on her hind legs to find out what I was doing. Thinking I did not want the griz to come looking for me, I took two steps back up to the ridge line so that she could keep me in view and know that I was not a threat to her and her cub. Then I walked slowly away from the bear along the ridge line. She went back to turning over rocks and I moved off to a safe distance. Another time I was near the Mammoth Hotel with some friends. We had just pulled up in their car but decided not to get out because of a love-crazed bull elk that was walking around the area

trying to keep up with his scattered harem of cows. We knew that he was loved-crazed because it was fall mating time. There were many people outside their cars and a few rangers trying to control the situation. Suddenly, the elk turned to a car near him and rammed his horns into the car's radiator. At that point, there was nothing the car could do; its radiator had a large hole in it. The elk had "killed" the car. Next the elk raced towards some of the people who were outside of their cars and trucks. One man did not have time to get to the door of his truck and had to dive into the bed of his pickup as the elk chased him. At this point, the elk walked away and the situation was defused. The next day as I was driving through Mammoth, I saw that same love-crazed elk minus his large antlers. The park rangers had carefully sawn them off. These are just some of the many situations you might find yourself in while in Yellowstone. Each circumstance requires different actions to defuse a perceived or real threat.

If you are serious about seeing grizzly bears, wolves and some of Yellowstone's other wildlife, then you will want to have a spotting scope and binoculars with you. Many of your wildlife viewing opportunities will be 500 yards are more away. This is not necessarily a bad thing when viewing grizzly bears and wolves fighting over who sits at the dinner table first. Having a spotting scope will be the difference between seeing wolf pups roll about and play in front of the den or seeing three fuzzy specks in the far distance doing who knows what. You can rent both at The Silver Gate General Store, which I have owned and operated for 7 years, located conveniently near Yellowstone's Lamar Valley, in Silver Gate, MT. You can also rent a camera for taking pictures through your scope (digiscoping) for once-in-a-lifetime photographs.



Animal Seasons in Yellowstone

THE TIME OF YEAR THAT WILL, TO A LARGE degree, determine the setting and types of animals that you will see when you arrive in Yellowstone.

May and June are baby season. The bull elk and moose have lost last season's antlers and sport nubs of new growth. Mats of winter fur are falling off of most of the adults. Baby bison, baby moose, baby bear, baby elk, baby, babies everywhere. During this time of year most of the animals are concentrated in or near the valleys, waiting for the deep high country snow to melt. This is a great time of year to see wolves and grizzly bears.



July and August is the time of year when many animals head for the high country. Elk and bear are a little less common in the valleys. Remaining herds of bison, at times, fill the valleys from end to end. For much of July, osprey nests will still hold this year's hatchlings. Around the first week of August, bison will go into rut. This is the least talked about animal "cool thing" in the park. Male bison will butt heads with such force that sometimes one bull will go down during a battle never to get up again. The noise the rutting bulls make will seem other worldly or may remind you of your husband or boyfriend. Sad but true.

September and October is a magical time in Yellowstone. The elk start to rut around the first week in

September and continue through much of the month. Fall colors can begin to show up in early September and usually peak around the 20th. Fall is the time of year to photograph elk, moose, bighorn, grizzly and just about every other Yellowstone animal in their prime. As the season progresses, the number of people and cars in the park drop off, allowing for a more intimate time.

November thru April is a great time to watch wolves. The elk tend to stay closer to the valley due to deep snow covering their food source at higher elevations. On many days, you can see wolves dining at their favorite restaurant, appropriately called "elk carcass".

"Best" Animal Viewing Spots

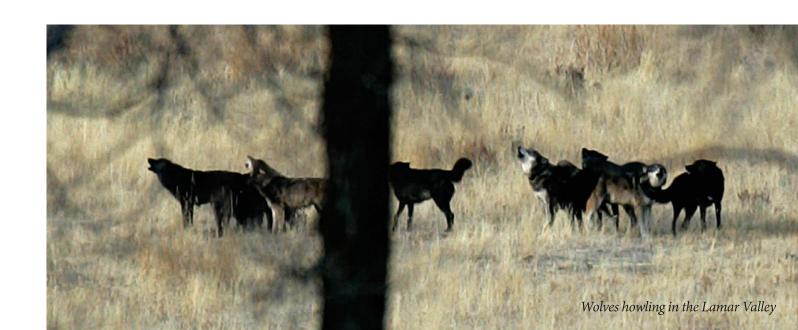
- Barronette Peak is a spectacular place to view mountain goats and bighorn sheep. The cliff face of Barronette Peak is a 3500 foot sheer drop covered with waterfalls, petrified wood, mountain goats and bighorn sheep. If Barronette Peak does not take your breath away, then you are probably either dead or Barronette Peak is covered in clouds. You will need a spotting scope. Did I tell you that you could rent one at the Silver Gate General Store?
- 2 Trout Lake is the place to watch trout spawn. This usually happens between June 10 and July 25. Otters come to fish and magic happens. There is a half mile hike from the trailhead to the lake. See the hiking section for more details.
- **Lamar Valley** is the place to see grizzlies or wolves. Cottonwood trees dot the valley floor as the Lamar River meanders along, while aspen trees hug the base of the forest where the mountain slopes meet the grasslands below. Gray wolves usually start to den in April near the valley. Grizzly moms and their cubs are often seen in the spring and fall and less frequently in the summer. Herds of bison numbering into the hundreds are commonly seen most of the year. During the bison rut, the mating period running from the last week in July to mid August, you will be treated to the strange and timeless guttural groans of the bison bulls. Herds of elk may be seen in the winter, spring and the fall. During spring, summer and fall, pronghorn are usually somewhere to be seen in Lamar Valley. Pronghorn can reach speeds of 60 miles per hour and as far as land mammals are concerned, they are second only to the cheetah which can run over 70 miles per hour. However, pronghorns are the fastest land mammal

- in the world at long distances, maintaining speeds up to 45mph over a distance of five miles. Osprey, bald eagle, bighorn sheep and mule deer are commonly seen in or near the valley. Badger, otter and beaver are always around somewhere and occasionally seen. There is no better place in the lower 48 States to view so many kinds of large animals at one time than in Lamar Valley. I Guarantee!
- 4 Tower Fall area is the place to see osprey. Osprey (also called the "water eagle") like to build their very large nest atop rock pinnacles above the Yellowstone River. Osprey eat exclusively fish. There are a number of pull-offs along the road between the Calcite Springs viewpoint and the Tower Fall general store. These pull-offs offer some of the "best" viewing areas to see nesting osprey in the park. Bighorn sheep are sometimes seen at surprisingly close distances while viewing osprey nests. Be extremely careful in this area because of the steep drop off into the Yellowstone Canyon Narrows. Many people have died being careless around this river gorge. Yes, they fell into the gorge.
- Floating Island Lake is the place to see birds. Sandhill cranes have nested here for at least the last four years (2008-11). They nest on a small island 3 x 5 ft long. As soon as the long-legged hatchlings are big enough to get to the mainland, the parents take the chicks to shore to feed during the day and return to the nest at night. Sandhills eat grasses, tubers, earthworms, small reptiles and amphibians but not fish. I have seen trumpeter swans, great blue herons, ruddy ducks, and yellow-headed blackbirds just to name a few around or on the lake.



The lake apparently got its name from mats of grass and reeds that separate from the bank and sometimes float out in the lake. Floating Island Lake is located about 2.5 miles west of Tower Junction and 1/8 mile to the east of Hellroaring trailhead. It is best to view the lake's wildlife from the small pull-off next to the road. Also, during the spring and early summer, approaching the lake is not allowed in order to give the nesting birds a break from all of us wildlife watchers. Do you ever wonder if the animals are watching back? Happy watching!

- 6 Mammoth is the place for elk. During the fall rut, which starts in early September, the big bull elk will be strutting their stuff, bugling like there is no tomorrow (a dangerous time for visitors). The cow elk seem oblivious to the bulls' antics. But come springtime, all the baby elk testify to the effectiveness of the bulls' attempts to impress the cows.
- Mount Everts is a good place to view bighorn sheep. I park at the first large pull-off after entering the North Entrance of Yellowstone, near Gardiner, Mt. I scan the north end of Mount Everts to the east which overlooks Gardiner. I almost always spot bighorn sheep from this pull-off. You may spot groups of bighorn sheep numbering into the high 20's. You will need a spotting scope to view the sheep from this pull-off. Many times you will find the bighorn sheep along this same road, about the midway point between Gardiner and Mammoth. The sheep come down from the mountain and drink from the cool waters of the Gardner River (spelled differently than the town of Gardiner).
- 8 Madison Junction is one of the great elk viewing places in Yellowstone. You don't want to miss checking out the Madison area for elk. During the fall rut, it is always a possibility that you may see





Osprey bringing a meal to its mate in a nest seen near Tower Falls

two dueling elk battling it out in some of the most beautiful river meadows in Yellowstone. Swans, eagle and osprey also frequent the Madison Junction area.

Hayden Valley is the second "best" place to see a grizzly bear in Yellowstone. There was a photo going around the internet a few years ago that showed 19 grizzly bears around a bison carcass at the same time. If you hike in the Hayden Valley, just as anywhere else in grizzly country, make sure that you stay aware of your surroundings and appreciate the risk associated with hiking here. In approximately 2008, an experienced professional photographer was hiking in Hayden Valley, only a mile or two from the road. He had bear spray and was well aware of the risk. The photographer had been mauled by a grizzly in years past. The main thing that I recall about the mauling is that the photographer said he was unable to draw his bear spray because of the bear's incredible speed. This is a common statement by mauling victims. As in most, but not all, bear maulings, the photographer survived, but with severe injuries. During the summer of 2011 two people were mauled and killed by grizzly bears in or near Hayden Valley. Neither were carrying bear spray.

To lower the odds of a bear attack while in Yellowstone, make noise while hiking, slowing down where visibility is low, like twisty trails, dense forests or over hill tops. This is especially true while hiking in the open sagebrush fields of Hayden Valley because grizzly bears dig for roots and tubers amongst the sagebrush. Pay attention to wind direction and strength. If it's blowing towards you, it can muffle your sounds and lessen the bear's ability to smell you. Stay aware of your surroundings. Hike in groups of 4 or more people. Check for areas that are closed for hiking due to high bear activity. Wolves frequent Hayden and of course bison roam there. Hayden Valley's soil was originally formed or deposited by what used to be an extension of Yellowstone Lake back during the waning days of the last glaciation of Yellowstone. Yellowstone River flows out of Yellowstone Lake and through the Hayden Valley on its way to Yellowstone Falls and Canyon. Be sure to check out Fishing Bridge near the outlet of the Yellowstone River from Yellowstone Lake. There are usually very large fish hanging out under or near Fishing Bridge. No fishing allowed at Fishing Bridge! You will want a spotting scope for watching wildlife in Hayden Valley.



Geothermals Grand Prismatic Spring

WITH THE PRESENCE OF HALF OF THE EARTH'S geothermal features or "remarkable curiosities" as they were sometimes called back around the time of the creation of the park, Yellowstone stands alone as the premier place to view geysers, hot springs, mud pots, and fumaroles. At the time of the park's designation in1872, herds of bison roamed large sections of the United States while grizzly bears had an even greater distribution. How things change. So it was not Yellowstone's animals, but its more than 300 geysers and 10,000 plus thermal features which persuaded America that Yellowstone should be "reserved and withdrawn from settlement, occupancy, or sale under the laws of the United States, and dedicated and set apart as a public park or pleasuring ground for the benefit and enjoyment of the people."

Geothermal, as the name implies, means heat. Geothermal comes from the Greek words "geo" (earth) and "therme" (heat). Most of the earth's heat is produced by the radioactive decay of potassium-40, uranium-238, uranium-235, and thorium-232. This heat helps form the magma that, every 600,000 years or so erupts from the Yellowstone Hot Spot. Yellowstone's geothermals are the park's most recent evidence of this radioactive decay. Canyon Village Educational Visitor Center, Norris Geyser Basin Museum, Park Service brochures located at popular thermal trailheads and *Windows into the Earth: The Geologic Story of Yellowstone and Grand Teton National Park* by Robert B. Smith and Lee J. Siegel, are all good sources for more information about these "remarkable curiosities."

There are many different types of geothermal activity that you can see in Yellowstone. There are, of course, geysers, which periodically erupt boiling hot water and steam to heights over 100 ft in the air. Hot pools that sometimes look bottomless and are filled with neon colors seemingly so unnatural but natural they are. You may see fumaroles, geothermal features where steam is constantly being released; sometimes with such great force that one would expect the fumarole to explode at any moment. Mud pots are areas of clay that have been infiltrated by hot gas and water which percolate up through the clay, turning the clay into a malleable plastic looking material. And hot springs flowing out of the ground large enough to form fair sized creeks.

- 10 Mammoth Hot Springs is, as the name implies, mammoth. The area has many different springs covering at least 1/2 square mile of hilly terrain. Boardwalks have been built so that you can climb the hillside created by the deposition of calcium carbonate precipitated from the waters of the hot springs. It's been said that the best way to get a hot spring to stop flowing is to build a boardwalk to it. And true to this saying, there are a lot of boardwalks covering Mammoth Hot Springs that lead to dried-up springs. As of the writing of this book (2011), I find that the Palette Spring/ Liberty Cap area at the base of the main hillside about 300 yards southwest of the general store and gas station is the most active with hot water. Just imagine that the earth is forming right before your eyes when standing in front of Palette Springs because it actually is! Also imagine that you are looking at a living entity because much of what you are looking at is alive with bacteria and algae called thermopiles. I check out this area and then hop in the car and go to Upper Terrace Drive above Mammoth. This little drive is always worth the short amount of time it takes. Also, while on Upper Terrace Drive, I would check out Canary Springs that flows down the hillside from near the parking lot that overlooks Mammoth.
- Boiling River Hot Springs is a "must do." The springs are the only place, near the road in Yellowstone, where you are allowed to go "hot potting" or swim in. The waters are the perfect place to rest your sore muscles after a long hike and/or just marvel at the wonderment of Yellowstone. Boiling river is closed, due to high water between the approximate dates of June 1 and July 4. See the "Best of Yellowstone" section for more detail.
- Fountain Paint Pots is, well, muddy but worth the half mile round trip along the boardwalks. Get ready to see one of the strangest things you have ever seen a bed of clay that has been infiltrated by a small hot spring. The clay has been turned into a strange malleable plastic-like material. Hot gases periodically escape through the clay forming little mud volcanoes. As you continue along the boardwalk, there are



interesting fumaroles, hot pools and geysers to check out. Fountain Paint Pots is located between Midway and Lower Geyser Basin.

- drand Prismatic Spring This hot pool is the largest and most colorful in the park. Only "seeing is believing" as the old saying goes. The blue, green, orange neon colors must be where Grand Prismatic got its name. A short hike from the road will take you to this magical spot that will let you view into one of the universes most beautiful natural wonders. See the "Best of Yellowstone" section.
- Old Faithful Geyser is the most well-known icon of Yellowstone Park. It is also the most visited place. But don't let that get in your way, just get your "best" attitude on and go brave the crowds. There is an unbelievably large log inn from which to view Old Faithful erupting almost 100 ft into the air. Be sure to walk around the geyser basin that is near the inn and Old Faithful. This is my favorite geyser basin in the park and has many different types of geothermal features. See the "Best of Yellowstone" section.
- 15 West Thumb Geyser Basin is the good place to get a close look into deep, colorful hot spring pools. It is also

the home of Fishing Cone which is a small thermal geyser located in Yellowstone Lake just a few feet from the boardwalk. There is a well-known historic photo of a fisherman lowering a cutthroat trout into Fishing Cone while still hooked to his fishing line. Please don't try this yourself. Walking around the basin only takes about 45 minutes. As the name implies, West Thumb Geyser Basin is located on the shore of the West Thumb of Yellowstone Lake. This area of the lake was formed by a large eruption that occurred approximately 150,000 years ago.

Mud Volcano geothermal area is different from the other areas mentioned so far. The features are somewhat larger and generally muddier in appearance than the others, with the exception of Fountain Paint Pot. The Dragon's Mouth Spring (one of the springs located in this group) is unique in that waves of water surge from a cave located on the hillside. You can easily imagine the early explorers hearing the noise of the escaping gases pulsing from Dragon's Mouth Spring from ¼ mile away and wondering what could possibly be making such a sound. The spring has quieted since the 1870's, but is still quite impressive. Mud Volcano is located at the south end of Hayden Valley.







Geology

YELLOWSTONE'S GEOLOGIC HISTORY IS probably as rich and diverse as anywhere in the world. You can drive by some of the oldest exposed rock in the United States or some of the youngest. Almost anywhere you go in the Yellowstone Park area, there will be some evidence of glaciation around you — large U-shaped valleys (Lamar Valley), smoothly polished rock outcrops (Hellroaring Mountain) and dried lake beds (Hayden and Lamar Valley) left by melting ice dams created by the glaciers themselves. Sometimes the ice dams gave way all at once and released spectacular amounts of water causing gorges to be cut quickly (Small creek bed/gorge near Phantom Lake). At other places, bolder fields were created when rushing waters slowed and dropped their load as river gorges opened up to valleys (where Yankee Jim Canyon and Paradise Valley meet 20 miles north of the Park). Before the glaciers came to Yellowstone, volcanism (volcanoes, lava, and large exploding things) ruled the day. And there are very few places, if any, that you can go in Yellowstone and not find evidence of volcanism. If you know where to go in Yellowstone, you can even find dinosaur eggshells or petrified pine cones lying on the ground. Please leave anything that you find so that other people may experience the same feeling that you had when finding something geologically special. Also it is illegal to take rocks and many other

things from the park. The following map highlights only a few of the many geologic formations and related interesting features. There are two good books that I highly recommend for delving more deeply into the fabulous geology of Yellowstone National Park and surrounding areas. They are *East of Yellowstone* by Robert J. Carson and *Windows into the Earth: The Geologic Story of Yellowstone and Grand Teton National Park* by Robert B. Smith and Lee J. Siegel.

- Heart Mountain Slide is an enormous landslide that happened about 48 million years ago. It is the largest landslide that has been identified on Earth's surface. A chunk of land near Silver Gate (Northeast Entrance) detached and slid as far as 45 miles to the east. Heart Mountain, near Cody, Wyoming, is caped with the remains of the slide. Research indicates that one of the contributing factors for the slide was volcanic gases penetrating between layers of rock.
- Fossil Forest covers much of the northern and eastern parts of Yellowstone Park. Starting about 49 million years ago and continuing until approximately 35 million years ago, large volcanoes (super volcanoes) erupted and formed what is known as the Absaroka Mountains. During this time, the forests

were periodically buried by volcanic ash, debris and mud flows. This cycle created most of the rock layers /mountains visible along the road from Silver Gate (Northeast Entrance) to Tower Junction. If you look at the rock cliff faces in Lamar Valley or Barronette Peak with a spotting scope or binoculars, you may see the light red or brown petrified logs or stumps. At one area, just two miles west of Tower Junction, there is a side road that leads to a petrified redwood tree standing upright, a tree 12 ft high by 4 1/2 ft. in diameter. In other areas of the park, petrified breadfruit trees, a type of tree found in tropical environments, have been found. When you enter the East Gate, you are surrounded by rock layers containing petrified forest. Look for petrified trees visible in some of the road cuts along this road section.

19 Yellowstone Caldera

About ¾ of a mile west of Dunraven Pass on Washburn Mountain is a pull-off with an interpretive panel about the Yellowstone Caldera (mouth of the volcano). From this pull-off, one can look to the south, 45 miles away, and see one end of the volcanic caldera that created or (or destroyed) much of Yellowstone's landscape. At this spot, you are standing on the other side of the caldera. The caldera is 45 by 35 miles wide. The Yellowstone Volcano has erupted 3 times in the last 2 million years with an average eruption cycle of 600,000 years. The last eruption took place around 635,000 years ago. But don't worry. If you are in Yellowstone when the next eruption happens, you will be in what I refer to as the vaporize zone and your death will be quick; the rest of the world will suffer a long, slow death. Ash from the last Yellowstone eruption has been found in states as far away as Louisiana and Arkansas.

Canyon Village Education Visitor Center

This visitor center is a "must see" for those interested in the history of volcanism and glaciation in the Yellowstone area. The center is really useful for newcomers to the study of geology. A good overview of Yellowstone's rock types, the Yellowstone hotspot and glaciation can all be had at the visitors' center with an investment of just 30 minutes of time.

21 Glacier Boulder Turnout

Here one can see evidence of the massive glaciers that once covered all but the highest peaks of Yellowstone. In some areas, the ice reached depths of over 3,000 feet. As glaciers flowed over the terrain, they picked up rocks, boulders and whatever else got in the way. When and wherever the glacier retreated or melted, the non-ice debris would remain. The boulders in the valley around this pull-off are evidence of the glacier's past presence. The technical term for these boulders is "glacier erratics." I call them "glacier poop." The last of Yellowstone's glaciers melted around 14,000 years ago.

22 Lamar Canyon Rock Outcrops

The exposed pink rock at the mouth of the upstream end of the Lamar River Canyon is approximately 3 billion years young. This granite and gneiss rock was originally liquid magma that solidified deep underground. Around 55 million years ago, this rock was pushed up toward the surface and is now part of what is called the Beartooth Uplift. Later glaciers and other erosional forces removed the top layers of rock exposing the pink outcrops for all of us to see.



Hiking

MY GRANDFATHER AND GRANDMOTHER (Thanks Ging and PawPaw) first took me to Yellowstone in 1970 when I was 11 years old. My desire to hike lured me back to Yellowstone years later. Yellowstone's hiking trails, for me, are not just a simple trail, but a path that leads to... well; I guess I am getting off subject. I hope your hiking path leads you to where you want to be.

Not to be redundant, but, this book is not the definitive book on hiking in Yellowstone. So when I go hiking in Yellowstone, I always take *Yellowstone Trails: A Hiking Guide* by Mark C. Marschall. *Yellowstone Trails* comes with an introduction into the do's and don'ts of hiking Yellowstone's backcountry, an excellent section on bears, trail descriptions and also includes a detailed topographical trail map. This book is a must for hikers in Yellowstone. As the saying goes "Don't leave home(the trail head) without it. Reading *Yellowstone Trails* before you get on the trail may just save your life.

Grizzly bear and Raven in Lamar Valley



Here is my short list of do's and don'ts for going back country in Yellowstone. Always carry bear spray and know how and when to use it. To lower the odds of a bear attack while in Yellowstone make noise while hiking, slowing down where visibility is low, like twisty trails, dense forests or over hill tops. This is especially true while hiking in the open sagebrush fields of Yellowstone because grizzly bears dig for roots and tubers amongst the sagebrush. Pay attention to wind direction and strength. If it's blowing towards you, it can muffle your sounds and lessen the bear's ability to smell you. Stay aware of your surroundings. Hike in groups of 4 or more people. Check for areas that are closed for hiking due to high bear activity. Almost always carry a raincoat; err on the side of caution. Have a plan on what to do if you meet a grizzly or horse on the trail. Wear shoes that are comfortable and sturdy enough for your ankles. Depending on the time of year and weather forecast, take extra cloths for warmth, bug repellent, suntan lotion, a hat and sunglasses. I highly recommend wearing hiking pants with zip-off

legs, so you will always have hiking shorts with you. Take a map and water. Be aware of the weather forecast. Just so you know, it can snow just about any day of the summer. On June 14, 2001, just outside the northeast entrance, Silver Gate received 17 inches of snow. Watch out for lightning, especially on ridges or mountain tops. You must get a hiking permit for overnight camping, which, in Yellowstone, is allowed at designated campsites only. No permits are required for day hiking.

Hiking season begins in late April or early May for the lower elevations of the park, mostly the lower Yellowstone River area below Tower all the way to the North entrance. These dates can vary wildly due to snow pack and temperature. Some higher trails and passes may not be accessible until late June or even mid-July. Check with a ranger or someone else who knows the current hiking conditions if you are unsure. Fall is my favorite time to hike, but, and this is a big but, it can snow a lot. (See Shoshone Geyser Basin/ Ferris Creek below.)

A word of caution about hiking Yellowstone. With trail elevations varying between 5,300 and 10,000 plus feet, even the shortest hiking trail can seem grueling. Try to get in shape before coming to Yellowstone. Be aware of group members' health issues, particularly heart problems with the elderly, for these may be compounded by the high elevation.

What follows are my favorite Yellowstone hiking trails. Now, Go Hike!

Short Distance Hikes

(Total hiking time one hour or less)



23 Trout Lake is a popular hiking trail that is approximately 20 minutes one way, with a steep 300 foot gain in elevation. If you hike this trail between June 10 and July 25, there is a good chance that you will see spawning trout. During high snow melt years the trout may not began their spawn till the first week in July. The trail arrives at Trout Lake where a small stream flows out. You want to walk around the lake to where a small stream flows in. This inlet and stream are where the trout spawn. Sometimes otters can be seen feeding on the trout. The trailhead is about a ¼ mile west of Pebble Creek campground.



24 Yellowstone Picnic Area is the trailhead for a wonderful hike that hugs the edge of the lower end of the Grand Canyon of the Yellowstone in a stretch known as the Narrows. There is a 75 ft gain in elevation at the beginning of the trail, but the path is relatively level hiking after this. Steep ledges are found along this trail. Many people have fallen to their death in this area of Yellowstone. Don't be one of them! I have often seen bighorn sheep, red fox and osprey while hiking this trail. Once, while sitting on a ledge near this trail that overlooks the Yellowstone River and observing an osprey nest, I saw a bighorn sheep and its five week old baby walk within a foot of me. With no time to walk away from the sheep and the trail too narrow for me to move out of their way, I just sat perfectly still while the bighorn mother and its little bitty baby walked right by me. Yeah, this was an experience I was lucky to have and will hopefully never forget. There are many great spots to sit, relax and eat a bite while overlooking the river. Watch out for the bighorn! You will hike about a mile and half from the trailhead to where the trail starts to turn east away from the river to join with the Specimen Ridge trail and at this point, I usually turn around and head back.

Medium Distance Hikes

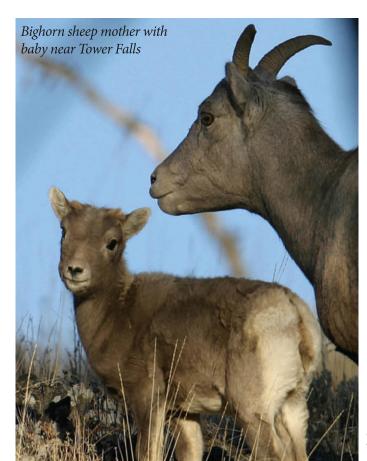
(Total hiking time between 4 and 8 hours)



25 Slough Creek trail leads to some of the "best" fishing in Yellowstone and also to a really beautiful valley. Griz are frequently seen on this trail so be alert. After a 600 foot gain in elevation at the beginning, the trail levels out and continues through the 3 wonderful meadows for which Slough Creek is famous. This is a great day or overnight hike. Try to make it to at least the second meadow. I have woken up in the middle of the night to the northern lights streaking across the sky and then woken in the morning to howling wolves visible in the distance. The trail head is about 500 yards before you reach the Slough Creek campground.

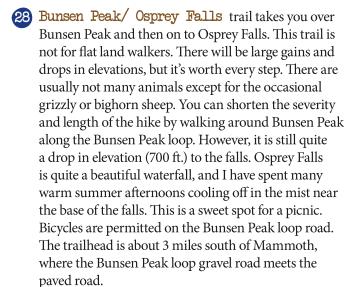


26 Hellroaring Creek trail drops 500 feet during the first mile or so before crossing the Yellowstone on a rather large suspension bridge. Continue from here to a really sweet spot at the confluence of the Yellowstone and Hellroaring Creek. The confluence is a great place to camp out and the fishing can be quite good. Don't count on catching any non-native fish species here, so bring your own food. I once met a kind, conservative, retired judge in Yellowstone who told me that he always brings home a stringer of fish from near here for his wife to cook up. I mentioned to the judge that he could only catch native cutthroat trout at that stretch of the river. He just looked at me with a smile on his face and said, "No evidence, no case!" The trailhead is about 3 miles west of Tower Junction.





Mount Washburn is the hike for those who like big views. The hike has 2 trailheads. One trailhead starts at the Chittenden Road parking lot which is located on the north facing side (Tower Fall side) of Mount Washburn. This route has little cover and the most open view. The other trailhead starts at the parking lots at Dunraven Pass. This route has more cover, maybe a slightly better chance of seeing wildlife and a good view of the Yellowstone caldera. Both trails are a long steady climb, not steep, just seemingly unending. Watch out for summer lightning storms and the building clouds that usually foreshadow them. These storms can ordinarily be avoided by hiking early in the day. Due to Mt. Washburn's high elevation and snow pack, hiking is sometimes not possible until late June or mid-July. Depending on what time of year you plan on hiking, you might want to check with the rangers to inquire about conditions. Mount Washburn has a forest of white bark pine trees which squirrels and grizzlies like to eat. So, be on the lookout for grizzlies. I wouldn't worry too much about the squirrels! Bighorn sheep are frequently seen along the trail. The flower show on Mount Washburn is one of the "best" in the park. Flowers start to bloom in early July, and the show lasts until around mid-August, depending on summer rains. If the skies are clear, look to the south and you should see the Grand Teton Mountains 100 miles in the distance. Enjoy the view!

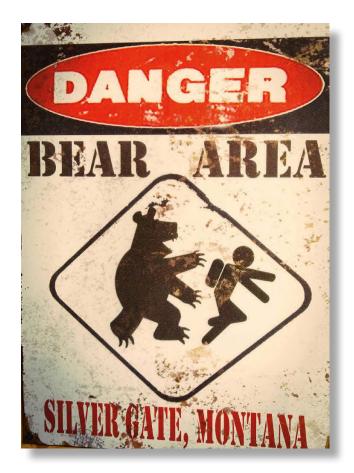


Long Distance Hikes

(Total hiking time one grueling day to multiple days)



Specimen Ridge Trail is another great trail for those of us who like big views. I suggest starting at the west end of the trail and hiking east. Either way the hike is long, so please start this hike early in the morning. After a quick 600 foot gain in elevation, the trail takes on a more modest rise in elevation until dropping 2,200 ft back into Lamar Valley. The total length of the trail is 17 miles. At the east end of the trail, you must



ford the Lamar River. Be sure to check with the park rangers as to the current conditions of the Lamar River before starting out on your hike. There is no camping allowed on Specimen Ridge. You must be able to read a map because the trail is not well marked. This is a long trail so come prepared. Make sure that you have plenty of water because there is not much water available on the mountain. Be on the lookout for thunderstorms and associated lightning. This is one day hike that you always want to take a raincoat with you, no matter what the weather forecast is. Specimen Ridge gets its name from all the petrified wood and minerals found in the rock layers making up the Ridge. I start at the trailhead near the glacier exhibit pull-off (about 1.5 miles east of Tower Junction) and end the hike at the Lamar River foot bridge pull-off (about 1/2 mile east of the confluence of the Lamar and Soda Butte Creek.)



The Shoshone Geyser Basin/ Ferris Creek hike is my favorite hike. This may be because I am a hot springs junky and the fact that soaking in Ferris Pool Hot Springs is very definitely addictive. The hike starts at the Lone Star Geyser trailhead (about 1 ½ miles southeast of Old Faithful) and continues to the Shoshone Geyser Basin where I would spend the first night. This would make the first leg of your hike only about 8.5 miles. This Yellowstone backcountry basin is a magical place where one can wander around without having to stay on boardwalks because there are none. People and animals have died here by falling in the

hot pots. Use extreme caution and good judgment. Once, while wandering in the basin, I came upon a clear hot pool with a fully articulated bison skeleton at the bottom of the pool. It probably slipped on ice during the colder months. Once in the pool, it wouldn't have stood a chance. I suggest reading a book called *Death in Yellowstone* by Lee Whittlesey in order to more fully appreciate just how careful one needs to be while in Yellowstone's wilderness wonderland. On the second day, hike to Ferris Pool Hot Springs. This hot pool, approximately 30 ft in diameter, is located next to Ferris creek. Part of the creek actually runs into the hot springs. In the middle of the pool is what seems to be a super-sized jet for a hot tub. The jet itself is about 18" in diameter and comes out of the bottom of the 30 inch deep pool with enough force to roll and churn the surface with bubbly, very hot water. As with all geothermal areas, great caution should be exercised. Test the water before entering and be aware that the water gets hotter the closer you get to the jet itself. Try to reserve the Three Forks camping site. This will put you closer to Ferris Pool in case you want to take a dip on the morning of your departure. Nakedness is allowed at this hot springs as long as other swimmers do not mind. No soap allowed in the hot springs.

Once, when hiking to Ferris Pool Hot springs, I misread the weather forecast. After a soak in the pool that evening and a great night's sleep, I woke up to find my tent blanketed by fog. I just lay in my warm sleeping bag and waited for the fog to break. Nature called (had to pee) before the fog broke. As I got out of the tent and into the fog, you can imagine my shock and surprise as the fog outside my tent door turned out to be a 3 ft snow drift blocking the exit from my tent. It had snowed 14" at my elevation. Knowing that I had to cross the continental divide on the hike back to the car, that the snow might be deep and the hiking slow going, I quickly broke camp, put on my waterproof rain suit and gaiters (without them, the hike out would have been a real bummer), and headed back to the trailhead. The snow near pass was 28 inches deep, with drifts up to 4 feet. There were no trees at this point and any trace of the trail was completed covered. I slugged my way across this treeless area until I came to the edge of the woods where I started to look for one of the orange trail markers that the Park Service periodically attaches to trees in order to mark the hiking trails of Yellowstone. It took me 20 slightly frustrating minutes to find the orange blaze. But I found it! All of this while carrying a 40 lb. pack. After 9 hours of hiking and 13 of the 15.5 miles of the trail with at least one foot of snow on it, I arrived back at my car just before dark with sore legs and a new story!



31 The Thoroughfare Trail is one of the most remote trails in the lower 48 states. For backcountry beauty, I have been on no other trail that beats it. The valleys are wide and the surrounding mountains are majestic. The fish are large here when you find them. This is definitely a multi-day hike. The Park Service offers a boat ride (it's not free) across the lake that will shorten the hike. Otherwise, the trail head is located 10 miles east of Lake Junction on the East Entrance Road. I suggest a fall time frame for this hike. Four days and nights fighting the blood-sucking mosquitoes would get a little old. There are a lot of animals around this part of the park. You might not see them, but you will probably come across some of the freshest grizzly prints pressed into the trail that you will ever encounter. You might not want to forget your bear spray on this hike. At one place in the Thoroughfare region, in an area called Two Ocean Plateau, a creek actually splits into two streams with one flowing to the Pacific and the other flowing to the Atlantic.

Let me close this section by saying that there are over 1,000 miles of hiking trails in Yellowstone and even though I have been hiking here for over 25 years, I have not been on even 50% of Yellowstone's trails. As the years go by, I hope to find another trail or two to add to my favorite list. Or maybe you will. Some days I have been on a trail and not enjoyed the hike and then other days I have hiked the same trail and had a great time. Just as with life in general, attitude seems to make a big difference when I hike. I really do believe that there is a lot of magic to be found in nature and sharing this magic with you is the "best" reason to write about my favorite Yellowstone hiking trails. Wherever I am, wherever you are, there is magic to be found, if we just have the "best" attitude.





Fishing

LET ME FIRST SAY THAT I AM NOT A HARDCORE fly fisherman. Sometimes I spin fish and other times I fly fish. Every spot I have mentioned is special and I have in no way listed every special fishing spot in Yellowstone. There are many great books on fishing Yellowstone. I would recommend Fishing Yellowstone National Park by Richard Parks. Parks Fly Shop, located in Gardiner, is a good source for fishing supplies and information. The most important thing to know about fishing Yellowstone is that once the spring snow starts to melt, most streams will not be fishable until the melt ends in late June or early July and the muddy waters clear. In some streams, the average number of times a fish is caught exceeds 8 per year. So, pinch all barbs on your fishing lure/flys and cut 2 hooks off any treble hooks you have. Everyone over 11 years of age will need to get a fishing permit. While you are not allowed to keep native fish that you catch, you can keep, and are actually required to kill, some non-native species. While not overly complicated, the fishing regulations are too involved to list in the Best Little Guide Book of Yellowstone, because, if I did, this book would not be little! Park fishing regulations can be had at most park entrances or visitor centers.

"If there was a guarantee that you were going to catch fish, fishing would be called catching and not fishing." Now get fishing!

Fishing Near The Road

- Soda Butte Creek and the Lamar River are part of the same drainage basin. Cutthroats abound from approximately June 20 (after the spring melt slows) until the Yellowstone fishing seasons ends on October 31. To be on one of these rivers when you have a 50 fish outing is unforgettable. My good friend Jake and I have had a few of those days and I hope to have a few more with Jake before... You will most likely only catch cutthroat trout on these rivers. The usual size is around 14 inches and at times 20 inches.
- Gardner River is "best" when the Brown trout run (spawn). The run starts in mid- September and lasts till the end of October, with the most productive fishing during the last two weeks of October. When you hook one of those hookedbeaked 18 or 20 inch browns and they spend more time dancing on top of the water than in the water, you may think that you have died and gone to fishing heaven. But when the teeth of that big brown trout slice into my finger as I am removing the lure, I quickly come back to earth. I have spent many a day fishing the Gardner River making my way upstream from the parking lot at the Montana/

Wyoming state line, until I get to the Boiling River Hot Springs where I soak. See the "Best of Yellowstone" section for a description of Boiling River.

Backcountry Fishing

Slough Creek is as beautiful a fishing spot as there is. You can walk there or hire an outfitter to take you there on horseback. The Cooke City Chamber at www.cookecitychamber.org/ has listings for outfitters. There are 3 meadows along the creek. The "best" fishing is usually in the third meadow which may be the "best" spot in the park for catching large numbers of large fish. See hiking section for trail description and directions.

Agate Creek is a 7 mile hike, with steady gain of 1200 feet in elevation before dropping 1200 feet into the Grand Canyon of the Yellowstone. There should be plenty of 12 to 14" Yellowstone cutthroat trout waiting for you. I fish in the Yellowstone River downstream from Agate Creek not the creek itself. Start at the Specimen Ridge trailhead located near the glacier interpretive pull-off, about a 1.5 mile to the east of Tower Junction. This hike has large gains and drops in elevation. You will definitely need to be in good shape and have a good topo map. There is a designated camping spot near the river and of course a backcountry permit is required if you spend the night. Don't plan on eating any fish here; there are only native cutthroat trout on this section of the river. You will need to get an early start if you are just fishing.

Lewis Channel, the channel that flows between Shoshone Lake and Lewis Lake, is spectacular during the fall run of the brown trout. Many of the fish are over 20 inches. There are very, very large lake trout in Shoshone Lake feeding on the very large browns. Speaking from experience, you will need a heavy weight line to land one of these large lake trout. All I have ever managed to do is hook one of these lake trout, only to have the fish break my line over and over again. The run starts in early October and gets better the later in October that you go. I always fish near the outlet of Shoshone Lake, and I take the Dogshead trailhead off of HWY 89 to reach this fishing spot. There is a nice multi-site camping spot near the outlet. I have heard the call of loons from here in the evening. I hope you hear them too.

The Thoroughfare section of the Yellowstone requires a multi-day commitment and of course comes with no guarantees. But if you find the fish, they will probably be huge. A few years back, while fishing with some friends, I landed a 24" cutthroat. Next to me, in the same fishing hole, I watched my friend Bob hook a large fish 4 times, only to have the fish break his line each time. Having just landed the biggest cutthroat I had ever caught and wanting to wander around, I went exploring up stream. When I returned, Bob informed me that on his sixth attempt, he was successful at landing a 28" cutthroat trout. Bob got his fish and I had one more fishing story to tell. See the hiking section for trail details and directions.









Services and Facilities

Check the park website www.nps.gov/yell or newspaper for seasonal dates of services and facilities.

Accessibility Guide

Entrance stations and visitor centers offer a free guide, *Accessibility in Yellowstone*, describing wheelchair-negotiable facilities.

Emergencies: Call 911

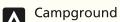


Medical clinic



Parking area (see detail maps at right)







Food service

Picnic area

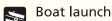
Store

Gas station (some have auto repair)

Recycling Recycling

Self-guiding trail or boardwalk

Horseback riding





Visiting Yellowstone National Park

Road construction is underway on park roadways. Check the park newspaper, visit www.nps.gov/yell, or phone 307-344-2117 for delays or closures.

Speed Limit

45 mph unless otherwise posted. Please drive slowly and cautiously to protect yourself and wildlife.

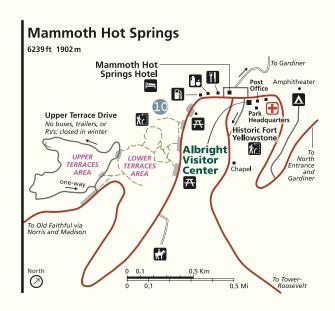
Winter Road Closures

From early November to mid-April most park roads are closed. The exception is the road between Gardiner and Cooke City. It is open all year.

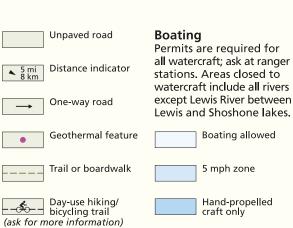
From mid-December to mid-March, oversnow vehicles may be used only on the unplowed, groomed park roads. Call park headquarters for regulations or check the park website, www.nps.gov/yell.

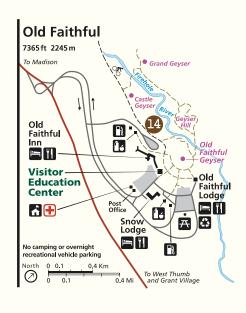


FOR THE BENEFIT AND ENJOYMENT OF THE PEOPLE











Fishing

A Yellowstone National Park fishing permit is required. State permits are not valid in the park and state regulations do not apply.

Backcountry Use

Get trail maps and permits, required for backcountry camping, at most ranger stations. Do not use this map for backcountry hiking. There are almost 1,000 miles of trails.

Firearms

You are responsible for knowing and following federal and state (WY, MT, ID) laws that govern firearms and weapons within the park. Find information at www.nps.gov/yell.

Accessibility

We strive to make facilities, services, and programs accessible to all. Service animals are allowed but require a permit in the backcountry. Find information at visitor centers and on our website.

