GLACIER

MANY GLACIER | POLEBRIDGE | LOGAN PASS

Swiftcurrent Lake and Grinnell Point

US Route 2 - Southern Border of Glacier National Park

SUMMER IN MONTANA

On the morning of August 15th, while traveling south on Route 2 along Flathead National Forrest, a stillness grew. The navigation went dark. Static spread to every radio station. All the cars and people withdrew to their well-traveled roads and corners of comfort. Not a fragment of society remained save the low drone of my engine, drifting through the quiet world like the whisper of a ghost…

When you're all alone, with nothing but your thoughts to keep you company among a land vast and unknown, what remains but your fascination and courage to propel you forward, lest despair in a wilderness without meaning? I sat with this question, quietly pressing on down an endless stretch of road, a bit unsure of what I was getting myself into. A rugged landscape wrought by the forces of man and nature was the answer awaiting me, looming in the mountains, plains, and forests beyond.

Behind their leaders Sitting Bull and Crazy Horse, the combined strength of the Lakota Sioux, Northern Cheyenne, and Arapaho tribes landed a decisive victory in nearby, southeastern Montana territory in the year 1876, at the Battle of Little Bighorn – commonly known as Custer's Last Stand. Settlers allured by wealth and opportunity surged to the region in the early 1860s with the discovery of gold. Before the rush, European missionaries opened new avenues for alliance and trade, but in their pursuit to spread Christianity, sparked territorial disputes and competed for resources with native populations. The first American explorers, Meriwether Lewis and William Clark, charted the area at the dawn of the nineteenth century, making discoveries and overcoming challenges along the way, including strong river currents, extreme heat, and a northern plain winter of near mythic-proportions – all in absence of modern technology.

As noteworthy and impactful as these events were in rapidly shaping the region, they're footnotes compared to the collective history of the early indigenous peoples of North America, who thrived under sophisticated civilizations deeply connected to the natural world. Pre-dating the colonial era by a considerable margin, archeological evidence suggests local tribes such as the Kootenai, Blackfeet, and Crow inhabited these lands for more than 12,000 years. Their traditions and ways of life were as varied as the surrounding landscape; each tribe had a distinct culture and language, contributing to a rich and diverse indigenous heritage. Unfortunately, the U.S. government and colonization brought a precipitous decline to their populations with disease, war, enslavement, and ethnic cleansing. The second half of the twentieth century, however, was a period of profound significance for Native American tribes of Montana, due in part to heightened activism, numerous legal victories, and a wave of cultural revival. The seven federally recognized reservations in Montana now serve as vital hubs of tribal governance, and play a crucial role in preserving their identity and traditions.

The spirits of pioneers and chiefs were calling out, drawing me into their sacred, untamed land, for there was no turning back…

ENTERING GRIZZLY COUNTRY

There is no guarantee of your safety. It's the type of warning that turns the ground beneath your feet to mud and sucks your shoes

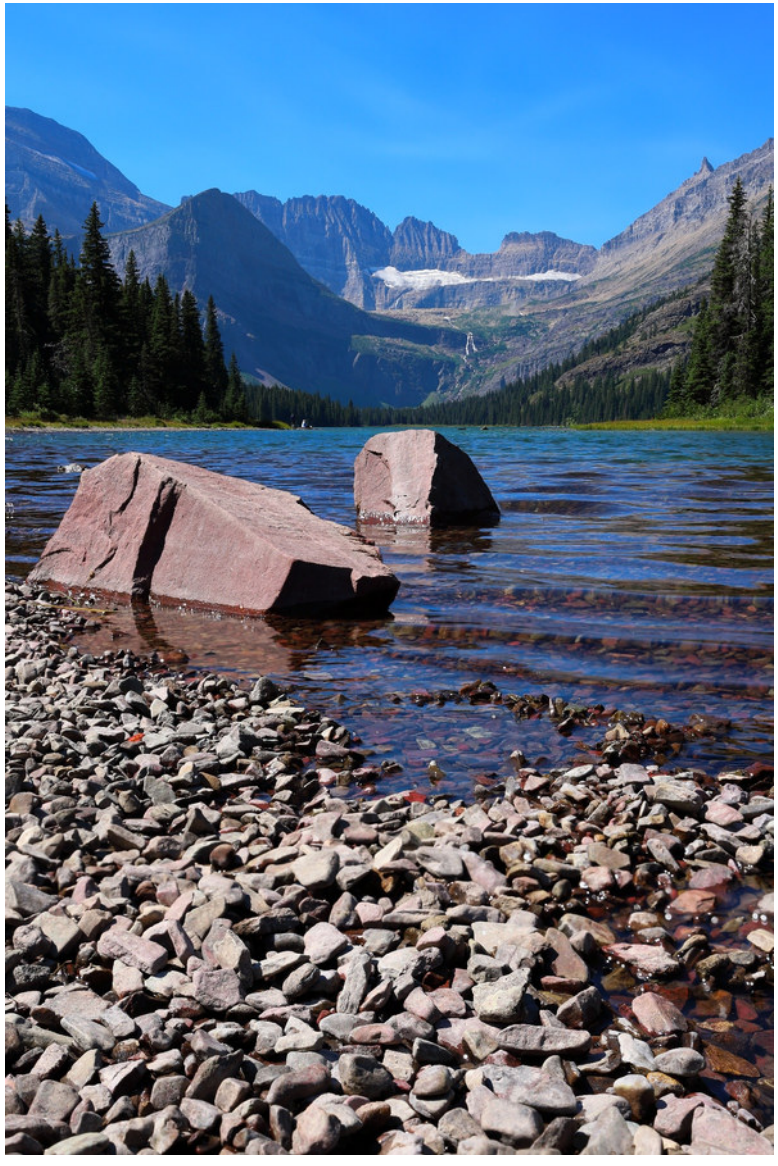
down into its muck, preventing another step. *Bears have injured and killed visitors and may attack without warning and for no apparent reason.* When it comes to pursuing thrills, we all have our reasons. Our justifications. Our motivations. We've pondered and weighed the risks in our heads. But wild animals don't always ask questions. Some are self-proclaimed anarchists. Others…living, breathing embodiments of Camus' absurdism, evidently. *You* are *their* thrill, and they'll pursue all right! But despite some danger, an aura of calmness comes with embracing nature's inviting hand. A sense of genuine belonging arises when the restraints and careful constructions of civilization grow so distant they can't be heard.

Did I mention hiking alone isn't recommended? Printed in bold capital letters – just to make sure the message hit home. So even though I dreamed of embarking on a hike I might impress the grandkids with, it was somewhat unsurprising (you might agree) I considered turning around, perhaps to seek a less foreboding trailhead…as if one existed; Glacier is home to a high concentration of both black and grizzly bears…and moose. It probably didn't matter where I hiked.

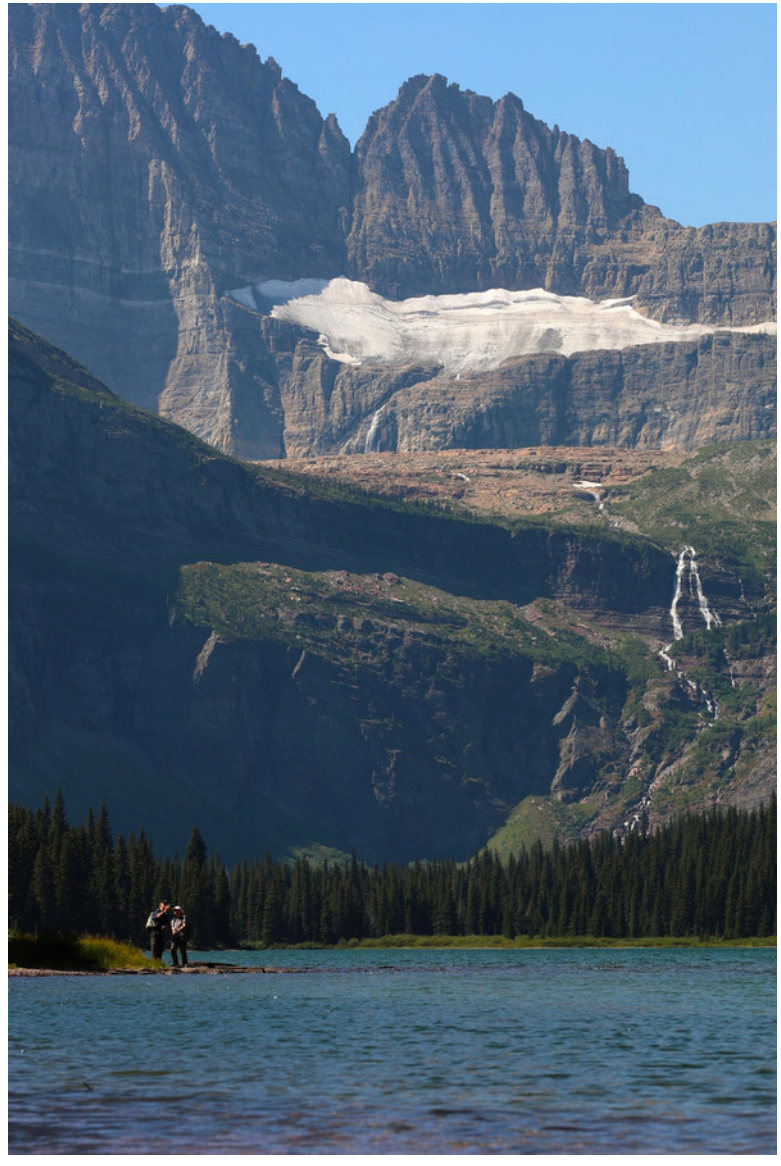
Fortunately, the chance of an encounter is extremely rare, especially while taking some precautions: make enough noise and travel during the day, among others. Plus, there were other hikers on the trail to make me feel more at peace. After all, I knew what I signed up for; since planning for this trip began, Grinnell Glacier

Mount Henkel and Ptarmigan Wall

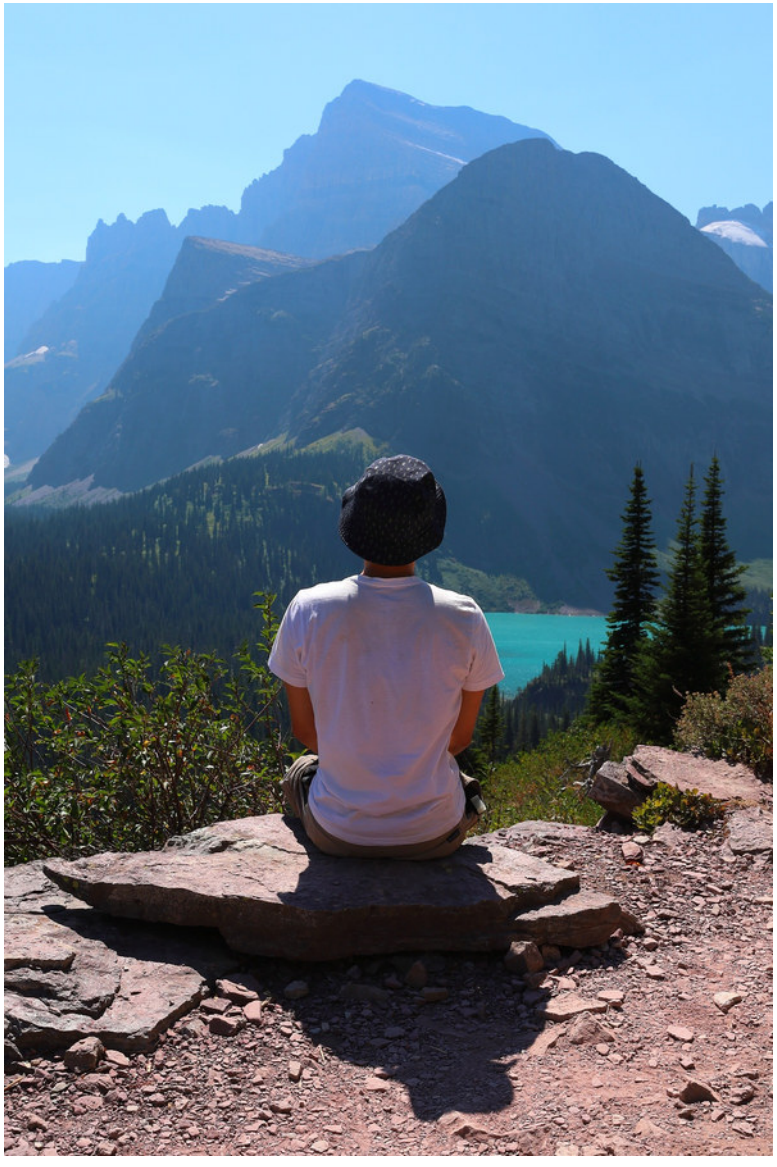
Grinnell Point and Lake Josephine - South Shore



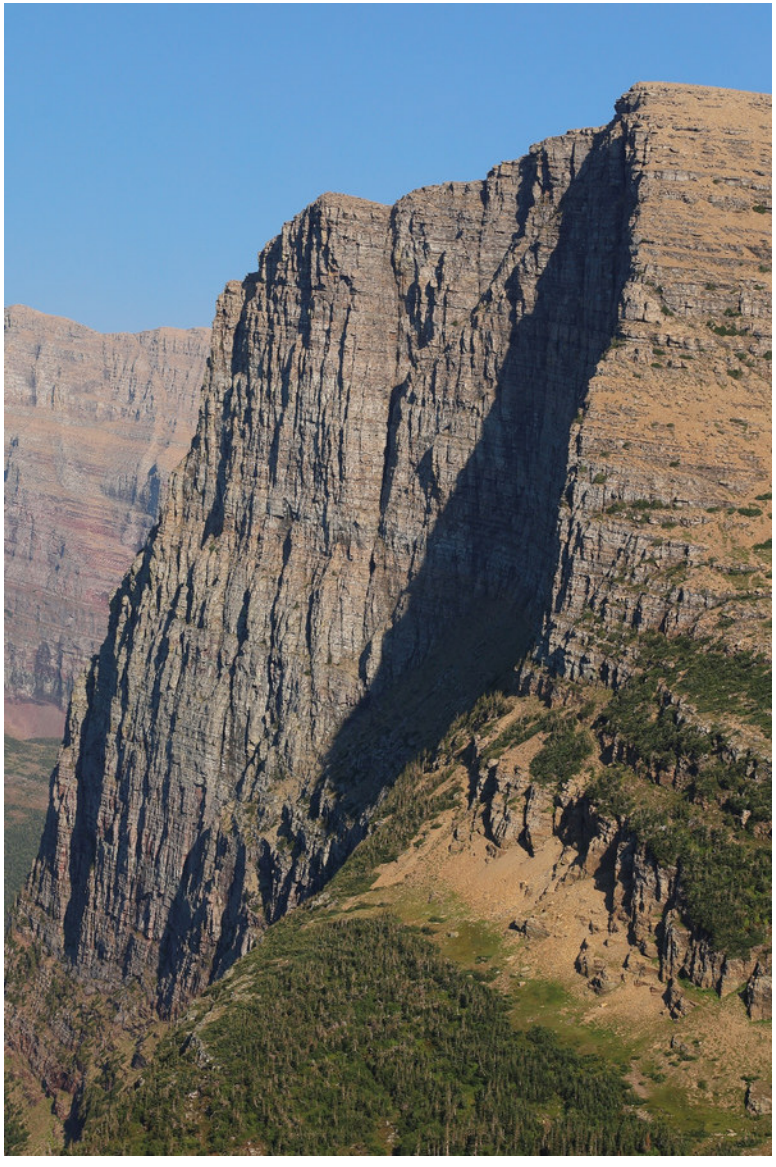
Lake Josephine - South Shore



Grinnell Falls, Grinell Glacier, and The Garden Wall



Looking out at Grinnell Lake, Angel Wing, and Mount Gould



Angel Wing

Trail (in the area named Many Glacier) was the adventure of choice. I drove over 100 miles along US Route 2 and Highway 464 in solitude, fear of the unknown, and anticipation…for this. The thrill was upon me. All that remained was to take the first step. So, after test-firing a cannister of bear spray my cheerful host Dawn loaned me (and how can I forget her sidekick Buddy who dropped his ball off the deck into the plants below in such silly, lovable fashion), I marched on, and I'm thankful I did, because the trek of a lifetime lied ahead.

DISCOVERING LAKE JOSEPHINE

It was early on, with the heat and vegetation at their heaviest, when I came upon a fork. One arrow pointed forward. That leg continued along the lake's massive southern edge. The other arrow led towards the water. I followed the offshoot, eager to discover as many tucked-away spots my legs could carry me off to. It was a quick detour based on the map. That was good news because, even though it was daytime, I had gotten a late start. If I had any chance of making it to the glacier and back before nightfall, I'd need to keep a brisk pace, but as you can tell from the photographs, I got plenty distracted along the way! Soon, the trees cleared and the path opened to the rock-laden shore. Besides a couple fishing in the distance, I found myself alone, laying eyes on a scene unlike any other.

Lake Josephine and the surrounding wilderness sprawled from one edge of vision to another like a poem of fantastical theme, written not in word, but ever shaped by nature's unrelenting might. My thoughts slowed to the rhythm of water creeping over the shore in one gentle wave after another. Forests enveloped the land in outstretched arms of green. Weathered cliffs interlaced with waterfalls beckoned beyond. Perched high among the mountaintops, Grinnell Glacier glistened bright and proud. A bold blue sky framed the scene, surveying the geologic beauty unfolding beneath its all-seeing dome.

The distant rock face swept across adjoining mountain peaks like an amphitheater carved by immortal hands, showcasing a piece of artwork 170 million years in the making. At that age, shifting tectonic plates formed the Rocky Mountains. In the process, a large region of ancient rock known as the Lewis Overthrust was pushed eastward into present-day Glacier National Park, one of the largest and best-preserved regions of Proterozoic rock across the globe. Then, during the last ice age 18,000 years ago, colossal ice sheets gouged the mountains and valleys of the region, creating massive cirques, U-shaped valleys, and outflow lakes radiating like fingers from the mountain bases. Since 12,000 B.C., these glaciers have been in retreat, though some – like Grinnell – still remain.

THE ASCENT BEGINS

When I reached the opposite end of Lake Josephine an hour later, the land began to rise. I asked a family of four on their way down, "How much further until the glacier?" but the trek proved too long and the day had grown too hot to make a push towards the pinnacle after which the trail was named. They weren't exaggerating – the thermometer read 100 degrees Fahrenheit that Tuesday in Montana. I remember staring at the television weather forecast in disbelief the night before. Despite the intense heat, the views were breathtaking and well worth the effort, they

Lake Josephine - West Shore

agreed, even half-way up. Unprepared for what was to come, I started the climb. Although I had a sense of the total length, the elevation gain from start to finish was lost on me while planning…I was drawn to this area by pictures alone – just one look was enough to persuade me to hop on a plane and drive early in the morning for hours to see it in person. Little did I know, I was in-store for a ten mile out-and-back capped by a 2,000 foot climb if I wanted to see the glacier in all of its glory and return to my cabin.

The initial ascent was a sweat-inducing affair under the sun's full strength. With a max grade of 25%, I ran through water quickly. Eventually, after a strenuous start, I rose above the forest and the air gradually cooled off. Even though it slowed me down, I reached for my camera every few minutes…the landscape was simply captivating. I stopped to look at Grinnell Lake marked by its deep turquoise hue, courtesy of silt-sized particles suspended in the water called rock, or glacial, flour, as well as Mount Gould standing at almost 10,000 feet of elevation, shrouded in a cloud of haze. Angel Wing, a summit of sedimentary rock laid down between the earliest part of Earth's history, the Precambrian (4,567 – 538 Ma), and the Jurassic period (201 – 145 Ma), jutted into the air like a defiant beast, corralling the lake in it's dragon-esque embrace, all while Grinnell Falls washed over the hills in a graceful cascade, descending nearly 1,000 feet from top to bottom. I took a few moments to rest and enjoy the mystique of it all. I thought to myself *I'm in an extraordinary place on an extraordinary planet.*

CROSSINGS AND SIGHTINGS

The bad news? I had nearly run out of water and wasn't sure where to refill; the glacier was still far off. Thankfully, nature answered. Around this time, folks from all backgrounds began to congregate together: families, adventurous friend groups, lone hikers making the journey by themselves, and people from different countries and cultures, apparent from their distinct garb and distant tongues. My eyes followed the trail of travelers up the cliff, surprised by where it led. There was a waterfall, and a cliff…but no path. Then the realization came: there was no way around…the only way was *through*.

The runoff from Mount Grinnell's southeast face is a well-deserved reprieve on a hot summer day – but a precarious crossing over a slickened rock surface for anyone hoping to pass. What's more, the traffic of hikers organized itself into two jam-packed lanes (unless you had the patience to wait for a brief clearing). One line went up while another came down, even though the steps could scarcely accommodate two people abreast.

As I waited my turn, I scoped my options. Those undaunted by the slippery steps could veer left to shield themselves from the falls. That option offered an added bonus: a tight-rope climb next to a dizzying drop-off just feet away. Others, perhaps afraid of heights and braced for an outdoor shower, could stick right and hug the cliff face. In either case, the slick surface required careful footing. I chose the wet route. Others on their way down passed by me on the exposed side. There was no possibility of staying dry; the falls sprayed its watery wrath without mercy on all who dared to cross, sparing neither lane from its blessing.

After emerging on the other side dripping wet, I took the opportunity to re-fill my thermostat and camelback. The fun part? Enjoying a second serving of cool, skin-soothing spray. The not-

Portrait in Front of Grinnell Lake and Allen Mountain

Bighorn Sheep

so-fun part? Filling and squeezing my filter again and again, expending more time and energy than expected. The payoff, however, was well worth the effort, and essential to keep going. As I continued on, I glanced back at the bottleneck of travelers. Two girls without backpacks or equipment played in the water barefoot, splashing and drenching themselves in the falls, getting their hair and clothing soaked, laughing all the while. When they had their fun, I watched the pair of friends head back down, realizing they came all this way for playtime under the falls. That made me smile.

Nature answered again, this time in a remarkably different – and memorable – way. Shortly after embracing the waterfall, a murmur rose from those around me. A man pointed out two bighorn sheep, both, rams. One grazed far off on a cliff. I unstrapped my backpack and reached down for my telephoto lens. When I popped back up, I caught the other ram, to my shock, standing much closer, his eyes locking with mine as he approached, showing no signs of stopping. I backed away slowly and stood as steady as I could, giving him space. Yet still he came up to me – within maybe ten yards – donning a soft smile before a set of formidable horns. For a few time-halting moments, the two of us studied each other, and I managed to capture our unforgettable meeting in photo. Then, he turned and leapt down the mountainside, landing surefooted, even with his immense weight crashing down onto the unyielding rock.

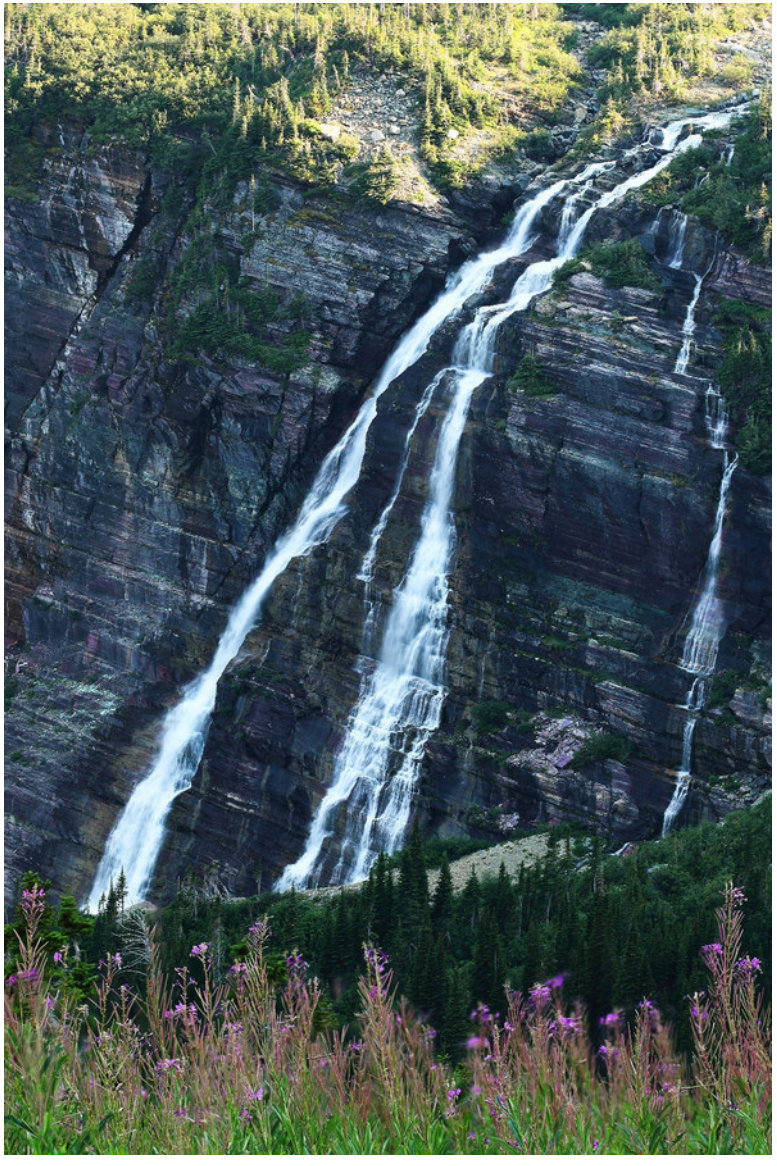
Rocky Mountain bighorn sheep are relatively large compared to other subspecies, with males occasionally exceeding 500 pounds. An amazing adaption shared by all bighorn sheep is the structure of their foot. A soft, spongy, inner layer like a rock-climber's shoe, and a hard, outer layer allow them to grip onto uneven surfaces, run on ledges just two inches wide, and evade predators by escaping to steep, rocky terrain.

Later on, another hiker and I spotted a moose crossing through the center of Grinnell Lake, thanks to its protruding antlers – because the tallest land animal in North America was a mere dot from where we stood. Before the final stretch, I stopped for a break and to replenish my energy with some food and water. That's where I stumbled into a girl I sat next to on our flight from Denver to Kalispell. She assured me it wasn't much further to the glacier and encouraged me to finish strong. As we talked, we watched a chipmunk inch closer, its intentions made clear after climbing into my defenseless backpack, insistent on sharing snacks.

VIEW FROM ABOVE

Heralded by large, rocky staircases, the finale was situated in an expansive landscape above the tree line. It was empowering (and a relief) to make it all this way. I took in the sights. Striations cut into the bedrock from glacial activity stood-out like successive slashes of a titan's sword. Upper Grinnell Lake sat cool and calm amid its soft blue glow. I dipped my head in and drank (through my filter) the lake's chilling, refreshing water. I spent time wandering around the nearby grounds, photographing Salamander Falls and admiring the bittersweet beauty of what remained of the glacier. Grinnell Glacier could very well be the park's most famous, as it was used as the poster child of global warming, with before-and-after photographs frequently shown in literature. Such photographic time-lapse evidence illustrates the accelerated recession of mountain glaciers around the world.

Grinnell Glacier Trail



Fireweed and Grinnell Falls

Bighorn Sheep

Grinnell Falls

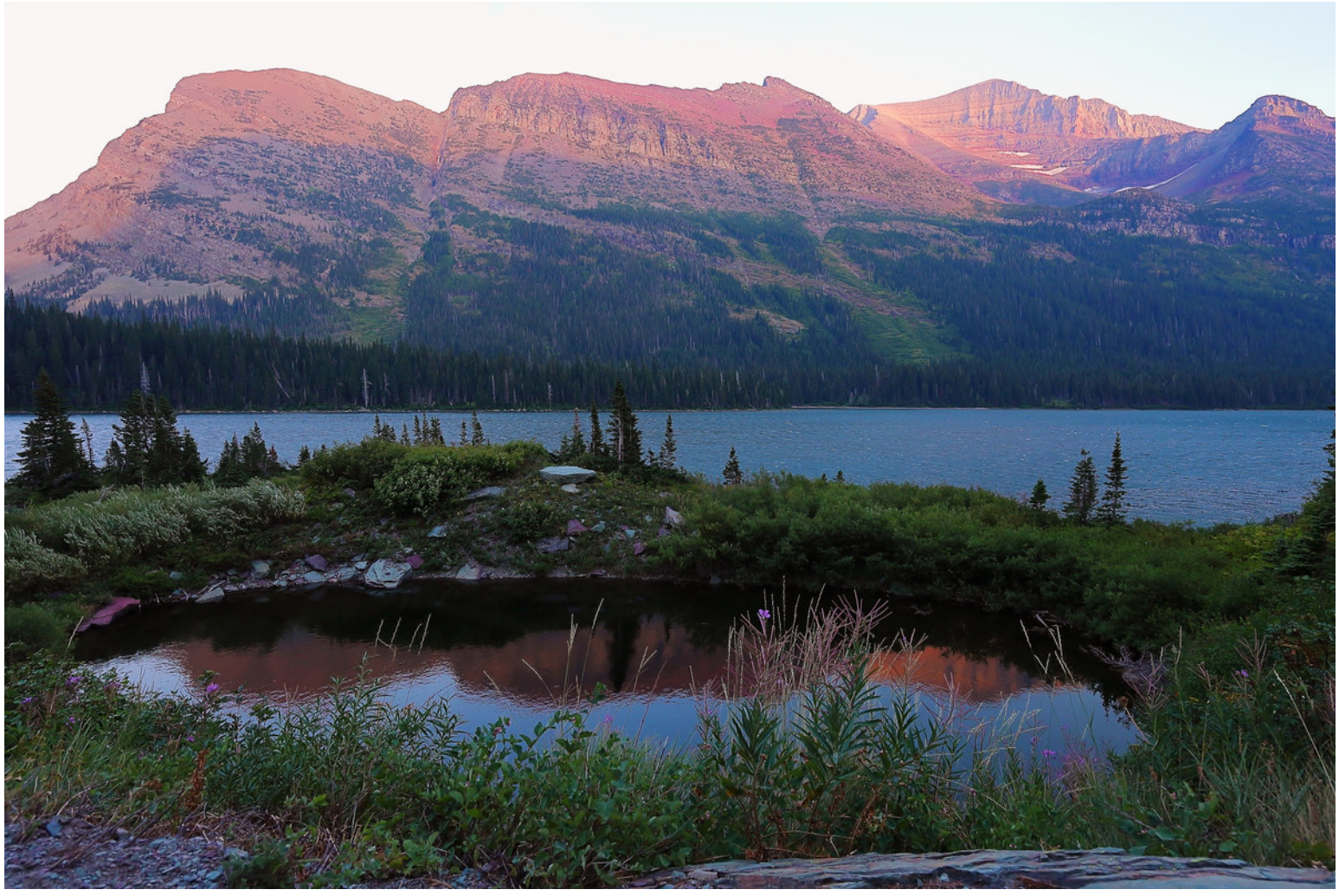
After circling back several times looking for my hat and failing to find it, I prepared for the descent, hoping to spot more wildlife along the way. At the top of my wish list were mountain goats, who enjoy roaming the alpines and are commonly found climbing sheer cliff faces. Sporting all-knowing faces, perhaps they sensed my excitement and retreated long before I had the chance to spot them. Some dreams never do come true, though to be frank, crossing paths with another four-legged creature might have been asking for too much luck in a single day.

Being 6,000 feet above by myself, taking in one of the best views Montana had to offer as the day drew to a close, could only be described as a moment of zen. But I was tired, and a long road down awaited me, not to mention the seemingly endless drive home thereafter. To avoid being caught in the dark without a head lamp, I spent most of the way down on a brisk walk (some might consider a jog), and while passing by some brush…what do you know – a deer and I surprised one other. If only it were a mountain goat…

A few memorable landmarks stuck out to help keep track of progress, like the waterfall and a switchback section near the start of the climb. Thankfully, there was a shorter route along Lake Josephine's north shore I could take back, otherwise it would have been cutting it close with daylight dwindling. It was exactly the type of morale boost to keep my spirits from completely flat-lining (because my energy level already had).

Looking out from Grinnell Glacier Trail

Grinnell Lake and Angel Wing



Lake Josephine - North Shore

WILD BERRY PICKING

As I neared the final stretch heading back towards Swiftcurrent Lake and Many Glacier Hotel, an elderly man rounded the corner munching on a snack. He spoke first. “Mmm, fresh and juicy.”

I asked, “What’s that you’re eating?”

As if the man missed my question altogether, he continued chewing and finished his thought “…just the way I like ‘em.” After a brief pause, he replied, “wild raspberries,” as I noticed the squat-shaped berries growing on nearby bushes. I was tempted to pluck one off and join in, but better judgement deterred me. Perhaps Jon Krakauer’s *Into the Wild* and Bear Grylls’ *Man Vs. Wild* had both left too much of an impact on me. I later learned they were edible thimbleberries, but my subconscious reasoned it was best to avoid eating wild fruits, however sweet they may have tasted…

DUST AND HAZE

Over the next few days, the air grew thick with smoke. Fire activity picked up Wednesday afternoon thanks to record warmth, low humidity, and gusty winds. The critical fire conditions pumped smoke throughout much of the state. Warning messages routinely flashed across my dash screen, and air particulate levels were measured at twice the threshold for being considered unhealthy for all people. Wildfires in both Flathead National Forrest directly south and in Canada directly north further fueled the thickening haze. 2023 was – by some distance – the worst wildfire season in Canada's history. In terms of acres burned, the season far outstripped all previous years.

I took my time waking up. I was sore. Often revered as one of the most stunning hikes in the park, Grinnell Glacier Trail was a spectacle that didn't disappoint…but did leave me hurting.

On day two, I sought a mellow trail in one of the remote portions of the park, The North Fork. This northwest corner of Glacier is much less-visited than the crowded areas to the south and east, and is reachable only by private vehicle on unpaved roads. The entrance lies outside of Polebridge, a tiny community without traditional electricity, garbage collection, wifi, or cell service, and consists only of a scattering of houses, cabins, and small ranches.

Once the road turned to dirt, it was slow goings. At least the radio worked! Most stations played Christian country music…but it was something. After a long drive in the middle of nowhere, a lone building with barn-red siding appeared, its name blazoned in proud, white letters above three plain windows, in a type reminiscent of the American Frontier. This turned out to be the unique and historic Polebridge Mercantile, the heart of the community; a combination store, post office, gas station, and hostel (with no running water). The Northern Lights Saloon stood to its side, a small cabin that serves beer and meals beneath propane lights. For years, Polebridge was powered by noisy diesel generators and a small solar energy system with 24 panels. Not long ago, 87 new solar panels were added, meaning that solar is now responsible for most of the energy in the town.

There are more grizzly bears than permanent residents in this part of the country. It’s one of the most remote places in the continental U.S., making it appealing to folks who want to escape the chaos of city life. Later that night, after driving across the

Portrait on Bowman Lake


Mule Deer

dusty, uneven North Fork roads, I read about the difficulties faced by early settlers: isolation, short growing seasons, and harsh weather.

It was another twenty minutes of slow, bumpy driving to Bowman Lake down a winding dirt road, filled with dips, climbs and tight turns. Flat tires were reportedly common-place. Thankfully, I arrived in one-piece. I walked up to find the lake covered in dense fog. The atmosphere was eerie and unsettling. People enjoyed the calm waters with their dogs, tending to stick near the campgrounds. The lake seemed to go on forever before trailing off in a cloud of hazy mystery. What was out there? I decided to hike along the north shore, just for a few miles, to find out. Almost immediately, a mule deer (named for their large ears resembling those of a mule) crossed the path ahead. As I carefully swapped lenses, she peeked up curiously before walking off into the trees. I was lucky to snap a photograph at just the right moment.

Later, I found a clearing on the water's edge. I sat, rested, and took a few more pictures. Remember when I couldn't find my hat? How could I be wearing it the next day on Bowman Lake Head? Well, after losing it near the glacier, I bought a replacement on my drive over…same size, same style.

The bugs were after me in a hurry. Ready to leave, I crouched down, bent forward, and began lifting my backpack over my shoulders…when a squirrel chose – in that moment – to use it as a runway (running up my back), and *jump* off my head! It took me more than a few thought-provoking minutes to piece together what just happened before I decided to make my way back towards the campground where things seemed to make more sense… I did the tortuous drive again in reverse as the sun sank and grew a deep orange. That drive from Bowman Lake back towards Polebridge showcased a different vantage point, this time offering a view of the valley, now washed in a fiery glow with dusk fast approaching. Back near my cabin, I found a secluded spot by some meadows off Belton Stage (by its junction with Blankenship Road) to watch the sunset, returning the following evening to watch and savor the experience all over again.

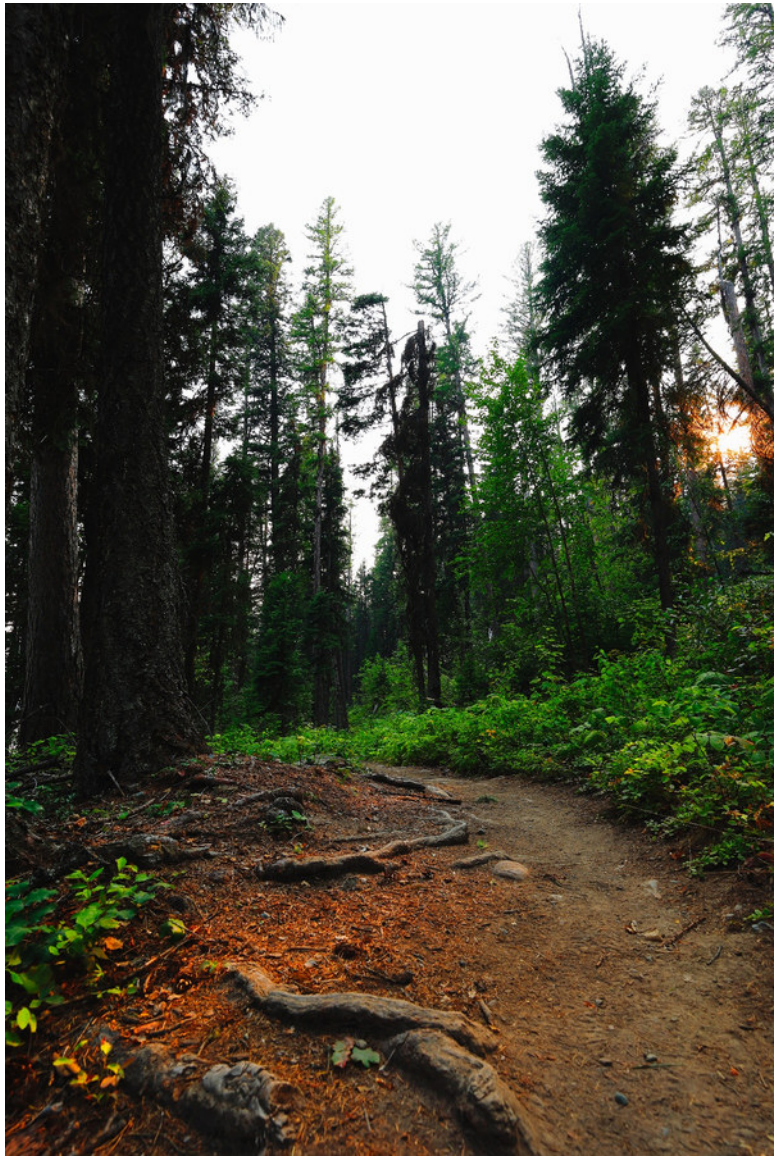
GOING TO THE SUN

On day three, I drove to the sun. Beginning at the West Glacier entrance, I drove along the aptly named Going-to-the-Sun Road towards Logan Pass. The morning smoke filled my nostrils. By Thursday it was as if Glacier stood at the center of a state-wide bonfire nearing its smoldering, smoky end. Even with a thick layer of haze veiling the landscape, ascending into the heavens was exhilarating. The scale was unmistakable. Mountains towered over deep valley ranges just off the side of the road; it was a disorienting juxtaposition, worsened by the amusingly short wall protecting cars (if it could claim such a feat) from the drop-off. After white-knuckling the first few turns, I settled-in and enjoyed the ride at a modest pace. Watching the red transport shuttles zip up and down the narrow road with cabins packed with passengers was a wonder in itself. On occasion, there were turnouts and pull-offs to take in the mountainous view. I stopped at one and found a swath of fireweed – a flower that tends to populate areas previously burned by forest fire (and hence its name) – adorning the edge of the road and carpeting the nearby grounds in patches of pink. Then it was back to the road to climb higher into the sky.

A little while later, I reached the bustling parking lot at Logan Pass, the highest elevation in the park reachable by car at 6,600 feet. I walked the Hidden Lake Trail and circled around Clements Mountain, a striking uplift of sedimentary rock. In-between photographs, I chatted with a friendly park ranger named Dan who was born and raised in Idaho. Once more – this time on a particularly boisterous trail – travelers from around the world came together to enjoy a walk in nature.

Like previous days, I was still on the look-out for mountain goats. Unfortunately, we never did cross paths…though there were other surprises in-store. A group up ahead stopped in their tracks to watch a marmot enjoy a relaxing break atop a boulder. Nicknamed whistlers (or whistle pigs) for their high-pitched warning, marmots are the largest ground squirrels in North America. Trusting my instincts on the return trip (or having good luck), I followed a stream uphill off the main path and came across a fantastic display of Monkey Flower. Typically found next to cold mountain streams in sunny areas, they are (usually) easy to spot with their bright, showy pink petals and five-petal structure.

I spent the next hour zig-zagging up and down Going-to-the-Sun Road in pursuit of photograph opportunities. The best spot turned out to be, ironically, back by Logan Pass near the start of the Highline Trail, where Logan Creek flows down the



Forest Along Bowman Lake Head

Meadows off Belton Stage and Blankenship Road

hillside in segmented waterfalls and Clements Mountain stands tall in the background. Satisfied, I started the long ride down – for real this time. It must have been good timing… Urgent Message: *US-2, Westbound From Glacier RT One/Going to the Sun Hwy to MT-206, serious fire.*

ONE LAST ADVENTURE

I returned to West Glacier. The frequented visitor area became a home-base of sorts over the week, and a convenient spot to grab food, enjoy a drink, or buy supplies (like a bucket hat…or two). The road leading to Apgar Village also offered something that caught my eye from day one – white-water rafting. Having already signed up for a time slot a day in advanced, I applied a fresh coat of sun-screen, grabbed a vest, a helmet, and an oar, then boarded the bus for a ride up the road to our launch point, at the junction of Moccasin Creek and Deerlick Creek.

We set off in the late afternoon. The crew included our rafting guide Jakob – part storyteller, history buff, animal and plant identifier, and comedian – a family of four visiting from Poland, a father and daughter from nearby Missoula, and myself, an aerospace engineer from New York. The Polish father and I manned the front. The haze had burned off by then and the sun was beaming. We spent the next three hours paddling down the Middle Fork of the Flathead River, passing through its crystal blue waters and

Hidden Lake Trail and Clements Mountain

Marmot

savoring the 360-degree view of pine trees and mountains. We were told to keep an eye out for wildlife on the hillsides, as well as westslope cutthroat trout swimming beneath us.

Before entering the canyon rapids, our journey began with a mellow float learning basic maneuvers. Jakob filled this time by describing the river and its storied past, serving us a masterclass in Montana's unforgiving climate and compelling history.

MERIWEATHER LEWIS ACCOUNTS

In 1803, Thomas Jefferson commissioned the Corps of Discovery, a unit of the United States Army whose objectives included studying the plants, animals, and geography of the Louisiana Purchase and Pacific Northwest. The Corps also sought to establish a U.S. claim to the land by documenting an American presence there before other European nations. President Jefferson named Meriweather Lewis as his personal secretary and U.S. Army Captain. Lewis selected William Clark as his partner.

Lewis was exploring solo ahead of the main party by the Sun River (just east of Flathead River) when he narrowly escaped being attacked by a large grizzly bear. Having forgotten to reload his riffle after killing a buffalo for fresh meat, the encounter is now a well-known tale in the *Lewis and Clark Journals*. The bear had approached unnoticed just 20 paces ahead before moving full speed at Lewis. Realizing his error, Lewis took off running into the adjoining Missouri River. He retreated waist-deep into the water and pointed his trusty espontoon (a kind of short spear) at the bear as it hesitated on the river bank. What must have been to Lewis' great surprise and relief, the bear wheeled around and ran.

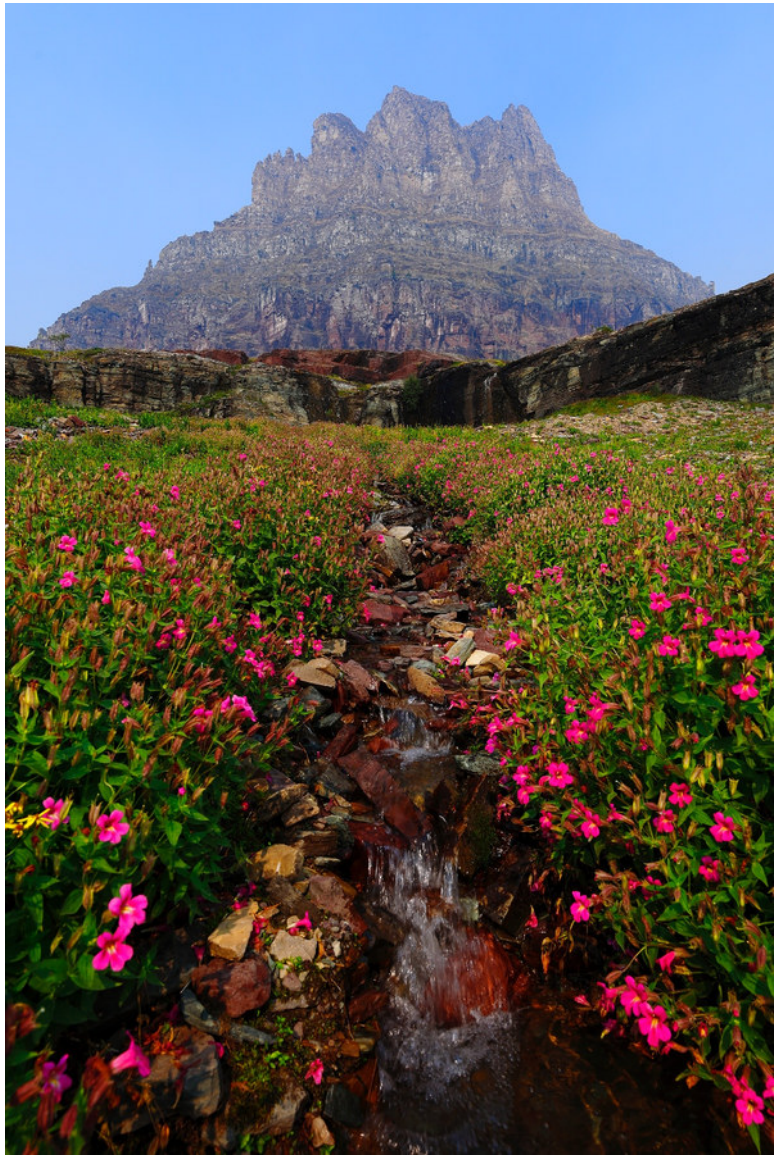
In his journal entry for June 14th 1805, Lewis described the Sun River (which he called Medicine River): "*I passed through the plain nearly in the direction the bear had run to Medicine River, found it a handsome stream, about 200 yards wide with a gentle c*urrent, *apparently deep, its waters clear, and banks which were formed principally of dark brown and blue clay were about the height of those of the Missouri or from 3 to 5 feet."* Then he said, "*Yet they had not the appearance of ever having been overflow, circumstances which I did not expect so immediately in the neighborhood of the mountains, from whence I should have supposed, that sudden and immense torrents would issue at certain seasons of the year; but the reverse is absolutely the case. I am therefore compelled to believe that the snowy mountains yield their waters slowly, being partially affected every day by the influence of the sun only, and never suddenly melted down by hasty showers of rain."* Failing to see the evidence of recent flooding such as piles of debris and obvious erosion of the riverbank, he concluded that this type of flooding did not actually occur on the Sun River.

THE GREAT FLOOD

It's quite remarkable that in 1805, Meriwether Lewis predicted the exact causes of a catastrophic flood that would occur more than 150 years later; The Great Flood of 1964, Montana's worst natural disaster.

That spring, record amounts of snowpack accumulated in the mountains from a series of late storms. Up until June, cooler than average temperatures kept the snowpack in place. An intense multi-day rainstorm was the tipping point; humid air carried from

White-Water Rafting Down the Middle Fork of Flathead River



Monkey Flower and Clements Mountain

Clements Mountain

Logan Creek and Clements Mountain

Swiftcurrent Lake and Grinnell Point

White-Water Rafting Down the Middle Fork of Flathead River

the Gulf of Mexico clashed with frigid air from the north, leading to an inch of rainfall per hour on the unusually heavy snowpack. On June 7th and 8th, 10-14 inches of rain fell over the Continental Divide. The storm's ferocity made the flood that year the most devastating and spectacular on record.

The June 8th Monday afternoon printing of the Great Falls newspaper *The Leader* warned that major flooding was forecasted by the U.S. Weather Bureau for the Sun River. Two dams failed on the Blackfeet Reservation that day. Swift Dam collapsed, sending a wall of water 20 to 40 feet high down Birch Creek at an estimated speed of 25 miles per hour. Two Medicine Dam had also failed.

On that morning, the water became so fierce that the waves charged over the 200-foot-tall Gibson Dam near Augusta Montana. All the towns and crops within 80 miles of the dam flooded. Approximately 128,700 tons of water rushed into the local communities at a rate of 50,000 cubic feet per second.

Hundreds of head of cattle and elk were washed down the river. Thirty-one people drowned, including tourists, Kalispell residents, and people who lived on the Blackfoot Reservation. One-hundred people were reported missing after the disaster, and 1,200 became homeless after hundreds of homes were wiped out. The vast majority of those displaced were Native American. From Essex to Flathead Lake, five bridges, six miles of railroad track, and 20 miles of what is now U.S. Highway 2 were all destroyed. When it was over, a total area of about 12,000 miles was affected. Damage totaled $62 million according to the U.S. Geological Survey and state Department of Natural Resources and Conservation, which adjusted for inflation, would total $474 million in 2014.

As we continued down the river, Jakob pointed out a train car that had washed miles downstream during the flood, still strewn high up on a hill. Nearby, a railroad tunnel multiple stories above us marked just how high the torrent rose, reportedly filling to the brim with mud and water at the time. Rumor has it, more train cars are nestled at the bottom of Flathead River, serving as yet another haunting memorial for anyone willing to lean over the edge of their rafts and gaze into the depths below.

GLACIER ON FIRE

From as early as our launch point, rows of bare tree trunks stuck up from the northern hillside like legions of speared soldiers marching to battle. It was a reminder of yet another troubling year for the gold and silver state, 2003. The fires began in the middle of July with moisture levels in vegetation at record lows. Lightning strikes sparked several fires that eventually grew to huge proportions. But before detailing what made them so threatening, a bit of context is helpful in understanding why fire is sometimes necessary, since low intensity fires benefit wildlands and are vital to the survival of several species.

Fire removes low-growing underbrush, cleans the forest floor of debris, opens it up to sunlight, and nourishes the soil. Reducing the competition for nutrients allows established trees to grow stronger and healthier. Brush removal can help prevent larger, more damaging wildfires from spreading out of control and completely destroying forests. Under optimum conditions, when wildfires do start, they remain on the ground and low in intensity, burning grasses and vegetation along their path, but cause less damage to trees.

Fire clears wildlands of heavy brush, leaving room for new grasses, herbs and regenerated shrubs that provide food and habitat for many wildlife species. When fire removes a thick stand of shrubs, the water supply is increased. With fewer plants absorbing water, streams are fuller, benefiting other types of plants and animals. Fire also kills diseases and insects that prey on trees, providing valuable nutrients that enrich the soil.

Change is important to a healthy forest. Some species of trees and plants are actually fire-dependent. They need fire every 3-25 years in order for life to continue. Some trees have fire-resistant bark and cones that require heat to open and release seeds for regeneration. Chaparral plants, including manzanita, chamise and scrub oak, also require intense heat for seed germination. These plants surprisingly encourage fire by having leaves covered with flammable resins. Without fire, these trees and plants would eventually succumb to old age with no new generations to carry on their legacy. When the heat is turned up too much, it's a different outcome…

By most measures, the fire season of 2003 was historic for Northwest Montana. Six major-fires burned more than 135,000 acres of forest in Glacier National Park that summer, roughly 13% of Glacier's total area including bare rock, water, ice, and snow. The destruction could have been much worse. Lives might have been lost when the fires made sudden runs toward populated areas and Going-to-the-Sun Road.

Sunset off Belton Stage and Blankenship Road

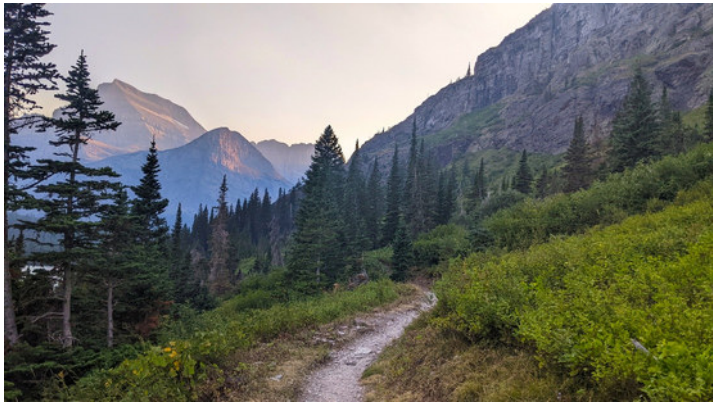
Meadows off Belton Stage and Blankenship Road

Fires came very close to burning Apgar, West Glacier, Park Headquarters, and irreplaceable historic lodges. Such disasters were averted by the hard work of interagency firefighting crews who conducted backfires and other tactical maneuvers with great skill. Many hundreds of firefighters labored for weeks on end in withering heat.

The first fire, the Wedge Canyon Fire, began in Polebridge. A second fire, The Trapper Fire, ignited in the center of the park near The Loop on Going-to-the-Sun Road. A third fire ignited on the Flathead National Forrest side of Flathead River's North Fork. It crossed the river and entered the park, becoming the Robert Fire, and eventually worked its way towards the Apgar and West Glacier communities. Each presented a unique set of challenges, but the most intriguing of the three wildfires was the Robert Fire.

To combat the Robert Fire in West Glacier and Apgar, an incident command team of around 500 firefighters was assembled. Most notably, the team was based out of Alaska, the largest state in America. Alaskan firefighters on their home turf have the ability to "play" with fire. They are able to implement strategies that can't be pulled off in the lower forty-eight, because Alaska has millions of acres with no values at risk from a human development standpoint.

As the fire descended south in late July, the team hatched a plan to burn-off Apgar Mountain. For three



(Top to bottom) Going-to-the-Sun Road, Chipmunk, Grinnell Glacier Trail

(Top to bottom) Hidden Lake Trail, Many Glacier Hotel, Swiftcurrent Lake

days, the forest along Camus Road was soaked by fire crews in preparation for the man-made fire and to prevent it from spreading to populated regions. Retardant bombers were flown through the area to further fireproof the line. Finally, at the end of the third day, a squadron of helicopters equipped with ping-pong balls full of napalm were dispatched…and lit the mountain on fire.

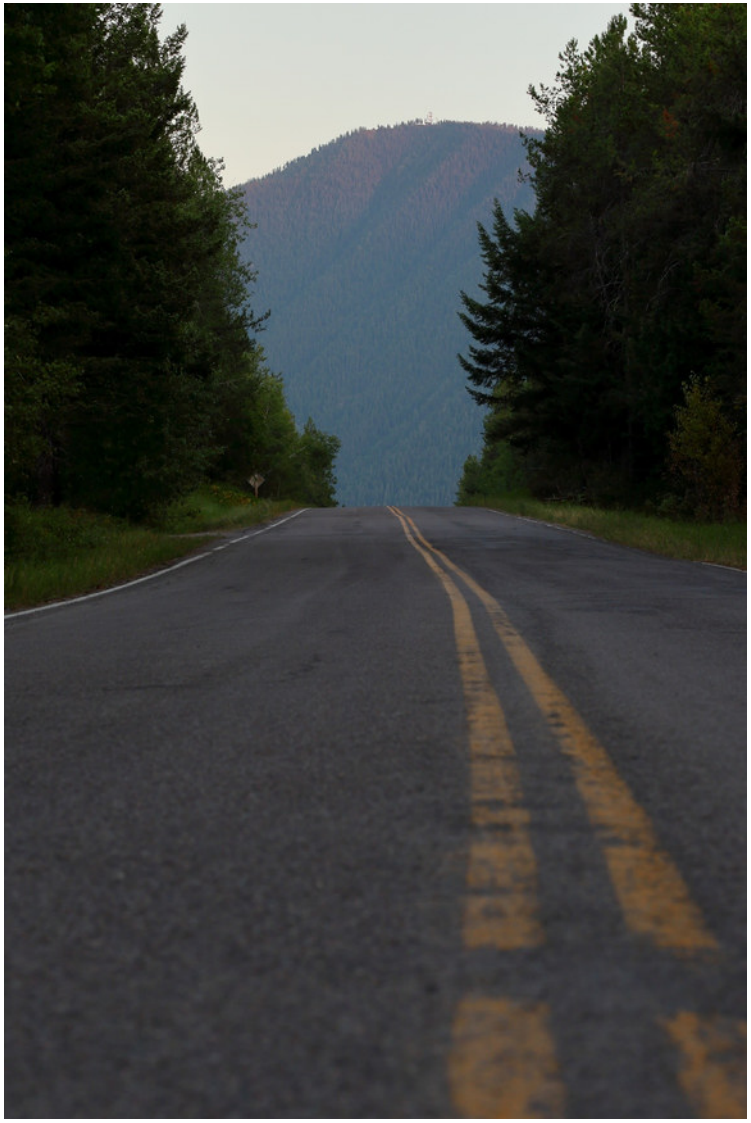
A Missoula reporter described how their efforts were concentrated in a cleft on the side of Apgar. The Robert Fire came roaring southward towards Apgar Village and West Glacier, with a giant pyroculums cloud billowing overhead. Everyone was evacuated. Meanwhile, the man-made fire ran up the valley like a guided missile and *tipped* the big fire over. From a distance, onlookers watched as the pyrocumulus cloud bent over and yielded to the wind channel formed by the back-fire, taking all of the momentum out of the main fire. In the process, 8,000 additional acres of Apgar and northern forest were burned, all done deliberately to move another fire somewhere else. Despite the heavy burden, the burnout operation (which was signed-off by the park's superintendent beforehand) was considered a fantastic success. By all accounts The Robert Fire would have overrun Apgar and West Glacier like the fires at Fort McMurray in Canada, or the Paradise fire in California – it probably would have burned those communities down to the ground. But there aren't a lot of places where you've got 8,000 acres of land to gamble with as a fire-fighting strategy.

The Trapper Fire began on the west side of the Continental Divide. It ran so hard through Swift Current Pass that it started fires on the east side of the divide in Many Glacier, a geographically rare thing for a fire to do. In response, the park evacuated Many Glacier hotel, and after the Roberts Fire regained some life, all of the Lake McDonald valley was evacuated as well.

The best way to summarize the rest of the wildfire season is through select diary entries of the Park Concessionaire. A bellhop at Lake McDonald was sitting on the shore in a lawn chair when a ranger came up behind him from the bushes and urged him to leave. The departure was so chaotic that when he returned to his dorm, he discovered his car keys were gone – someone had driven off with his car believing he'd already evacuated! People weren't even looking to see who had what, they simply grabbed their stuff and fled. Thankfully for the bellhop, a red jammer bus transported him to safety, and his car was returned…surely not without some sort of reasonable explanation.

The west side of Glacier, especially the Lake McDonald area, featured some of the last remnants of the Pacific Northwest rainforest, including great, big Cedar trees. There are very few remaining, particularly after the Spragg Fire in 2017 knocked most of them out. Doghair Lodgepole trees dominate now, having serotinous cones coated in a heavy natural wax. What needs to happen to return the forest to a more balanced state is, ironically, another fire. However, rain levels are becoming too low for trees to return, encouraging a grassland savannah biome to take its place. As to firefighting, it goes to show how different landscapes adopt to different tactics.

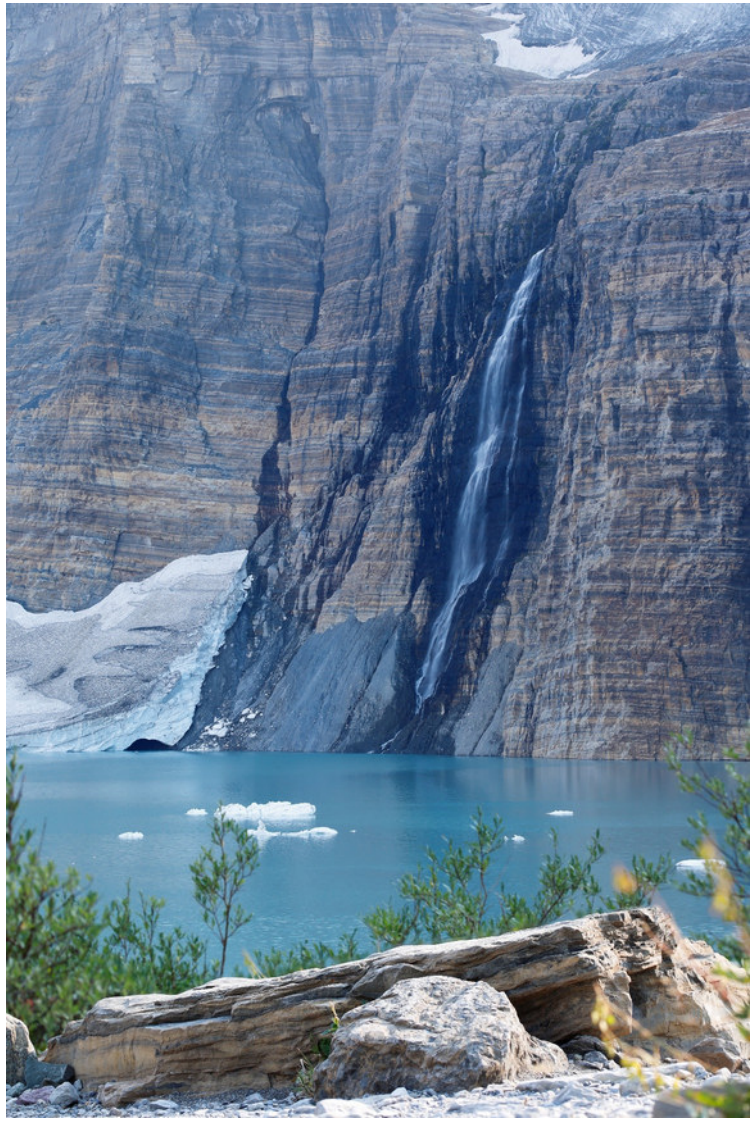
The images of 500-foot flames raging into the night sky and evacuators abandoning half-eaten dinners faded away on September 8th with heavy rains drawing the most destructive fire season in Glacier's history toward a close.



Old US 2 - Columbia Falls Montana

Lake McDonald

Bighorn Sheep



Upper Grinnell Lake and Salamander Falls

As climate change increases the frequency and intensity of wildfires around the world, the damaging effects to the environment are being exacerbated. The United Nations recently assessed the global risk of catastrophic wildfires, concluding that as climate change continues to accelerate, more of the world will burn, having devastating effects on both human health and biodiversity. Wildfires and climate change are inextricably linked. As their effects worsen, a vicious cycle is emerging. The risk of wildfires is rising globally due to climate change, but the wildfires themselves are also contributing to worsening climate change because plants release carbon dioxide into the air as they burn, contributing to the greenhouse effect.

ROCK DODGING LESSON

One final lesson awaited us – a much more, hands-on, type of lesson. We entered a canyon split by rapids and deep, clear water pools. Our speed steadily rose.

Water levels and river flow are directly tied to weather and snowpack melting. During the peak of early June, water levels surge for an adrenaline-pumping ride. As the summer progresses, receding water levels transition to a more technical ride. Due to a scorching heat-wave, the river was at record lows, and our quest to navigate the rapids quickly became a crude demonstration in rock dodging rather than a laughter-filled joyride with the waves.

Massive boulders routinely blocked our path, forcing our crew to paddle hard to clear them. Where the rocks broke above the surface, we steered around, often scrapping our way past. Inevitably, it was only a matter of time before we met our match. Unable to generate enough speed or steer around a particularly stubborn obstacle, the raft ground to a halt, spinning backwards in the process, and lifted halfway into the air, jostling us off our seats. In dire circumstances, of which there were at least two instances, our only option was to brace for impact and careen straight into the rocks, with Jakob's voice carrying high over the swells, ordering, "All in" (for us to lift our oars and lean towards the center). Our raft took most of the damage, bouncing off in a sumo-wrestler-like collision.

After cruising past what park rangers call the "Bone Crusher" pass, smoother waters emerged and carried us towards the river's deepest section. Since the Flathead Rivers are dependent on snowmelt, the water temperature early in the season can be as cold as 45°F. As the summer progresses, the river warms up considerably, so we were encouraged to take a dip. I took full advantage and leapt in, giving my sore muscles a much-needed break. Climbing back aboard without aid required precise technique, and because I lacked training, it took every bit of my remaining strength to pull-off.

After conquering all sections worthy of a title, those being "Tunnel Rapids", "Bone Crusher", "Washboard", "Big Squeeze", "Jaws", "Pin Ball", "Repeater Rapids", "The Notch", and "Pumphouse", we passed under the new bridge at the beginning of Going-to-the-Sun Road, as well as the Belton bridge, aka "The Old Bridge" – which was completely covered with water and destroyed (save its concrete arch) during the 1964 flood. Being fully restored since then, it was filled with folks catching rays and enjoying summer in Montana. Every town and village have 'those spots'; places to see and be seen, the ones nobody ever tells you about but everybody seems to know about, where the locals go in their free time and

(Top to bottom) Lake McDonald, Striations from Glacial Activity, Marmot

(Top to bottom) Grinnell Glacier Trail, Logan Pass Parking Lot, Upper Grinnell Lake

Portrait on Bowman Lake

where people just seem to gather… Well, West Glacier's Belton bridge qualifies as one of 'those spots'.

A minute or so after the final boat of our caravan crossed beneath the arch, a man finalized his footing atop the handrail, and dove *backwards* off the center of the bridge, eliciting a roar from the crowd. His dog on the other hand…didn't appreciate the theatrics. Darting across the span, the four-legged friend raced to the rescue. Leaping down the cliff face before a tail wagging wild with nerves, the committed canine grabbed the eyes and support of onlookers (both those on foot and in life jacket), ultimately reuniting with his perfectly safe and, now, sound owner at the shore as the two embraced in a ceremonious bear-hug among a backdrop of cheers.

…So marked the end of a three-hour, eight river-mile rafting expedition, bringing a solo adventure through western Montana to a close.

A TREETOP FLYER

An elderly lady from Colorado I sat next to and chatted with on the first leg of my flight asked me where I was off to and who was accompanying me. I explained how I was on my way to Glacier National Park to hike and explore on my own because, well…I wanted to, and because I didn't want to wait around until someone was willing to come along…that day might never come. She smiled wide and said "Good for you. Life's too short to wait around. You're doing it for yourself, and that's what matters." It was the sort of encouragement a grandmother might give to her young, ambitious grandson, and it meant everything to hear that.

And I'll never forget what played over the radio as I drove down the long dirt road along Lake McDonald at sunset my first day – no, it wasn't gospel; it was *Treetop Flyer* from Stephen Stills' unaccompanied acoustic album *Stills Alone*. It was a song that stuck with me and set the tone for a solitary excursion into Montana's captivating, raw, and massive landscape.

"I could be a rambler from the seven dials. I don't pay taxes 'cause I never file. I don't do business that don't make me smile. I love my aeroplane 'cause she's got style. I'm a treetop flyer…"

"…Well there's things I am, and there's things I'm not. I am a smuggler and I could get shot. Aint going to die, I ain't goin' to get caught, 'Cause I'm a flyin' fool and my aeroplane is just too hot. I'm a treetop flyer. Born survivor. Usually work alone."

Grinnell Lake, Angel Wing, and Mount Gould


Waterton Park
AKAMINA-KISHINENA PROVINCIAL PARK
NATIONAL PARK
BLOOD INDIAN RESERVE
Belly River
BRITISH COLUMBIA
MONTANA
Customs (closed to border crossing)
Customs (summer only)
CANADA
UNITED STATES
Customs
ALBERTA
MONTANA
BOUNDARY MOUNTAINS
Goat Haunt
Goat Haunt Overlook
Kintla Lake
Belly River
Chief Mountain International Highway
Chief Mountain
Babb
Duck Lake Road
Bowman Lake
GLACIER
Many Glacier Information
Many Glacier
Many Glacier Entrance
FLATHEAD NATIONAL FOREST
Polebridge
Granite Park Chalet
Swiftcurrent Nature Trail
St. Mary
Saint Mary Visitor Center
Saint Mary Entrance
Going-to-the-Sun Road
Saint Mary
BLACKFEET INDIAN RESERVATION
Quartz Creek
NATIONAL PARK
Logging Creek
Logan Pass Visitor Center
Rising Sun
Avalanche Creek
Trail of the Cedars Nature Trail
Hidden Lake Nature Trail
Sun Point Nature Trail
Inside North Fork Road
Outside North Fork Road
Lake McDonald
Cut Bank
Camas Creek Entrance
Forest and Fire Trail
Big Creek Outdoor Education Center
Big Creek U.S. Forest Service
Sprague Creek
Sperry Chalet
Fish Creek
Apgar
Apgar Visitor Center
West Entrance Park Headquarters
Glacier Institute Field Camp
West Glacier Railroad Depot
Going-to-the-Sun Road
LEWIS RANGE
Two Medicine Entrance
Running Eagle Falls Nature Trail
Two Medicine Junction
Two Medicine Campstore
East Glacier Park Railroad Depot
WHITEFISH RANGE
Whitefish Lake State Park
Whitefish
Burlington Northern and Santa Fe Railway
Coram
FLATHEAD NATIONAL FOREST
Hungry Horse U.S. Forest Service
Columbia Falls
Blankenship Bridge
GREAT BEAR WILDERNESS AREA
SWAN RANGE
Glacier Park International Airport
To Kalispell
Essex Railroad Depot
Walton
Goat Lick Overlook
Devil Creek U.S. Forest Service
Summit U.S. Forest Service
LEWIS AND CLARK NATIONAL FOREST
FLATHEAD NATIONAL FOREST
Legend
Unpaved road
Trail
Distance indicator
Continental Divide
Glacier
Warden/Ranger station
Warden/Ranger station (infrequently staffed)
Food service and lodging
Picnic area
Riding stable
Boat tour/rentals
Campground
Primitive campground
Backcountry campground
Self-guiding trail
Wheelchair-accessible trail
Lookout tower