

Canadian Rockies: From rugged hikes to upscale resorts

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CANMORE, Alberta — Canada's stretch of the Rocky Mountains is an outdoor paradise with something for everyone: upscale resorts surrounded by jagged mountains, isolated hikes offering an escape from urban life and crystal-blue water that dares you to feel the chill.

The mountains straddle the border of British Columbia and Alberta, with two of its best-known destinations, Banff National Park and Lake Louise, in Alberta.

My family and I flew into Calgary, rented cars and spent a week exploring the wonders around Banff, setting up base camp in Canmore, about 60 miles west of Calgary. Our accommodations were at the midway point between luxury and roughing it. Cabins at Banff Gate Mountain Resort have a full kitchen and electricity, but no air conditioning. That worked fine on summer nights when temperatures dipped into the 50s F. Late afternoon sun beating in got the cabins toasty. That's not a problem, though, in a place where there's plenty to do besides sit indoors.

Here are some highlights:
Join the throngs at Lake Louise

Banff is the most popular of the area's cluster of national parks — which also includes Jasper, Yoho and Kootenay — and Banff's crown jewel is the glacial-fed Lake Louise. The lake is exquisite, as evidenced by selfies snapped along its shoreline walking paths, capturing smiling families with snow-covered mountains in the background. If being on the water is your preferred way to experience the lake, canoe rentals are available through Fairmont Chateau Lake Louise, a decidedly more chic hotel than where we stayed.



AP Photo/Adam Kealoha Causey

In this July 6 photo, a bridge crosses a stream along the Iceline Trail in Yoho National Park in Canada's stretch of the Rocky Mountains, straddling the border of British Columbia and Alberta. It is an outdoorsman's paradise with scenic mountain hikes and crystal-blue water.



AP Photo/Adam Kealoha Causey

In this July 6 photo, the Yoho River flows through Yoho National Park in Canada's stretch of the Rocky Mountains.



AP Photo/Adam Kealoha Causey

In this July 6 photo, water tumbles 1,246 feet at Takakkaw Falls in Yoho National Park in Canada's stretch of the Rocky Mountains.

If crowds aren't your thing, plan to get to Lake Louise as early as possible.

We didn't venture that way until noon, and parking lots were packed.

Crowds are likely to be bigger than usual this year, because admission to Cana-

da's national parks is free in observance of the nation's 150th birthday.

Hear the roar the falls

For a more rugged experience, we left the masses of Banff behind, bound for Takakkaw Falls in Yoho. Heading west into British Columbia (and the Pacific time zone) you pick up an hour, so that may have helped us beat the crowd a bit, too.

Even before we got out of the parking lot — about a half-mile from the falls — we could hear their mighty roar. Tumbling from 1,246 feet, the 60-degree F air took on a chill as mist filled the air.

A refreshing start to the day preceded what eventually became a 12-mile round-trip hike. From Takakkaw we took the Iceline Trail, which included views of the Yoho and Little Yoho rivers and Laughing Falls.

Take in the sights from the Bow River

Not everyone in our crew enjoys a hike, but we do all like the water.

Sections of the Canadian Rockies include whitewater, but we decided to go for a smoother ride with Canmore River Adventures. The six of us joined another family of three on a wide raft paddled by a guide.

At one point we stopped and were told to touch a finger or toe to the water if we dared. I did, but I didn't keep my hand in for long — the guide said the river's temperature was about 40 degrees F and wouldn't get any warmer.

Our one-hour float down the beautiful Bow River included sightings of an elk that had swum to an island to munch on grass and — just before we exited the boat — a bald eagle that dove into the water and came up clasp a fish. It was a fitting end to a spectacular trip.

Seasons

If you can't get there this summer, the weather remains relatively mild into September, when larch and aspen trees turn gold as fall arrives. And there's always winter skiing: The slopes typically open in November.

SCIENCE: 'It's ironic that we've learned most about the sun when its disk is hidden from view'

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Penn is chief scientist for a National Science Foundation-funded movie project nicknamed Citizen CATE. More than 200 volunteers have been trained and given special small telescopes and tripods to observe the sun at 68 locations in the exact same way. The thousands of images from the citizen-scientists will be combined for a movie of the usually hard-to-see sun's edge.

Mike Conley, a Salem, Oregon, stock trader whose back yard is studded with telescopes, jumped at the chance to be part of the science team.

"Who knows? Maybe a great secret will come of this, the mysteries of the sun will be revealed, because we're doing something that's never been done before and we're getting data that's never been seen before," he said. "A big discovery will come and everybody will say, 'Hey, we were part of that!'"

You don't need to have telescopes to help out. You can use the iNaturalist app via the California Academy of Sciences and note the reaction of animals and plants around you. You can go to a zoo, like the Nashville Zoo, where they are asking people to keep track of what the animals are doing. The University of California, Berkeley, is seeking photos and video for its Eclipse Megamovie 2017, hoping to get more than 1,000 volunteers.

Even with all the high-tech, high-flying instruments now available, when it comes to understanding much of the sun's mysteries, nothing beats an eclipse, said Williams College's Pasachoff. That's because the sun is so bright that even satellites and special probes can't gaze straight at the sun just to glimpse the outer crown, or corona. Satellites create artificial eclipses to blot out the sun, but they can't do it as well as the moon, he said.

The corona is what astronomers really focus on during an eclipse. It's the sun's outer atmosphere where space weather originates, where jutting loops of red glowing plasma lash out and where the magnetic field shows fluctuations. The temperature in the outer atmosphere is more than 1 million degrees hotter than it is on the surface of the sun and scientists want to figure out why.

"It's ironic that we've learned most about the sun when its disk is hidden from view," said Fred "Mr. Eclipse" Espenak, a retired NASA astronomer who specialized in eclipses for the space agency.

And they learn other things, too.



AP Photo/Pat Eaton-Robb

In this Aug. 9 photo, an 8-foot balloon carrying a camera rises into the sky during a test launch at the University of Hartford in West Hartford, Conn. A team from the University of Bridgeport and the University of Hartford conducted the test as part of a project that will send cameras into the stratosphere to photograph the solar eclipse Monday.

Helium — the second most abundant element in the universe — wasn't discovered on Earth until its chemical spectrum was spotted during an eclipse in 1868, Espenak said.

But that discovery is eclipsed by what an eclipse did for Albert Einstein and physics.

Einstein was a little known scientist in 1915 when he proposed his general theory of relativity, a milestone in physics that says what we perceive as the force of gravity is actually from the curvature of space and time. It explains the motion of planets, black holes

and the bending of light from distant galaxies.

Einstein couldn't prove it but said one way to do so was to show that light from a distant star bends during an eclipse. During a 1919 eclipse, Arthur Eddington observed the right amount of bending, something that couldn't be done without the moon's shadow eclipsing the sun.

"It marked a complete change in the understanding of the universe," said Mark Littmann of the University of Tennessee, a former planetarium director. "Bang. Right there."

ECLIPSES: Mythologies surrounding total solar eclipses still exist today

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pots and pans.

Perhaps the most creative version of this strand of mythologies comes from certain branches of Hindu culture. In that version, the mortal Rahu is said to have attempted to attain immortality. The sun and moon told the god Visnu of Rahu's transgression. As punishment, Visnu decapitated Rahu.

Ever since, Rahu has sought to exact vengeance on the sun and the moon by pursuing them across the sky to eat them. Once in a while — at the time of an eclipse — Rahu actually catches the sun or the moon. In the case of a solar eclipse, Rahu slowly devours the sun, and it gradually disappears into Rahu's throat — only to reappear from his severed neck.

In other branches of Hindu culture, the "sun eater" took the more traditional form of a dragon. To fight this beast, certain Hindu sects in India immersed themselves up to the neck in water in an act of worship, believing that the adulation would aid the sun in fighting off the dragon.

Other cultures had equally ingenious explanations for — and defenses against — a total solar eclipse. Eskimos thought an eclipse meant that the sun and moon had become temporarily diseased. In response, they'd cover up everything of themselves included — lest they be infected by the "diseased" rays of the eclipsed sun.

For the Ojibwe tribe of the Great Lakes, the onset of total eclipse represented an extinguished sun. To prevent permanent darkness, they proceeded to fire flaming arrows at the

darkened sun in an attempt to rekindle it.

Amidst the plethora of the myths and legends and interpretations of this strange event, there are seeds of understanding about their true nature.

For example, the famed total solar eclipse of May 28, 585 B.C., occurred in the middle of a battle between the Medes and the Lydians in what is now the northeast region of modern-day Turkey. The eclipse actually ended the conflict on the spot, with both sides interpreting the event as a sign of the displeasure from the gods. But based on the writings of the ancient Greek historian Herodotus, it's thought that the great Greek philosopher-mathematician Thales of Miletus had, coincidentally, predicted its occurrence.

Chinese, Alexandrian and Babylonian astronomers were also said to be sophisticated enough to not only understand the true nature of solar eclipses, but also to roughly predict when the "dragon" would come to devour the sun. (As with much knowledge back then, however, astronomical and astrological findings were relayed only to the ruling elites, while myths and legends continued to percolate among the general population.)

Advances in modern astronomy have given us detailed explanations for solar eclipses, to the extent that their time and location can be predicted centuries into the future and reconstructed from centuries ago.

Of course, mythologies surrounding total solar eclipses still exist today. Some conspiracy theorists say this year's eclipse will cause the end of the world — perhaps a testament to the endurance of the superstitious side of the human psyche.