Katmai

Katmai National Park and Preserve
Alaska

National Park Service
U.S. Department of the Interior

Steve Kraseman/DRK

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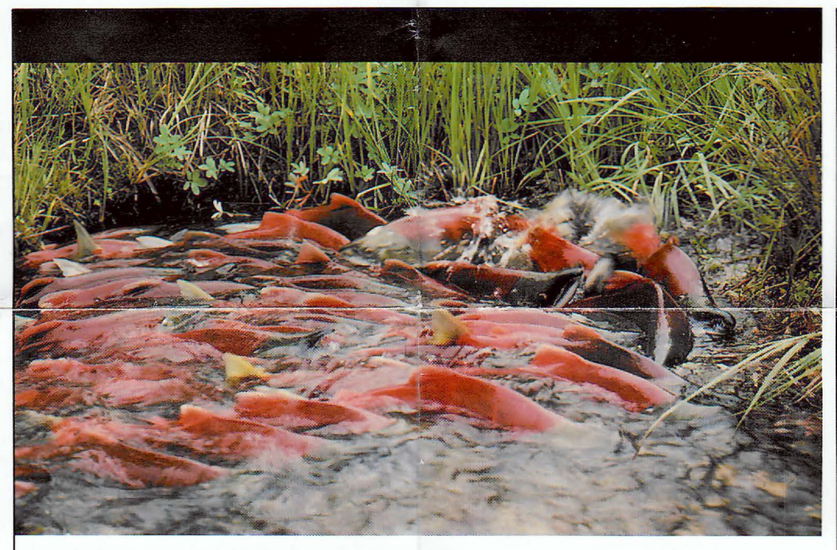
Martin W. Grosnick/Alaska Photo

Tom Bean

Cover photo: Brown bear on shore of Naknek Lake, by Tom Bean

Katmai was declared a national monument in 1918 to preserve the living laboratory of its cataclysmic 1912 volcanic eruption, particularly the Valley of Ten Thousand Smokes. The intervening years have seen most of the surface geothermal features cool. But the protection of brown bears has become an equally compelling charge for Katmai. To protect this magnificent animal and its varied habitat, the boundaries were extended over the years, and in 1980 the area was designated a national park and preserve. Katmai looms so vast that the bulk of it must elude all but a very few persistent visitors. To boat its enormous lakes and their island-studded bays, to float its rushing waterways, to hike the wind-whipped passes of its imposing mountains, or to explore its Shelikof Strait coastline require great effort and logistical planning. This unseen Katmai lies beyond our usual experiences here of fishing from Brooks Camp, walking up to Brooks Falls, and riding the bus out to the Valley of Ten Thousand Smokes. We come to Katmai to sample but an edge of this enormity of raw natural forces, a sampling that itself constitutes a rare and endangered opportunity. Katmai's awe-inspiring natural powers confront us most visibly in its volcanics and its brown bears: in summer North America's largest land predators gather along streams to feast on salmon runs, building weight from this wealth of protein and fat, preparing for the long winter ahead. Alaska's brown bears and grizzlies are now considered one species. People commonly consider grizzlies to be those that live 100 miles and more inland. Browns are bigger than grizzlies thanks to their rich diet of fish. Kodiak brown bears are a different subspecies that is geographically isolated on Kodiak Island in the Gulf of Alaska. Mature male bears in Katmai may weigh up to 900 pounds. Mating occurs from May to mid-July, with the cubs born in dens in mid-winter. Up to four cubs may be born, at a mere pound each. Cubs stay with the mother for two years, during which time she does not reproduce. The interval between litters is usually at least three years. Brown bears dig a new den each year, entering it in November and emerging in April. About half of their lifetimes is spent in their dens. Because each bear is an individual, no one can predict exactly how a given bear will act in a given situation. These awe-inspiring bears symbolize the wildness of Katmai today.



Volcanics

The 15 active volcanoes that line the Shelikof Strait here make Katmai National Park and Preserve one of the world's most active volcanic centers today. These Aleutian Range volcanoes are pipelines into the fiery cauldron that underlies Alaska's southern coast and extends down both Pacific Ocean shores—the so-called Pacific Ring of Fire. This Ring of Fire boasts more than four times more volcanic eruptions above sea level than any other region in historic times.

Nearly 10 percent of these more than 400 eruptions have occurred in Alaska; less than two percent in the rest of North America. The current theory of plate tectonics attributes this phenomenon to the collision of the series of plates that makes up the Earth's crust. The Ring of Fire marks edges where crustal plates bump against each other. Superimposing a map of earthquake activity over a map of active volcanoes creates a massed record of violent earth changes ringing the Pacific Ocean from southern South America around through the Indonesian archipelago.

Major volcanic eruptions have deposited ash throughout the Katmai area at least 10 times during the past 7,000 years. Under the now quiet floor of the expansive Valley of Ten Thousand Smokes, and deep beneath the mountains that rise around it, there is still molten rock present. Most visible as clues to this are the steam plumes that occasionally rise from Mts. Mageik, Martin, and Trident. These steam plumes show that there is real potential for new eruptions to occur. In fact, Mt. Trident has erupted four times in recent decades, its last eruptive episode taking place in 1968.

A volcanic eruption capable of bringing major change could occur at any time in this truly dynamic landscape. Since the great 1912 eruption, the massive deposits of volcanic ash and sand that resulted have consolidated into tuff, which is a type of rock. In the valley these ash deposits have been rapidly cut through by streams to form steep-walled gorges. The thousands of fantastic smoking fumaroles that greeted the scientists who discovered the Valley of Ten Thousand Smokes after that powerful eruption have now cooled and ceased their ominous smoking. But the fiery cauldron, whose intense heat and pressure can be forcefully released to alter the landscape in mere hours, still looms close to the surface in the park's portion of the volcanic Aleutian Range.

Wildlife

A predictable eruption occurs here annually as salmon burst from the northern Pacific Ocean and into park waters. Sockeye, or red salmon return from the ocean where they have spent two or three years. By a homing mechanism they return to the exact headwater gravel beds of their birth. Their size, averaging 5 to 7 pounds, varies proportionally to how long they spend feeding at sea.

The salmon run begins here in late June. By July's end a million fish may have moved from Bristol Bay into the Naknek system of lakes and rivers. Salmon stop feeding upon entering freshwater, and physiological changes lead to the distinctive red color, humped back, and elongated jaw they develop during spawning. The salmon spawn during August, September, and October. Stream bottoms must have the correct texture of loose gravel for the eggs to develop. The stream must flow freely through winter to aerate the eggs. By spring the young fish, called smolt, emerge from the gravels and migrate into the larger lakes, living there two years. The salmon then migrate to sea, returning in two or three years to spawn and begin the cycle once again. Salmon provide food for the bears, bald eagles, rainbow trout, and directly or indirectly for the other creatures that forage along these streams. They also have been important to Katmai people for several thousand years, and commercial fishing—outside the park—remains the mainstay of today's local economy.

Katmai's lake edges and marshes serve as nesting sites for tundra swans, ducks, loons, grebes, and that 20,000-mile annual commuter, the arctic tern. Sea birds abound along the coast, grouse and ptarmigan inhabit the uplands, and some 40 songbird species summer here. Seacoast rock pinnacles and treetops along lakeshores provide nesting sites for bald eagles, hawks, falcons, and owls. Brown bears and moose live throughout the coastal and lake regions, the moose feeding on willows, water plants, and grasses. Other mammals include the caribou, red fox, wolf, lynx, wolverine, river otter, mink, marten, weasel, porcupine, snowshoe hare, red squirrel, and beaver. Along the coast are sea lions, sea otters, and hair seals, with beluga, killer, and gray whales sometimes using the Shelikof Strait.

People

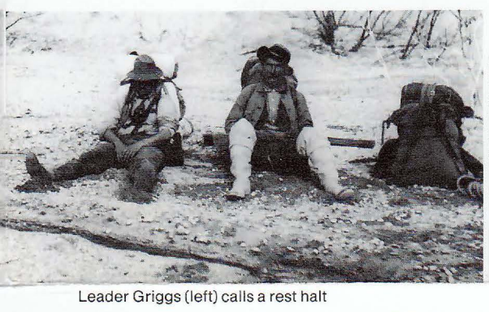
People have been coming to the place we call Katmai for thousands of years. Some found a good life in the heart of the park near the present-day Brooks River. Others made their existence along the islands and shores of the rugged Shelikof Strait. The rich natural resources of the Alaska Peninsula brought these people to this land of fierce storms, high seas, and steaming volcanoes.

Streams filled with salmon, tundra plains covered with migrating caribou, and ocean shores teeming with abundant life were the attraction. Some came to stay, building partially underground homes to protect them from the howling winds and frigid winter temperatures. Others came to take advantage of rich summer salmon runs, constructing summer shelters but retreating from the mountains during the winter. Many traveled through the park, crossing from the east side of the peninsula to Bristol Bay. The trail over Katmai Pass was a link between peoples, a route that provided access to a greater variety of food sources and a sharing of story and culture.

For more than 6,000 years people have called Katmai home. The prehistoric resources left from earlier days are included in three archeological districts listed on the National Register of Historic Places: the Savonoski River, Takli Island, and the Brooks River districts. The archeology of Katmai National Park has contributed significantly to an understanding of prehistoric cultural developments in southwestern Alaska.

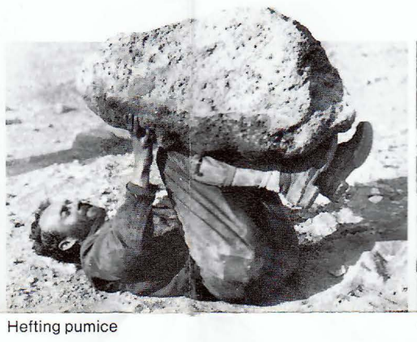
Today, the natural resources of Katmai National Preserve provide critical food supplies for descendants of those earliest inhabitants. Native Alaskans living a subsistence lifestyle harvest fish and game, intimately linking their lives with the life of this land.

Historic photos copyright by National Geographic Society

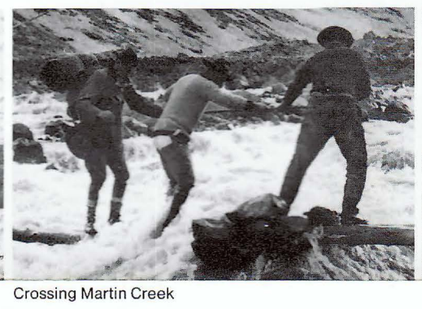


Leader Griggs (left) calls a rest halt

Novarupta vents steam



Hefting pumice



Crossing Martin Creek

Pack train crosses the Valley of Smokes

Eruption! And the Valley of Ten Thousand Smokes

The June 1912 eruption of Novarupta Volcano altered the Katmai area dramatically. Severe earthquakes rocked the area for a week before Novarupta exploded with cataclysmic force (see diagram). Enormous quantities of hot, glowing pumice and ash were ejected from Novarupta and nearby fissures. This material flowed over the terrain, destroying all life in its path. Trees upslope were snapped off and carbonized by the blasts of hot wind and gas. For several days ash, pumice, and gas were ejected and a haze darkened the sky over most of the Northern Hemisphere.

When it was over, more than 65 square kilometers (40 square miles) of lush green land lay buried beneath volcanic deposits as much as 200 meters (700 feet) deep. At nearby Kodiak, for two days a person could not see a lantern held at arm's length. Acid rain caused clothes to disintegrate on clotheslines in distant Vancouver, Canada. The eruption was 10 times more forceful than the 1980 eruption of Mount Saint Helens. Eventually Novarupta became dormant. In the valleys of Knife Creek and the Ukak River, innumerable small holes and cracks developed in the volcanic ash deposits, permitting gas and steam from the heated ground water to escape.

It was an apparently unnamed valley when the 20th century's most dramatic volcanic episode took place. Robert Griggs, exploring the volcano's aftermath for the National Geographic Society in 1916, stared awestuck off Katmai Pass across the valley's roaring landscape riddled by thousands of steam vents. The Valley of Ten Thousand Smokes, Griggs named it.

"The whole valley as far as the eye could reach was full of hundreds, no thousands—literally, tens of thousands—of smokes curling up from its fissured floor," Griggs would write. One thousand steam vents reached 150 meters (500 feet) in the air, some more than 300 meters (1,000 feet). Such marvels inspired explorers on the next year's expedition:

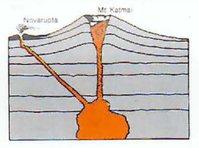
"I felt like a boy at a circus, for I couldn't take time to study the attraction before me because I suspected something more captivating farther on."

"The meager pictures of the previous year . . . had not prepared me to face such a spectacle of awesome magnitude. I had pictured the Valley as large; the actual view dwarfed my wildest imagery to insignificance."

"You may build in memory, but never reproduce the scenes which lie beyond the Katmai Pass. They seem too big to be a part of the rest of the world. They do not connect up with the little things which are built into our lives."

The expedition's surveyor did not concur with such glowing assessments of natural wonders that seriously reduced visibility: "The smokes did not impress me with their grandeur. . . . Their ability to make surveying next to impossible did . . . A wool comfort placed on the ground which is 110°F . . . will steam beautifully. It is a natural phenomenon, but it is not a good bed." Nature can't please everyone.

Robert Griggs thought Mt. Katmai had blown—he found its new crater lake. Novarupta Volcano subsequently proved the source, although much of the ejected magma was drained from beneath Mt. Katmai. As Mt. Katmai's foundation was drawn away, its summit subsided, leaving a caldera in which a crater lake formed. The ash flows that spewed out over the valley held their heat for years. Surface water percolating through them was heated and vented to the surface as fumaroles.



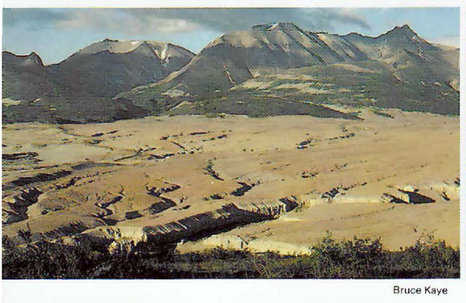
Only one eruption in historic times—Greece's Santorini in 1500 B.C.—displaced more volcanic matter than Novarupta. The terrible 1883 eruption of Indonesia's Krakatoa belched out little more than half as much, yet killed 35,000 people. Vastly isolated Novarupta killed no one. If the eruption occurred on Manhattan Island in New York City, Robert Griggs calculated, residents of Chicago would hear it plainly. The fumes would tarnish brass in Denver. Acid raindrops would burn your skin in Toronto. In Philadelphia the ash would lie nearly as deep as this folder is wide. Manhattan would have no survivors.

Today you can take the trip from Brooks Camp out to the Valley of Ten Thousand Smokes, where the turbulent Ukak River and its tributaries cut deep gorges in the accumulated ash. The landscape slowly recovers: In nature, each destruction is somewhere's new creation.

Katmai

Bear Warnings. Katmai is a wildlife sanctuary. Bears, moose, and other animals are unpredictable and can be dangerous. Read and study the park leaflet about bears. Ask any ranger about special precautions for backcountry camping, fishing, camping, and hiking. Do not fish near bears.

At Katmai brown bears may come very close to you. The safety of yourself, others, and the bears depends on you.



Bruce Kaye

At Three Forks in the Valley of Ten Thousand Smokes, Knife and Windy Creeks join the River Lethe, headed for Ukak River. The streams cut steep gorges in the volcanic debris.

Porcupines eat bark, twigs, leaves, buds, and an occasional piece of camping gear.

Partially underground houses provided year-round shelter for Brooks River area natives. A reconstructed house at Brooks Camp helps tell the story of survival in sub-arctic Alaska.

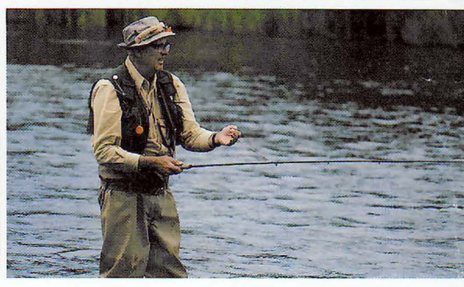
Mike Tollefson

Rock ptarmigan, wearing white in winter and brown in summer are mottled in between.

Jim Gavin

Float planes provide access to main visitor use areas such as Brooks Camp and an opportunity to see some of the most remote parts of Katmai.

Red-necked grebes build floating nests in vegetation along shallow lake margins.

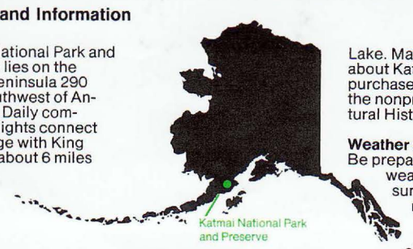


Tom Walker

Catch-and-release fishing is encouraged parkwide and required for rainbow trout in many backcountry streams. Anglers: be alert for bears and move out of the river when a bear moves toward you.

Access and Information

Katmai National Park and Preserve lies on the Alaska Peninsula 290 miles southwest of Anchorage. Daily commercial flights connect Anchorage with King Salmon, about 6 miles from the park's west boundary. Commercial float planes operate daily between King Salmon and Brooks Camp from June to September. Year-round air charter services are available in King Salmon.



Private Lands Private inholdings and Native village corporation lands lie within the boundaries of Katmai National Park and Preserve. You must obtain owner permission before using these lands. Of special concern are properties at the Kukaklek Lake outlet, the head and upper end of the Alagnak River, and the outlet area of Naknek Lake. Maps and books about Katmai may be purchased by mail from the nonprofit Alaska Natural History Association.

Weather and Clothing Be prepared for stormy weather and some sunshine. Summer daytime temperatures range from about mid-50s to mid-60s°F; the average low is 44. Strong winds and sudden gusts—williwaws—frequently sweep the area. Skies are clear about 20 percent of the summer. Light rain can last for days. Bring comfortable outdoor clothes.

Brooks Camp Separate user fees and use restrictions apply to Brooks Camp. The free park newspaper gives details.

Firearms Hunting or discharging any weapon is prohibited in the park, and firearms must be unloaded and cased. Hunting, under Alaska State law, and carrying firearms are allowed in the preserve only.

For Information Write to the Superintendent, P.O. Box 7, King Salmon, AK 99613 or call 907-246-3305 or **www.nps.gov/katm/** on the Internet.

Accommodations and Services

A concessioner provides accommodations and food services at Grosvenor Lake and at Brooks Camp from about June 1 to mid-September. Reservations are necessary. Meals and accommodations are also available in King Salmon at other private lodges. Limited camping and food supplies and some fishing tackle are sold at Brooks Lodge. Several commercial operators are authorized to provide air taxi, "flightseeing," backpacking, canoe, and fishing guide services in the park and preserve. Write to the park address for a list. Concession-operated tours make daily round-trip excursions to the valley. The National Park Service conducts guided walks and evening programs at Brooks Camp in summer. Information, maps, and other publications are available at the Brooks Camp Visitor Center and the King Salmon Visitor Center.

Seeing Katmai A 23-mile dirt road between Brooks Camp and the Valley of Ten Thousand Smokes offers a view of this wilderness sculpted by glaciers, stream erosion, and volcanism. A foot trail descends to the valley from road's end. A concession-operated bus makes daily round-trip excursions to the valley. Charter aircraft at King Salmon and Brooks Camp offer scenic flights. In good weather you see the bays, fjords, and waterfalls along the coast, glacier-clad mountains with steaming volcanic peaks, and the island-studded lakes. You may fly over the Valley of Ten Thousand Smokes to see the 1912 eruption site.

Backcountry Travel Katmai's rugged wilderness offers rewarding experiences—with reasonable precautions. Be well prepared and equipped. There are several good short routes and unlimited opportunities for long trips. Katmai has few trails, but passable routes can be found along river bars, lakeshores, and gravel ridges. For overnight Valley hikes you can arrange a concession-operated bus drop-off and pick-up.

Hiking Safety Cold winds and icy waters pose great hazards. Gear must withstand blowing rain and high winds up to 50 to 60 mph. Carry extra dry clothing, preferably wools. Read up on hypothermia symptoms and their treatment. Be prepared to wait out storms: carry matches, first aid kit, and emergency food. Rains or melting glaciers can make stream crossings impossible. You need sneakers and hiking boots here. Be extremely cautious when crossing muddy waters. Streams rise quickly during rainstorms or heavy glacial melt.

Camping For backcountry camping please get a permit from the Brooks Camp Visitor Center or park headquarters in King Salmon. Backcountry users must store food at least 10 feet above the ground or in bear-proof containers. Bear-proof containers are available in limited supply at the Brooks Camp Visitor Center or park headquarters. There are no improved campsites or food caches in the backcountry. **Brooks Camp Campground** has water, pit toilets, food storage cache, and picnic tables. Food storage space is limited. Reservations are required in summer at this campground. Cooking is allowed on camp stoves only. The concessioner sells white gas for camp stoves. Meals are available at Brooks Lodge; otherwise bring all your food with you.

Regulations and Safety

Bears and Other Large Mammals Persons may not intentionally approach or remain within 50 yards of a bear or any large mammal, or within 100 yards of any large mammal with young, except when on the bear-viewing platforms.

Camping/Food Storage Within five miles of Brooks River camping is by permit only. Food and gear must be secured within a building or approved bear-proof container. Picnicking (food consumption) is not permitted within 100 yards of Brooks River or on the Naknek Lake beach within a half mile of the Brooks River.

Fishing An Alaska fishing license is required; all state rules apply. Sport fishing is allowed in the park only using artificial lures; fly fishing only from Brooks Lake to Brooks River foot bridge. Release a fish or cut your line when a bear approaches. Check with the Brooks Camp Visitor Center for special regulations regarding fishing.

Boating Safety All state and federal boating regulations apply. Water conditions change rapidly with little warning. It is generally safer to travel near shore when in a kayak or canoe. Watch weather and stay ashore in rough water conditions.

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