



The River Lethe in the Valley of Ten Thousand Smokes



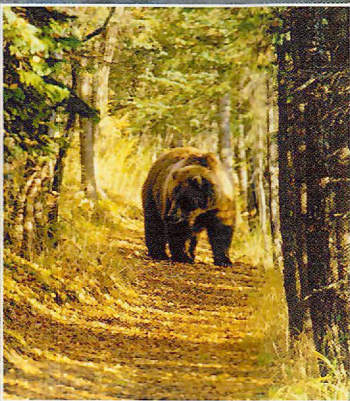
Advice to salmon: look before you leap.



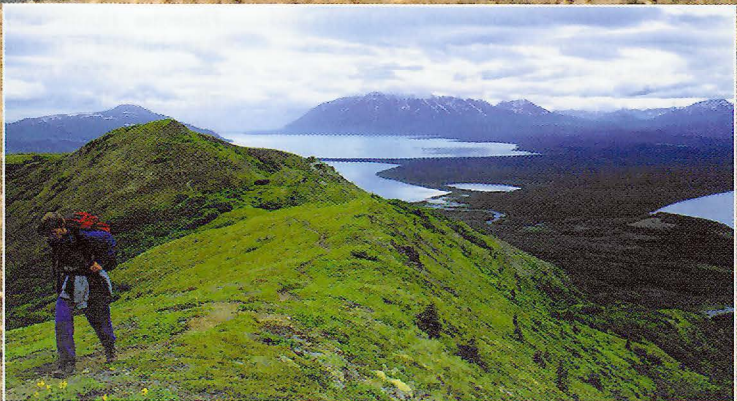
These are the continent's largest land predators.



Mothers teach cubs to fish—and protect them from adult males.



Never get this close!



Open uplands are easiest for backpackers.

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. Since then most surface geothermal features have cooled, but protecting brown bears has become an equally compelling charge. To protect these magnificent animals and the 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 few persistent visitors. To boat its enormous lakes and island-studded bays,

to float rushing waterways, to hike wind-whipped passes of imposing mountains, or to explore its Shelikof Strait coastline requires great effort and careful logistical planning.

This unseen Katmai lies beyond our usual experiences 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 its enormous raw natural force, a sampling itself constituting a rare and endangered opportunity.

Katmai's awesome natural powers confront us not only as volcanics but as brown bears. In summer, North America's largest land predators gather at streams to feast on salmon runs, build weight from this wealth of protein and fat, and prepare for the coming long winter. Alaska's brown bears and grizzlies are now considered one species. Generally, grizzlies are those living 100 miles or more inland. Browns are bigger than grizzlies thanks to their rich fish diet. The Kodiak brown bear is a subspecies 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 one pound each. Cubs stay with the mother for two years, during which she does not reproduce. The interval between litters is usually three years. Brown bears dig a new den each year, enter it in November, and emerge in April. About half of their lifetimes is spent in dens. Because each bear is an individual, how that bear will act in given situations cannot be predicted with any precision. These great and awe-inspiring bears symbolize the wildness of today's Katmai.



Mount Katmai's Crater Lake formed after Novarupta Volcano erupted and Mount Katmai collapsed.

Volcanics

The 15 active volcanoes lining Shelikof Strait make the park and preserve one of the world's most active volcanic centers. These Aleutian Range volcanoes are like pipelines into the fiery cauldron beneath Alaska's southern coast, a cauldron that extends down both Pacific Ocean shores. This Pacific Ring of Fire boasts over four times more volcano eruptions above sea level than elsewhere in historic times.

Nearly 10 percent of the 400-plus eruptions took place in Alaska; less than two percent in the rest of North America. Plate tectonics theory attributes this to collisions of the plates making up the Earth's crust. The ring of fire marks edges where crustal plates bump against each other. A map of earthquake activity superimposed on a map of active volcanoes will show violent earth changes ringing the Pacific Ocean from South America around to and down the Indonesian archipelago.

Major eruptions deposited ash across the Katmai area at least 10 times in the past 7,000 years. Under the now quiet floor of the Valley of Ten Thousand Smokes, and

deep beneath mountains around it, molten rock is still present. The most visible clues to this are the steam plumes rising occasionally from Mounts Mageik and Martin and Trident Volcano. The plumes show the potential for new eruptions to occur. Trident erupted in 1968, and Four-peaked Mountain awoke from 10,000 years of dormancy in fall 2006.

A volcanic eruption capable of bringing major change could occur at any time in this dynamic landscape. Since the great 1912 eruption, the resulting massive deposits of volcanic ash and sand have consolidated into tuff, a type of rock. In the valley, streams rapidly cut through these ash deposits to form steep-walled gorges. The thousands of fantastic smoking fumaroles that greeted the scientists entering 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 lurks near the surface in the park's part of the volcanic Aleutian Range.



Salmon crowd up small creeks to spawn in the waters where they hatched.

Wildlife

Another predictable eruption takes place each year as salmon burst from the northern Pacific Ocean into park waters. Sockeye (red) salmon return from the ocean—where they have just spent two or three years—to the headwater gravel beds of their birth. Their size averages five to seven pounds, varying proportionally to how long they have spent feeding at sea.

The salmon run begins in late June. By the end of July a million fish may have moved from Bristol Bay into the Naknek system of lakes and rivers. Salmon stop feeding when they enter fresh water, and body changes lead to their distinctive red color, humped back, and the elongated jaw they develop when they spawn—in August, September, and October. Stream bottoms must have the correct texture of loose gravel for eggs to develop. The stream must flow freely through winter to aerate the eggs. By spring the young fish, called fry, emerge from the gravels and move into the larger lakes, to live there two years. Then the salmon migrate to sea, returning in two or three years to repeat

the cycle. Salmon are food for bears, bald eagles, rainbow trout, and—directly or indirectly—for other creatures who forage along these streams. They also have been important to Katmai people for several thousand years, and commercial fishing—outside the park—still anchors the local economies today.

Lake edges and marshes are nesting sites for tundra swans, ducks, loons, grebes, and a 20,000-mile annual commuter, the arctic tern. Sea birds abound along the coast, grouse and ptarmigan live in uplands, and some 40 songbird species summer here. Seacoast rock pinnacles and lakeshore treetops are nest sites for bald eagles, hawks, falcons, and owls. Brown bears and moose live in both coastal and lake regions. Moose feed on willows, water plants, and grasses. Caribou, red fox, wolf, lynx, wolverine, river otter, mink, marten, weasel, porcupine, snowshoe hare, red squirrel, and beaver all live here. At the coast are sea lions, sea otters, and hair seals, with beluga, orca, and gray whales sometimes using Shelikof Strait.



Salmon drying on racks exemplify the continuing traditional subsistence uses of the park and preserve.

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 lives on islands and shores of the rugged Shelikof Strait. The Alaska Peninsula's rich natural resources 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 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, building summer shelters but retreating from the mountains for winter. Many traveled through the park, crossing from the east side of the peninsula to Bristol Bay. The trail over Katmai Pass was not only a link between peoples but a route that gave access to a greater variety of food sources and to a rich sharing of both stories and cultures.

For over 9,000 years people have called Katmai home. Concentrations of prehistoric sites in the Brooks River and Amalik Bay areas are recognized as national historic landmarks. Several other prehistoric and historic sites are listed on the National Register of Historic Places, including the Savonoski Archeological District.

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

Eruption! And the Valley of Ten Thousand Smokes

It was apparently a nameless valley when the 20th century's most dramatic volcanic episode happened. Robert Griggs, exploring the volcano's aftermath for the National Geographic Society four years later, stared awestruck off Katmai Pass across the valley's roaring landscape riddled by thousands of steam vents. And so Griggs named it The Valley of Ten Thousand Smokes.

The June 1912 eruption of Novarupta Volcano dramatically altered the Katmai area. Severe earthquakes rocked the area for a week before Novarupta exploded with cataclysmic force (diagram at right). 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 blasts of hot wind and gas.

For several days ash, pumice, and gas were ejected. A haze darkened the skies over most of the Northern Hemisphere. When the eruptions subsided, over 40 square miles of once lush green land lay

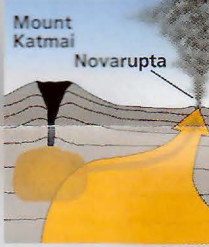


Novarupta vents steam in 1916.



Pack train crosses the smoking valley four years after the eruption.

What Blew?



Robert Griggs thought Mount Katmai had blown—he found its new crater lake. But it was Novarupta Volcano that blew. A deeper source of magma intersected Mount Katmai's older magma chamber and the surface, so that both erupted through Novarupta—and caused Mount Katmai's summit to collapse.



NPS / JIM GAVIN

"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," Robert Griggs wrote in 1916. A thousand steam vents reached 500 feet in the air, with some reaching over 1,000 feet.

Just two eruptions in historic time—Greece's Santorini in 1500 BCE (Before Common Era) and Indonesia's Mount Tambora in 1815—displaced more volcanic matter than Nova-

rupta. The 1883 eruption of Krakatoa, also in Indonesia, belched out just over half as much yet killed 35,000 people. The vastly isolated Novarupta's eruption killed no one. Had it occurred on New York City's Manhattan Island, Robert Griggs calculated, people in Chicago would hear it plainly. The fumes would tarnish brass in Denver. Acidic rain-drops would burn your skin in Toronto. In Philadelphia the ash would lie nearly as deep as this brochure is wide. Manhattan would have zero survivors.

Today you can make the trip from Brooks Camp out to the Valley of Ten Thousand Smokes (photo at right), where a turbulent Ukak River and its tributaries are still at work cutting deep gorges in accumulated volcanic ash. The landscape slowly recovers. In the natural world of stupendous Earth forces, destruction often leads to creation of new life and new landscapes.

A photograph of a porcupine standing in a field of tall grass and dry leaves. The porcupine's quills are prominent and dark, contrasting with its lighter brown body. It is facing right, and its head is slightly lowered. The background is a soft-focus field of similar vegetation.

A man wearing a light-colored long-sleeved shirt, a dark vest, and a hat is standing in a river, fishing with a rod and reel. The water is flowing, and the background shows a forested bank.

try streams. Anglers: be alert for bears and move out of the river when a bear moves toward you.

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