



Nature's Knife Edge

To ascend Rocky Mountain National Park's Trail Ridge Road is to leave this world and enter another. It carries you, breathless with wonder and altitude, toward a fragile alpine realm, the tundra. Most animals hibernate or migrate during the harsh winters. No trees can live here.

Despite the brief, six-week growing season, plants survive. Most conserve energy by miniaturizing. Each July thousands of brilliant alpine sunflowers, Rydbergia grandiflora (above), burst from the thin blanket of soil that covers parts of the tundra. For decades these hardy plants have worked toward this moment. Many tundra flowers track the sun to maximize their intake of light, required for photosynthesis.

Park your vehicle at the Alpine Visitor Center and behold 360-degree views of astonishing peaks, lakes, snowfields, canyons, forests, and meadows spread over 400 square miles. For a close look at the alpine ecosystem walk the **Tundra Communities Trail to the east. To the** west, the Rockies' spine divides the continent into two watersheds. One flows west to the Pacific, the other east to the Atlantic.

On the park's drier east side, snow blows in from the wetter west, replenishing the few remaining glaciers. All rest in cool, dark valley cirques, or bowl-shaped depressions. Higher summer temperatures since the 1990s have caused the glaciers to melt back. On the park's

west side, in the Never Summer mountains, the Colorado River begins as a tiny stream fed by snowmelt. Downstream, it will provide water to 40 million humans.

Thrust skyward by Earth's forces between 40 and 70 million years ago, then sculpted by three glacial episodes, the Rockies are "new" in geologic terms. In 2009 Rocky Mountain National Park, a small neighborhood within this vast mountain range, became one of the nation's "newest" designated wildernesses. Nature has always ruled this wild, fantastic place. But as human-triggered events outside park boundaries increasingly affect life within the park, how will nature respond? What is our role?

Nature's Guideposts

The montane ecosystem is the park's gateway whether you enter from Grand Lake, Estes Park, or Wild Basin. On warm, south-facing slopes the ponderosa pines will greet you with their sweet fragrance. The open, sunlight-dappled forest of tall (up to 150 feet) trees feeds and shelters the tassel-eared Abert's squirrel.

Chokecherry, currant, and serviceberry bushes sustain many animals, insects, and birds. Beavers and otters work and play in the montane's streams. Elk, one of the park's larger mammals, gather here to rut in fall. They eat the aspen trees' soft inner bark and shoots, and leave a calling card of abraded aspen trunks. On cooler, north-facing slopes, forests are dense with Douglas-fir and lodgepole pine.

Montane below 9,000 feet Subalpine 9,000-11,400 feet

Snow that falls in the alpine zone blows down to the subalpine, creating a wet ecosystem with over 30 inches of precipitation annually. Sharp-tipped, pungent **Engelmann spruce and flat-needled fir** trees prevail, reaching 100 feet. The understory supports shrubs like blueberry, wax currant, huckleberry, and Wood's rose. Wildflowers like arnica, fairy slipper, twinflower, and purple elephant's head colonize open meadows.

On the park's southern edge, the water ouzel, or American dipper, defies fast-running streams to dive for food. Downy and hairy woodpeckers, bold Steller's jay, and the yellow-rumped warbler share the woods. Look for the pocket gopher and golden-mantled ground squirrel.

Alpine above 11,400 feet

Extremely thin soil, strong ultraviolet light, drying winds, and bitter cold define life on the tundra. Many plants hug the ground in dense mats (avens, below right), preserve moisture with waxen leaf surfaces, or trap warmth against stems and leaves with hairs.

Animals also must adapt or die. Marmots store fat, then draw upon their reserves as they hibernate. Bighorn sheep graze here in summer, but migrate in fall, like many other species in the park, to lower elevations. The resilient white-tailed ptarmigan is an exception. This bird stays all winter in the alpine zone, warmed by feathered eyelids, nostrils, legs, and feet.

Travel through Ecosystems along Trail Ridge Road



Montane Above: Aspen (Populodgepole pine (Pinus contorta). Left: Common sulphur butterfly (Colias philodice) pol

Subalpine

Above: Elk, or wapiti, graze amid Engelmann spruce (*Picea engel-mannii*). *Left*: The park is home to over 350 highorn sheep, which here in the 1950s.



Legacy of Stewardship

Native Americans lived on and cared for this land for centuries. As human numbers and uses grew, people recognized that preservation was needed. Many passionate ad-

vocates for a park emerged, including naturalist and guide Enos Mills (1870-1922). He led the push for a wilderness park. Mining, grazing, and logging interests lobbied for a national forest where commercial activities could continue. In 1915 Congress dedicated Rocky

Mountain National Park.

Influential Estes Park resident Mary King Sherman (1862-1935) also campaigned hard to establish the park. She promoted outdoor education, citing better health and an increased sense of civic duty as benefits. Her ideas are cornerstones of National Park Service programs today.

Long before anyone envisioned a Rocky Mountain National Park, Isabella Bird (1831-1904) published A Lady's Life in the Rocky Mountains. Her book helped make others aware of the region's rugged beauty and "unprofaned freshness" and paved the way for preservation.

In 1873 a fur trapper called Mountain Jim helped Isabella Bird climb Longs Peak. He was one among many who traveled to the Rocky Mountains in search of natural beauty or bounty.

Native Americans preceded all others in this wild place. Tools, pottery, and rock piles whisper of human presence over 10,000 years ago, when Paleo-Indians seasonally hunted and possibly traded here. Later, Ute, Cheyenne, and Arapaho bands came to these mountains. They probably wore the path now known as Trail Ridge Road. They left few other traces.



Clockwise from upper left: Dedication, September 4, 1915; Mary King Sherman; Volunteer assists a visitor; Learning to snowshoe. CLOCKWISE FROM UPPER LEFT: PHOTO BY HARRY MELLON RHOADS, COURTESY DENVER PUBLIC LIBRARY; ROCKY MOUNTAIN NATIONAL PARK ADMILYCE, NDE (DETER PUDLIC LIBRAY; ANN COLONIAL)

Over one million people now pour into the park in a six-week period each summer. Nearby urban areas affect how the park is managed. Decades of fire suppression created dense undergrowth, which only increased the threat to surrounding communities and caused changes in the forest composition. Over 35 invasive plant species now mingle with natives.

To better understand these and other challenges, the park has set aside areas for science and research. It is also home to the Continental Divide Learning Center, where education and research programs focus on park resources.

As Rocky Mountain National Park moves into its second century it will continue to preserve natural systems and cultural stories for future generations. What role can you play in the park's next one hundred years?



Roaming Rocky Mountain National Park



Lightning can kill. Hike early and watch the sky—thunderstorms are more common in Park Information Check your free park newspaper for current information about visitor centers, safety and high country survival, ranger-led programs, services, hiking trails, wildlife, shuttle buses, and more. Find lodging and visitor services at Estes Park and Grand Lake.

Safety Avoid lightning. Begin your hike early in the day. Get below treeline or to a shelter by afternoon, when thunderstorms begin. If caught above treeline in a storm, run from summits and isolated trees and rocks. Avoid small cave entrances and overhangs. Crouch down on your heels. • Many park visitors experience altitude sickness. Consult your doctor if you have a respiratory or heart condition. • The park's swiftrunning streams, waterfalls, falling trees,

many natural hazards. • While driving, stay alert for wildlife crossing the roads.

Pets Pets are prohibited in all areas not accessible by motor vehicle, including trails and meadows. Do not leave pets unattended in vehicles. Where allowed, pets must be kept on a six-foot leash.

Hunting, Fishing, and Firearms Hunting is prohibited in the park. • For firearms regulations check the park website. • Fishing requires a Colorado fishing license.

Regulations Abide by park regulations and restrictions, available at visitor centers and entrances. Camp only in designated campgrounds. All backcountry camping requires a permit. Do not leave property unattended for more than 24 hours with-

out prior permission. • All vehicles, including bicycles, must stay on roads or in parking areas. Stopping or parking on roads is prohibited. • Overnight parking requires a permit. • Do not feed, approach, or try to touch any wild animal. • Leave wildflowers and other plants for others to enjoy. • Open alcoholic beverage containers in vehicles on park roads are illegal. • Marijuana use is prohibited in the park.

Accessibility We strive to make our facilities, services, and programs accessible to all. For information go to a visitor center, ask a ranger, call, or check our website.

Rocky Mountain National Park is one of over 400 parks in the National Park System. To learn more about national parks, visit www.nps.gov.

More Information Rocky Mountain National Park 1000 Hwy. 36 Estes Park. CO 80517-8397

Estes Park, CO 80517-8397 970-586-1206; TTY 970-586-1319 www.nps.gov/romo

For information call 970-586-1206

For Trail Ridge Road status call 970-586-1222

Emergencies call 911

National Park Foundation

Join the park community.

Preserving Wilderness
In 2009 Congress protected
most of Rocky Mountain
National Park as wilderness
under the 1964 Wilderness
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Act. Wilderness is a gift to
people today and to future
generations. The designation protects forever the
land's wild character, natural conditions, opportunities
for solitude, and scientific,
educational, and historical
values. In wilderness people
can sense being a part of
the whole community of life
on Earth.



