



Plants and Animals



Glacier National Park An Abundance of Diversity

Glacier National Park is rich with plants and animals. Approximately 1800 species of plants, over 250 species of birds, and 63 species of mammals live here. When an area is made up of a wide variety of living things, it is known to be an area with lots of biodiversity. One of the reasons Glacier is special is its great amount of biodiversity.

Plants and animals associated with northern Canada, the Pacific Coast, and the prairies of the Great Plains mingle here with alpine plants and animals of the Rocky Mountains.



Glacier National Park is a meeting place for species from all directions. Three major rivers provide pathways for plants and animals from throughout the Continent.

Glacier Park is located at the crossroads of several different biological communities. Plants and animals associated with northern Canada, the Pacific Coast, and the prairies of the Great Plains mingle here with alpine plants and animals of the Rocky Mountains. The result is a mixture of plants and animals that do not usually live together.

To help understand what allows Glacier to have so much biodiversity, take a look at the map. Glacier National Park straddles the Continental Divide of the Rocky Mountains. Here, the Rocky Mountains are at their narrowest point, allowing the biological communities of the Pacific Coast and the Great Plains to come closer together than they are at any point along the Continental Divide.

Glacier has significant difference from east to west in elevation from valleys at 3,000 feet elevation to the Continental Divide at 6,000 feet and then back to eastern valleys at 3,000 feet. These elevation differences create incredible temperature differences from the valleys to the peaks. The east side of the park is also known for its exceptionally warm chinook winds during the winter and its dry summer winds. Although there is not a significant difference in rainfall between the east and west sides of the park, in general, the east side of the park has wider temperature swings than the west side and it is windier. Thus, the increased wind on the east side of the park creates conditions which make it seem drier than the west.

Glacier National Park is dominated by dense forests. Thick forests of evergreens carpet nearly two thirds of the park. On the west side, in the McDonald Valley, huge western red cedars grow – a factor of the rich soils and maritime weather influence. These cedars are typically plants found on the Pacific coast.

Just a few miles away, on the east side of the mountains, Lodgepole pine are the main species of tree. Their small cones have adapted to resist and take advantage of fire. The heat from a fire opens up the cones and seeds are dispersed at a time when the forest floor is full of ash-enriched soil and receives plenty of sunlight (since the canopy has burnt away).



It is this combination of factors- differences in topography, temperature, wind, frequency of fire, soils, and rock that creates such a diverse array of plant communities in Glacier National Park. Not only the plants are influenced by these factors, the wildlife as well.

Forests, meadows, streams, lakes, and mountains combine to provide almost unlimited varieties of wildlife habitat. Forests in the valley provide food and cover for bears and mountain lions. A few thousand feet higher, rocky cliffs supply habitat for mountain goats, marmots, and ptarmigan. Streams and lakes are home to beaver, muskrat, ducks, and other water-loving birds. Meadows bursting with wildflowers support elk, coyotes, hawks, and a number of different rodents. This variety of habitats presents different survival challenges to animals and plants.

On the high rocky cliffs of the park, the mountain goat's thick fur keeps it warm and its specially-developed hooves are great for traction when climbing.

On the dry and windy east side of the park, the bright pink Douglasia plant has thick, fuzzy leaves that conserve water and low, compact growth to reduce wind damage.

Bears are well-adapted to living in Glacier. They are found in all areas of the park, from low valleys to high rocky slopes. Grizzly bears have long claws and a powerful hump of muscle on their shoulders that aid in digging for food. Their ability to dig is an important adaptation for the grizzly, but is also important for the ecosystem. When a grizzly bear digs, it tills the soil which helps new vegetation to take root and grow.

Plant and animal residents of Glacier have also adapted ways of surviving the challenges seasonal changes bring. Winter creates special challenges for animals. When it comes to facing these challenges, animals have three basic options.

For some animals, sleeping through the winter, or hibernating, is the best option. Animals like hoary marmots and Columbian ground squirrels, prepare for cold winters by spending their summers eating vegetation and putting on pounds. In the marmot's case, their summer diet allows them to hibernate for up to eight months, when their food is unavailable.

When winter comes and food and warmth are hard to find, other animals, like many birds and even some bats, prefer another option: migration. Some bird species, like the western tanager, live and nest in Glacier during the summer and migrate around 3,000 miles to South America in the fall, where food sources are more abundant.

Still some animals prefer to stick it out, stay active, and resist or tolerate what the winter has to offer. Many resistors, like snowshoe hare and ptarmigan, are well-adapted to the winter world. They are experts in winter camouflage. As winter nears, and the days become shorter, ptarmigan begin molting their feathers from brown to white, and the tips of a snowshoe hare's fur begins to turn white. By the time the landscape is dressed in a thick blanket of brilliant white snow, these animals are dressed in white as well. This makes it easier for them to move around in winter without attracting the attention of predators.

Glacier's plants and animals do not rely solely on the park to survive. Glacier National Park forms the core of a large area of wild lands that are vital to their survival. Many species travel and use areas outside the park. For Glacier's diverse plant and animal species to survive, it will take the cooperation of many different landowners and agencies.

**Photographs from top to bottom
Lodgepole pine cone, mountain goats, pink
Douglasia in bloom, grizzly bears, Western
Tanager, Ptarmigan**