Mammals and Life Zones

Just as people have adapted to living in nearly every climate imaginable, our fellow mammals have come to occupy many different life zones around the world. These life zones, like big neighborhoods, provide many different habitats where animals can find food, water, shelter, and space. More than fifty different kinds of mammals live in the life zones found in Mount Rainier National Park. Some are specially adapted to one life zone, while others range through several.

Imagine taking a very long walk from the edge of the park up to the summit of the mountain. What kinds of life zones would you see? What kinds of mammals would you find in each one? Looking at life zones can help us better understand and appreciate mammal adaptations and the struggle to survive—a trait all living things share.

Lowland Forest Zone

You’re in the lowland forest when you enter the park and find yourself sheltered by giant trees, dense shrubs and brush. The old-growth forests of this zone have trees towering 250 feet (76 m) or more, reaching diameters of 100 inches (2.54 m). Found between 2,000 and 3,000 feet in elevation (610-914 m), this zone is crowded with Douglas fir, western hemlock, and western red cedar.

If you pass a pond or a lake, you might see evidence of beavers. Beavers eat tree bark and “girdle” trees which they can later use to make dams and lodges. Look for signs of gnawed trees as you walk through this zone. And listen overhead for the chirping sound of the Douglas squirrel, also known as a chickaree. You’ll probably notice how it got its name: it will shout out chickareeeeee! as you pass.

Pacific Silver Fir Zone

A subtle change in the types of trees and thickness of forest undergrowth might clue you in when you arrive at the edge of the Pacific silver fir zone. It stretches between 3,000 and 4,500 feet (914-1372 m) in elevation. The climate here is slightly cooler and wetter than in the lowland forest. You’ll recognize Pacific silver fir, noble fir, western white pine, western hemlock, and Douglas fir trees all around you.

If you walk through this zone during the night, you may be lucky enough to hear the soft thwack of flying squirrels jumping and gliding from one tree to another. They have extra skin under their arms and legs, and they stretch them out and sail like kites from high up in the trees right down to the ground.

In the daylight you might catch a glimpse of a bear cub climbing up a tree. Like some other mammals, bears seasonally wander through many different life zones in search of available food.

Subalpine Zone

You know you’ve entered this zone when you see mountain hemlock trees. They have short, stubby needles like their cousins in the lowland forest, but these needles form beautiful star-shaped bundles on the branch. You’ll still see a few Pacific silver fir, mixed in with whitebark pine. Stands of subalpine fir, Alaska yellow cedar, and Engelmann spruce will begin to appear as you climb higher. The subalpine zone is generally found between 4,500 and 6,500 feet (1372-1981 m). As you climb into this colder, snowier zone, the continuous forest gives way to patches of trees surrounded by meadows of colorful wildflowers, where deer and elk come to graze and browse in the sunshine.

Alpine Zone

Here’s one zone you can’t miss—no trees grow here. Some parts of the alpine zone are covered with flowers and grasses in the summer; others are blanketed by snowfields that never melt and glaciers of blue ice. This zone starts between 6,000 and 7,500 feet (1828-2286 m) and goes all the way to the 14,410-foot (4392 m) summit of Mount Rainier!

What mammals could ever survive up here? You hear a high-pitched whistle, and in a rock pile you see what looks like a big fat mouse with round ears and no tail. A pika gathers leaves, flowers, and the fruits of alpine plants to dry in the sun and store for winter. Another rodent, the marmot (left), doesn’t gather food, but hibernates instead. It can sleep more than half the year in its burrow until the snow melts.
Bears - family Ursidae
black bear Ursus americanus

Shrew - family Soricidae
common / masked shrew Sorex cinereus
Trowbridge shrew Sorex monticolus
wandering shrew Sorex vagrans
dusky shrew Sorex palustris
water shrew Sorex bendirii
marsh shrew Sorex cinereus

Mole - Family Talpidae
shrew-mole Neurotrichus gibbsii
Townsend mole Scapanus townsendii
coast mole Scapanus orarius

Bats - family Vespertilionidae
Yuma myotis Myotis yumanensis
hairy-winged bat Myotis volans
silver-haired bat Lasionycteris noctivagans
big brown bat Eptesicus fuscus
hoary bat Lasiusus cinereus
Townsend’s big-eared bat Corynorhinus townsendii

Marmots, squirrels, and chipmunks - family Sciuridae
hoary marmot Marmota caligata
golden-mantled ground squirrel Spermophilus saturatus
yellow pine chipmunk Tamias amoenus
Townsend’s chipmunk Tamias townsendii
Douglas squirrel Tamiasciurus douglasii
northern flying squirrel Glaucopsyche sabrinus

Raccoons - family Procyonidae
raccoon Procyon lotor

Weasels, skunks, and their allies - family Mustelidae
American marten Martes americana
fisher Martes pennanti
short-tailed weasel, ermine Mustela erminea
long-tailed weasel Mustela frenata
mink Spilogale putorius
spotted skunk Mephitis mephitis
striped skunk

Cats - family Felidae
mountain lion, cougar, puma Puma concolor
bobcat Lynx rufus
 lynx (not seen since 1906) Lynx canadensis

Pocket Gophers - family Geomyidae
northern pocket gopher Thomomys talpoides

Porcupines - family Erethizontidae
porcupine Erethizon dorsatum

Pikas - family Ochotonidae
pika Ochotona princeps

Foxes, wolves, and coyotes - family Canidae
cyote Canis latrans
red fox Vulpes vulpes

Jumping mice - family Zapodidae
Pacific jumping mouse Zapus trinotatus

Mice, rats, and voles - family Cricetidae
deer mouse Peromyscus maniculatus
pack rat, bushy-tailed woodrat Neotoma cinerea
Gapper’s red-backed mouse Clethrionomys gapperi
heather vole Phenacomys intermedius
water vole Microtus richardsoni
long-tailed vole Microtus longicaudus
Townsend’s vole Microtus townsendii

Rabbits and hares - family Leporidae
snowshoe hare, varying hare Lepus americanus

Deer - family Cervidae
elk Cervus elaphus
wapiti Odocoileus hemionus columbianus
mule deer Odocoileus hemionus hemionus

Goats - family Bovidae
mountain goat Oreamnos americanus

Beavers - family Castoridae
beaver Castor canadensis

Apoldontias - family Apodontiidae
mountain beaver, boomer Apolodontia rufa

**Why Latin?**
Most people just call animals by their common names. But it’s good to know the Latin, because common names can be confusing. For example, *Aplodontia rufa* has many names: boomer, sewellel, and chehalis. It’s also called a mountain beaver, even though it’s not a beaver at all (see list below).

Latin names are also good for international travelers who might not know the common name but recognize the Latin. It is, after all, the language of science all over the world.

**How Can I Learn More?**
Check out *Cascade-Olympic Natural History* by Daniel Mathews; *Mount Rainier’s Mammals* by M. L. Schamberger; and *Plants and Animals of Mount Rainier* by Joe Dreimiller. The best way to learn about mammals, though, is to look for them in the wild!