

CHAPTER 1—NORTHERN ROCKY MOUNTAINS

A Boreal Forest Biome



Yellowstone National Park was established in March of 1872 through an act of congress that was signed by president Ulysses S. Grant. The park spans the borders of Wyoming, Montana, and Idaho and is composed of over 3,400 square miles of heavily forested land amid the northern Rocky Mountains. Underlying the park is an extremely active volcanic system resulting in over 10,000 hot springs and geysers, including the well-known “Old Faithful.” The last major volcanic eruption created an enormous crater (caldera), which spans nearly half of the park.



Grizzly Bear (*Ursus horribilis*) Although grizzly bears have been almost exterminated in the United States, these magnificent creatures once ranged throughout most of the western half of the country. Lewis and Clark first encountered them on the grasslands of the Missouri River where they fed on fish, grass, roots and small animals. The average length of a male grizzly is 7.5 feet and they commonly weigh 500 pounds, although some may reach 1100 pounds. Their lifespan is 25 years.



Trumpeter Swan (*Cygnus buccinator*) Once fairly common throughout the northern United States and Canada, this bird was relentlessly hunted until the late 1800s when it was believed to be extinct. In 1919, two nests were found in Yellowstone National Park, and 69 birds were documented in the area. Since then, wildlife refuges set aside to protect the species and relocation projects have led them from the brink of extinction. Although trumpeter swans are still a threatened species, nearly 1,000 of them are believed to be alive today with their numbers growing each year.



Cutthroat Trout (*Oncorhynchus clarki*) Much admired as the state fish of Montana, this species was first discovered and recognized as unique in 1805 by members of the Lewis and Clark expedition. Named for their bright orange streak found just below the mouth, these fish once migrated to the Pacific Ocean until a series of natural events limited their range to the Snake and Yellowstone River drainages. Though few native Cutthroat Trout survive today, several other species thrive in managed conditions throughout the Pacific Northwest mountain streams and lakes.



Douglas Fir (*Pseudotsuga taxifolia*) This massive conifer is named for the famed Scottish naturalist, David Douglas, who explored the Pacific Northwest in the 1820s. The tree grows over 200 feet high with the bark on old trees as much as 12 inches thick forming oblong plates. It grows throughout the Northern Rockies and can survive a wide range of climatic conditions. Its wood is highly valued for use in construction.

Tree Identification Activity: For this activity, you will need to visit a forested area or have students bring leaf samples from their yard. Contact your nearest national or state forestry department office and invite a forester to come to the class during the collection and identification phases of the project. First, have your students journal the collecting process, taking careful note of the habitat while sketching the tree from which they collect. Next, label each sample collected and challenge the students to devise their own classification scheme that would lead to identification. Finally, use an online tree identification tool to correctly identify each of the samples collected.

<http://www.arborday.org/trees/treeID.html>

<http://www.oplin.lib.oh.us/products/tree/index.html>

<http://www.fw.vt.edu/dendro/forsite/key/intro.html>

<http://forestry.msu.edu/uptreeid/glossary.htm>