

The Taiga

An Introduction

As we move south from the tundra, or into lower altitudes, a few trees begin to sprout. Traveling into an area with a longer growing season and soil that lacks permafrost, we begin to find even larger trees. This is the biome called the taiga (pronounced TIE-guh). The taiga stretches across northern Europe, Asia, and North America. It is also found in mountain ranges, including the Alps, Rockies, and Urals.

Trees found in the taiga are often coniferous (cone-bearing evergreen trees with needle-like leaves). Some of them grow to great size. The Giant Redwoods can reach 107 meters, or 350 feet, tall. Douglas Fir, Concolor Fir, Colorado Spruce, White Spruce, Norway Spruce, White Pine, Scotch Pine, and Austrian Pine are just a few of the evergreens found in different parts of the taiga.

The increased precipitation of this biome often comes in the form of snow. Many of the trees are adapted to withstand large and heavy snowfalls. Most conifers are conical-shaped trees that shed snow easily without breaking limbs. Some of them also have very thick bark to protect them from fire. Pines and sequoias are examples of thick-barked evergreens.

There are also some deciduous trees in the taiga. These are usually very hardy types such as birch, aspen, poplars, and willows. In the niche created by the cool shade of the large trees, there are a great variety of plants. They include lots of mosses, lichens, and ferns. Often a carpet of beautiful wildflowers appears in spring and summer.

With the milder climate and greater diversity of plants, there is also an increase in animal life. Large mammals such as moose, elk, deer, and bear may be fairly common. Several varieties of squirrels may be found, along with rabbits, porcupines, and chipmunks.

Some rather fierce predators inhabit this biome in various parts of the world. They range from the large wolverines and fishers, to the mid-sized pine martins and mink, to the tiny Least Weasel. Some of the cats of this region include the lynx, mountain lion or puma, and the rare Snow Leopard. Many of these animals sport a very thick pelt to protect them from the cold winters. Man has found these furs to be useful and ornamental. Unrestricted trapping caused a decline in the population of some fur bearers.

The taiga is often laced with rivers and streams. Two of the mammals often associated with these habitats are the river otter and beaver. The value of their furs has declined as synthetic fabrics become increasingly available and as the humaneness of trapping continues to be questioned. Currently, with the decline of trapping, beaver populations have increased, and in some areas they are now considered a nuisance.

Conifers can be periodic producers of cones and seeds. This means that species dependent on them for a food source must be mobile or able to change their diets. Two taiga species that are dependent on the cone seeds are Red Crossbills and White-winged Crossbills.

A group of hawks adapted for the taiga are the accipiters. These birds don't have the pointed wings and large wing spans of the falcons of the open country. Their wings are rounder and shorter. They are slower fliers, but they have greater maneuverability. They can follow their prey, which is usually small birds, as they twist, turn, and dart through the trees. The forest hawks include the Northern Goshawk, Sharp-shinned Hawk, and Cooper's Hawk.

A favorite prey of the Sharp-shinned Hawk is the warbler. Several species of warblers nest in the spruce and pine forest. They feed on insects, such as the Spruce Bud Worm, that can be common in the taiga's trees. Most of these wood warblers are brightly colored.

Many of the birds of the taiga migrate, to some extent, because the winters may be very harsh. The warblers travel all the way to South and Central America. The Broad-winged Hawk leaves the north woods about mid-September and heads for tropical forests. Finches, such as the Purple Finch, and Evening Grosbeaks may form into flocks and only travel a few hundred miles to the south. The Ruffed Grouse and Spruce Grouse don't migrate. They survive the winters by feeding on spruce and birch buds and by spending the bitter cold nights buried in snow drifts.

The soils of the taiga thaw out completely each summer and are the home of lots of tiny invertebrates and vertebrates. These microscopic organisms help break down the leaves and evergreen needles on the forest floor, enriching the soil. The recycled nutrients are then available for use by the taiga's trees to continue growing and producing for yet another season.

1. Where is the taiga located?

2. What is the difference between an evergreen and a deciduous plant?

3. Why does a conical shape help evergreen trees withstand large and heavy snowfalls?

4. What are two reasons why the taiga has a greater diversity of animal life than the tundra?

5. Why do accipiters have shorter, rounder wings than falcons?
