Mount Washington

Ecology

Robbins' Cinquefoil

Ascending Mt. Washington or any of the high peaks of the White Mountains travellers pass through several distinct ecological zones. At the base is a forest of northern hardwoods, followed a bit higher by a forrest of spruce and fir. As more elevation is gained, trees become small and stunted. These dwarf and gnarled trees of the sub-alpine zone are called krummholtz. Tree line, the elevation above which trees do not grow, is about 4,400 feet in the White Mountains, nearly 2,000 feet below the summit of Mt. Washington. The area above tree line is called the alpine zone. The short growing season, soil acidity and the destructive effect of high winds on ice-covered foliage at the higher elevations create an environment in which trees cannot survive. Although rain is plentiful, the meager soil does not retain moisture, and nearly constant winds cause plants to lose precious moisture to the atmosphere.

Many of the plants of the sub-alpine and alpine zones have special adaptations to cope with the extreme conditions. They grow close to the ground in locations where they are sheltered from winter winds by snowbanks; many have evergreen leaves that eliminate the need for energy to re-foliate each spring; and many have hard, waxy leaves that retard the loss of moisture. Some of the plants are rare or endangered, including one on Mt. Washington, Robbins Cinquefoil, that is found nowhere else on earth.

The tiny plants of the alpine zone are extremely sensitive to trampling and very slow to recover. It is important to stay on designated trails and camp below tree line.

Division of Parks and Recreation
P.O. Box 1856
Concord, NH 03302-1856
www.nhstateparks.org

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