

Early European settlers had a major impact on the ecology of this area, using the resources of the area intensively to support timbering, millstone cutting, tanning and charcoal industries, as well as small farming and livestock. Hoop poles cut from the newly re-grown forest were used on barrels that carried Rosendale Cement, which was used for the footings of the Brooklyn Bridge. Huckleberry picking, which relied on fire as a means to improve the crop, was an important industry until the middle of the last century.

CLIFF HOUSE, Lake Minnewaska.

ALFRED H. SMILEY.

PROPRIETOR.

1887



The Cliff House, Lake Minnewaska, New York.
MINNEWASKA, ULSTER COUNTY, NEW YORK.
Opened June 28th. Closed Aug 1st. Sept. 20th.

From the late 1800s, two hotels occupied sites adjacent to Minnewaska Lake. The current system of trails and carriageways was created for the enjoyment of the guests, leaving most other areas undisturbed. These trails are used today more than ever and open up this amazing landscape for recreation. By the late 1980s, both of the hotels had been destroyed by fire.

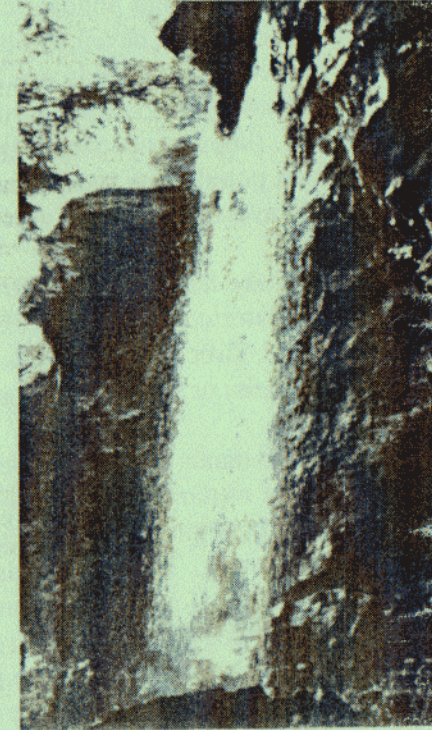
New York State acquired a 6,725-acre tract of land including Awosting Lake and Mud Pond in 1970. The remaining property was acquired in two separate purchases; 1,379 acres in 1977, and the Minnewaska Lake property in 1986. The Park Preserve is currently

over 12,000 acres in size and is open to the public for hiking, bicycling, horseback riding, picnicking, and cross-country skiing. Swimming, rock-climbing and deer hunting are permitted seasonally in designated areas. Scuba diving and car-top boats are allowed in Minnewaska Lake.

- Text by Hatti Langsford, April 4, 2002.

MINNEWASKA STATE PARK PRESERVE

ECOLOGY



Located on Route 44\55
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Situated in the heart of the Northern Shawangunk Mountains, Minnewaska State Park Preserve is 12,000 acres of dramatic cliffs, skylakes and waterfalls. The highest elevation in the Northern Shawangunks is located at the adjacent Sam's Point Preserve at or about 2,200 feet (665 meters) above sea level. From this high elevation in the south, the ridge slopes downward, northwest to the Rondout River Valley. Most Minnewaska streams are part of the Rondout watershed.

The northern Shawangunks are located in the boundary between the northern boreal forests and the southern temperate forest and contains elements of both forest types. This factor, along with the "sky island aspect of the topography creates an area rich in biological diversity and significant natural habitats. Many rare plants and animals can be found here, but please, do not find them...this is their haven and they are best left alone. There are so many other aspects of this landscape for us to enjoy.

The ecology of Minnewaska is shaped by the geology. A Silurian quartz conglomerate rock (known as Shawangunk grit) forms the horizontally bedded cliffs so popular for rock-climbing. The high quartz content of the rock (98% on average) provides virtually no buffer for acid rain.

The soils at Minnewaska hold little moisture except in pockets of boggy wetland areas where water collects in depressions in the rock. The conglomerate is a fractured bedrock system so water tends to run off quickly into streams and channels, or slowly drips into fractures rather than soaking into the soil.

There are numerous wetlands at Minnewaska, in spite of the solid rock and thin soil. Many of the wetlands are in small basins on level areas of the slab. The largest wetland complex is associated with Mud Pond and the upper reaches of the Fly Brook. These wetlands were influenced by centuries of beaver dam construction. Many of the smaller wetlands in the Shawangunks are mere pools or soggy patches of organic matter in slight depressions in the rock. These spots dry up completely during any extended dry period. Minnewaska State Park Preserve boasts three magnificent sky lakes; Awosting, Mud Pond and Minnewaska. These deep mountaintop lakes form the headwaters of streams. Awosting and Mud Pond feed into the Peter's Kill and Minnewaska Lake is the headwaters of the Coxing Kill. Minnewaska is about 65 feet and Awosting Lake is over 90 feet in its deepest part. All surface waters are acidic. The average pH of the lakes ranges from 4.2 to 4.7. No fish are found in any of the lakes in Minnewaska State Park Preserve.

The lakes are clear, but not devoid of life; Minnewaska Lake, for example, supports a healthy population of a rare sphagnum moss at a depth



300 years old and stand just over five feet tall. Small pockets of soil accumulating in cracks or depressions allow the pitch pines to maintain a roothold along with an array of lichens, mosses and a few other vascular plants such as blueberry, huckleberry and laurel. Scrub Oak is the other small tree that is found in this forest community.

Mixed deciduous forests here are dominated by Chestnut Oak trees. Hardwood forests in Minnewaska are found on slopes where the soil has been able to develop and avoid erosion. Oak, birch, and maple species with some White Pine are common in these forests. The most common tree is the thick-barked chestnut oak, which is adapted to fire as is the pitch pine. The understory is more diverse, with Striped Maple, Shadbush and



Sassafras. The shrub layer is thick with mountain laurel, sheep laurel, blueberry and huckleberry. In the shaded ravines with wetter soil, dense stands of hemlock forest prevent understory development. These hemlock ravines are in danger from an exotic insect pest that kills the hemlock trees.

Cliff and talus communities are a distinctive Shawangunk feature. Cliffs attract many different types of wildlife from small lizards called five-lined skinks to Peregrine Falcons nesting on the high outer cliffs. Many plants colonize here, including a rare



fern species. Lichens are found on bare rock throughout the park. Notable are large foliose lichens, called Rock Tripe. Rock Tripe is a dark wavy disk attached to the vertical white cliffs. This slow-growing species can take 25 years to achieve the size of a quarter. Talus habitat exists in piles of boulders at the base of the cliffs providing microhabitats for a variety of animals, including porcupines.