

## Welcome to the Flume

You are entering a unique geological area with many scenic wonders. We hope you will enjoy your visit. Use this pamphlet as your guide. Paths in the Flume are graded gravel and most kinds of footwear are suitable, however, the paths are steep in several places.

The entire walking loop through the Flume and back to the Visitor Center by way of the Pool is two miles (3.2km) and takes approximately one hour and 15 minutes.

Starting at the Gilman Visitor Center, follow the Flume Path, then go downhill past a huge 300-ton boulder, and cross the Pemigewasset River on a scenic covered bridge on the way to Boulder Cabin.

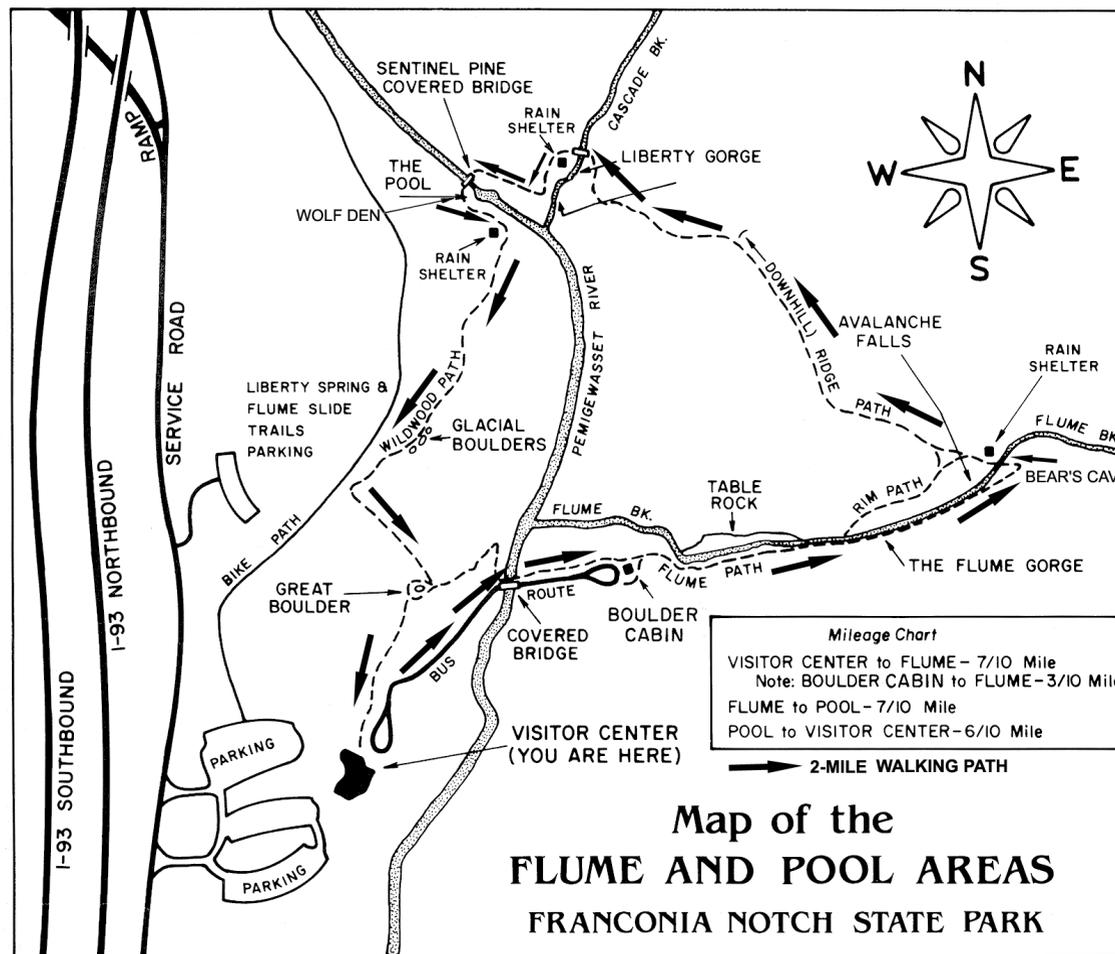
From Boulder Cabin, follow the Flume Path uphill through the Flume Gorge for 3/10 mile (483m). At the top of the gorge, continue downhill on the Ridge Path to

the Pool. Walk across the Sentinel Pine Covered Bridge and follow the Wildwood Path back to the Visitor Center.

You may shorten your walk by riding the bus from the back of the Visitor Center to Boulder Cabin. The bus operates from late June through mid-October. Your total riding and walking time would be one hour.

If you prefer to visit just the Flume, you may cover the 7/10 mile (1117 meters) distance by riding the bus to Boulder Cabin and walking from there. At the top of the gorge, follow the Rim Path back to the Flume Path and return to Boulder Cabin to take the bus back to the Visitor Center. The total round-trip riding and walking time would be approximately 40 minutes.

Note: For your safety, do not walk on the Flume Bus Road. Please stay on the gravel trails and behind the railings.



## How the Flume Was Formed

Nearly 200 million years ago in Jurassic times, the Conway granite that forms the walls of the Flume was deeply buried molten rock. As it cooled, the granite was broken by closely spaced vertical fractures which lay nearly parallel in a northeasterly direction. Sometime after the fractures were formed, small dikes of basalt were forced up along the fractures. The basalt came from deep within the earth as a fluid material, and because of pressure, was able to force the Conway granite aside. The basalt crystallized quickly against the relatively cold granite. Because of this quick cooling, the basalt is a fine-grained rock. Had this material ever reached the surface, it would have become lava flows.

Erosion gradually lowered the earth's surface and exposed the dikes. As the overlying rock was worn away, pressure was relieved and horizontal cracks developed, allowing water to get into the

rock layers. The basalt dikes eroded faster than the surrounding Conway granite, creating a deepening valley where the gorge is now.

The gorge was covered by glaciers during the Ice Age, but the ice sheet did not greatly change the surface. It partially filled the valley with glacial debris and removed soil and weathered rock from the vicinity. After the Ice Age, Flume Brook began to flow through the valley again.

The highly fractured granite and basalt have been eroded by frost action as well as by the brook's water. As you walk through the Flume, look at the floor of the Gorge and you many notice remnants of the main basalt dike, and on the walls of the gorge, small trees are growing. Erosion is still occurring.

**The Flume Covered Bridge.** This picturesque covered bridge is one of the oldest in the state. It was built in the 1886 and has been restored several times. Such bridges were often called “kissing bridges” because of the darkness and privacy they provided. This bridge was built across the scenic Pemigewasset River. Pemigewasset means “swift or rapid current” in the Abenaki Indian language.



**Table Rock.** Over time, the rushing waters of the Flume Brook has exposed this large outcropping of rock. Table Rock is a section of Conway granite that is 500 feet (150m) long and 75 feet (20m) wide. Caution: The rocks are slippery - please stay on the trail.

**The Flume Gorge.** The Flume is a natural gorge extending 800 feet (241m) at the base of Mt. Liberty. The walls of Conway granite rise perpendicularly to a height of 70-90 feet (21-27m) and vary in width from 12-20 feet (3.6-6m). The boardwalk allows you to look closely at the growth of flowers, ferns and mosses found here. The Flume was discovered in 1808 by 93-year-old “Aunt” Jess Guernsey when she accidentally came upon it while fishing. She had trouble convincing her family of the marvelous discovery, but eventually persuaded others to come and see for themselves. At that time, a huge egg-shaped boulder hung suspended between the walls. The rock was 10 feet (3m) high and 12 feet (3.6m) long. A heavy rainstorm in June of 1883 started a landslide that swept the boulder from its place. It has never been found. The same storm deepened the gorge and formed Avalanche Falls.

**Avalanche Falls.** At the top of the Flume is a close view of Avalanche Falls. The 45-foot (13.6m) waterfall creates a roaring sound as the Flume Brook enters the gorge. The falls were formed during the great storm of 1883, which washed away the hanging boulder.



**Liberty Gorge.** On the Ridge Path, look for a turnoff that leads you to Liberty Gorge, a beautiful cascading mountain stream that flows through the narrow valley.

**Sentinel Pine Bridge and Pool.** The Pool is a deep basin in the Pemigewasset River. It was formed at the end of the Ice Age, 14,000 years ago, by a silt-laden stream flowing from the glacier. The Pool is 40 feet (12m) deep and 150 feet (45m) in diameter, and is surrounded by cliffs 130 feet (39m) high. A cascade rushes into it over fragments of granite that have fallen from the cliffs above.

On the high cliff above the Pool, the Sentinel Pine stood for centuries. It was one of the largest in the state, nearly 175 feet (53m) high, with a circumference of 16 feet (4.8m). The hurricane of September, 1938 uprooted the giant pine whose trunk bridges the river above the Pool and forms the base for the covered bridge. The bridge offers a fine view of the Pool.

**Wolf Den (optional).** This is a narrow, one-way path that involves crawling on your hands and knees and squeezing through rocks.

**Glacial Boulders.** As you walk through this area, you will notice many boulders. Some are quite large, weighing over 300 tons. During the glacial period over 25,000 years ago, a great ice sheet more than a mile thick moved over this area. The mass of ice was so powerful, it moved both large and small boulders. As the ice sheet retreated, these boulders were left behind. They are called glacial erratics.

The Flume Gorge, a feature of Franconia Notch State Park, is operated by the N.H. Division of Parks and Recreation.

For further information on the Flume Gorge, call 603.745.8391 or visit [www.flumegorge.com](http://www.flumegorge.com).

[nhstateparks.org](http://nhstateparks.org)



## A Guide to the Flume Franconia Notch State Park

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