ICE GULCH

Ice Gulch is one of the most unusual ecological areas in the White Mountains region. It is a very deep, east-west oriented ravine that is filled with a massive accumulation of large boulders. The unusual combination of canyon-like topography and east-west orientation results in a ravine floor that receives significantly less direct sunlight than surrounding areas on average, while the chaotic arrangement of talus creates numerous cavities for water to collect and freeze. These factors produce a microclimate that is significantly colder than normal, resulting in vegetation that is characteristic of much higher elevations. The natural community that has developed under these conditions is called the subalpine cold-air talus barren, and includes many plants usually found on mountain-tops above 3,000 feet. This community is extremely rare in New Hampshire, and has been documented from only six locations in the state, with Ice Gulch the largest known occurrence.

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This brochure was created by the New Hampshire Natural Heritage Bureau as part of a series designed to educate the public about the state’s special plants and natural communities. More site guides and profiles are available on the Visiting New Hampshire’s Biodiversity program page at:

www.nhnaturalheritage.org

WARNING

This is a difficult hike, involving careful climbing over wet, slippery rocks. Only visitors comfortable with travel in challenging terrain should attempt this trip. Although the loop may be hiked in either direction, we strongly recommend that you hike up the ravine, not down it, as descending over the boulders can be especially arduous.

PROPERTY USE GUIDELINES

This property is open to the public for recreation and education. Please, for the protection of the area and for everyone’s enjoyment:

• NO MOTORIZED WHEELED VEHICLES.
• CARRY OUT ALL TRASH.
• NO CAMPING OR OPEN FIRES.
• PRACTICE LOW-IMPACT RECREATION.

RANDOLPH MOUNTAIN CLUB

The trail system at Ice Gulch is maintained by the Randolph Mountain Club. The purpose of the RMC is to promote enjoyment of the Randolph area through hiking, trail development, upkeep of camps and shelters, and sharing the collective knowledge of its members.

www.randolphmountainclub.org

New Hampshire Natural Heritage Bureau

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TRAIL DESCRIPTION:
From Randolph Hill Rd, cross the road and follow signs for the Ice Gulch Path. The trail here crosses private property. Please respect the landowners and stay on the trail.

Initially, the trail passes through managed forest, crossing several logging roads and three significant streams. After roughly 2 miles, the trail splits at a tree called “The Marked Birch.” The left fork heads directly to the lower end of Ice Gulch. The right fork takes a scenic detour down a steep slope to the base of Peboamak Falls, a pleasant cascade on Moose Brook. The trail climbs steeply up beside the falls, then follows the brook above, crossing it several times (brook crossings may be difficult in high water). Roughly a quarter mile beyond the falls, the trail passes the upper junction with the cutoff trail, and arrives at an area of groundwater seepage called Fairy Spring. Just beyond the spring, you arrive in Ice Gulch itself.

As you enter the gulch, the south-facing slope to the right is covered by a field of huge boulders, which collectively make up a montane lichen talus barren. Vascular plants are very sparse in this natural community, with lichens on the rocks being the primary vegetation type. To the left, the shaded, north-facing slope is much cooler and more moist, and supports the spruce – moss wooded talus community. The forest here consists of a dense cover of red and black spruce (Picea rubens and P. mariana, respectively) growing over boulders that are draped with a lush layer of mosses and liverworts.

From this point onward, the trail becomes much more challenging, climbing over large boulders that are often wet and slippery. Great care should be taken while maneuvering through this area.

Navigating the boulders, the trail now climbs steeply up through the bottom of the ravine. Cool air sinks and collects here, creating a microclimate that mimics areas much higher in elevation. The effects of this cold air can be seen in the krummholz-like, stunted black spruce growing along the trail. These trees grow very slowly, and can be quite old despite their small stature.

About a quarter mile beyond Fairy Spring, the trail squeezes through a narrow portion of the gulch, where it is shaded by trees from the surrounding slopes. Be especially careful of your footing here. Shortly after, the gulch opens up again, revealing what appears to be a long, narrow basin. Enough cold air is trapped in this area to create conditions for the subalpine cold-air talus shrubland community. Here again, black spruce and balsam fir (Abies balsamea) are stunted by the cold, and are joined by other plants typically only seen at high elevations, such as alpine bilberry (Vaccinium uliginosum), mountain cranberry (Vaccinium vitis-idaea), and dwarf birch (Betula minor). Mats of Labrador tea (Ledum groenlandicum), a species of both the subalpine zone and lowland bogs, also grow here in abundance, sometimes covering entire boulders.

While traveling through this community, stop to peer into the gaps between the boulders. There is a good chance you will find blocks of ice, which may last through the entire summer without melting. This persistent ice contributes to the unique growing conditions, and gives the ravine its name.

Beyond this basin, the trail passes through another narrow area and then enters a final opening in the ravine, known as the Vestibule, which has a similar cold microclimate. From here, climb steeply up the head of the ravine alongside a series of small cascades. At the top of the ravine, the trail turns sharply to the south. The footing is generally good, though the trail can be wet in places. It is about 2.5 miles back to Randolph Hill Rd.

Labrador tea in bloom on a talus boulder in Ice Gulch.

Maps and photos by Ben Kimball, 2009.