

### 9. Micro-climate

Look ahead to where the small stream crosses the trail. The terrain is flat. Look back at the trail behind you. You descended a slope to reach the flat area, just like cool air settles into small valleys, flowing downhill from steeper hillside slopes above. Small changes in the topography (shape of the land) create site-specific differences in temperature and moisture called "microclimates." Different microclimates provide habitat niches (favorite homes) for different plants along a relatively short distance. Imagine yourself as a small animal. You need to find food, water, and places to hide from predators and space to roam. Microclimates provide special habitat opportunities for different wildlife and plants. An example ahead: the richer soil of the stream bed provides habitat for a wider variety of club mosses and wildflowers on the forest floor.

### 10. Beaver Pond and Bog

Why is this open area different from the surrounding forest? What happened here? This opening was created by beavers that dammed Lost River to flood the Kinsman Notch valley floor. Do you see any recent evidence of trees cut by beavers? Beavers are large rodents that feed on the inner bark of trees. Their favorites are birch, aspen, alder, and willows. Are there beavers living here now? When the beavers ran out of food, the pond drained, and the area became a wet meadow. Beavers move to new areas to build dams when food supplies are depleted. Beavers return to this meadow when alder and birch trees mature, a cycle that has continued for hundreds of years.

### 11. Snag Trees / Appalachian Trail

Look at the view across the valley. Standing dead trees are called "snags." Snags attract insects and provide bird nesting sites. Hawks and owls use snags to perch when scanning the open beaver meadows for prey. Woodpeckers glean ants and beetles from rotting wood of dead trees. Here at the edge of the meadow, you can view the steep north face of Mt. Jim and Mt. Blue where the Beaver Brook Trail descends north into Kinsman Notch, crosses Route 112, and ascends as the Kinsman Ridge Trail. These hiking trails are a rugged segment of the renowned Appalachian Trail, a 2,160 mile hiking trail from Maine to Georgia.

### 12. End of the Trail

You made it! As you complete the Kinsman Notch Ecology Trail Loop, you arrive back at the parking lot where Lost River begins its journey. Think about the roles of glaciers, plants, wildlife and humans in shaping this forest today.

The Society for the Protection of New Hampshire Forests was founded in 1901 to save the White Mountains from careless logging and forest fires. Lost River is the Forest Society's oldest forest reservation, acquired in 1912. Today the Forest Society is New Hampshire's largest land trust. Please join us to protect more special places statewide!

Please return your trail guide to the box provided. Enjoy the rest of your visit.

#### Use Guidelines

For the enjoyment of all, please respect the following guidelines while visiting this natural area:

- ◆ This property is open from dawn to dusk. However, the gate is closed promptly at the hours listed at the parking area entrance.
- ◆ This is a carry in-carry out natural area. Please do not litter! Take out what you bring with you.
- ◆ Pets are welcome under the following conditions:
  - Pet waste must be picked up and carried out.
  - Owners must maintain active and vocal control over pets at all times.
- ◆ No wheeled vehicles are permitted.
- ◆ No smoking or fires of any kind are permitted.
- ◆ No alcohol or drugs are permitted.
- ◆ No camping allowed.

Disregard for the rules above may result in your being asked to leave the property.

### About the Society for the Protection of New Hampshire Forests

The Society for the Protection of New Hampshire Forests (Forest Society) is the state's oldest and largest nonprofit land conservation organization. Supported by 10,000 families and businesses, the Forest Society's mission is to perpetuate the forests of New Hampshire by establishing permanent conservation areas on public and private lands, and by promoting wise stewardship of all lands.

Since its founding in 1901, the Forest Society has led numerous statewide conservation initiatives including the campaigns to create the White Mountain National Forest and to save places like Lost River, Franconia Notch, Crawford Notch, and Mounts Monadnock, Kearsarge, and Sunapee. In addition, we have protected more than 100,000 acres on more than 160 parcels like the Lost River Reservation throughout the state. We use those lands to practice and teach responsible forestry, and we invite the public to enjoy them for low-impact, daytime recreation.

Land conservation and stewardship require action and a great deal of work. The Forest Society is in the field every day, conserving the lands that keep New Hampshire *New Hampshire*. But collective strength begins with individual action. We could not have accomplished all that we have without the support of our individual members.

#### Join Us!

Forest Society membership is much more than a monetary donation: it is a statement that you care enough about New Hampshire's special places and natural beauty to act. Please take a moment to consider how important you are to preserving our most important landscapes today and for generations to come.

For more information or to become a Forest Society member:

*Visit* us at [www.forestsociety.org](http://www.forestsociety.org)

*email* [info@forestsociety.org](mailto:info@forestsociety.org)

*Call* us at (603)224-9945

*Write* us at

54 Portsmouth Street  
Concord, NH 03301

# Welcome to the Kinsman Notch Ecology Trail at Lost River Reservation

*This property  
is owned and  
managed by the*

SOCIETY FOR THE  
PROTECTION OF  
NEW HAMPSHIRE  
FORESTS



## 1. Welcome

Maintained by the Society for the Protection of New Hampshire Forests, the Kinsman Notch Ecology Trail (KNET) is a half-mile loop of easy to moderate hiking difficulty. Along the way, you will learn the natural history and ecology of this unique area. Lost River is owned by the Forest Society and managed by White Mountains Attractions. The trail and picnic area located at the parking lot are free. A fee is charged for the Lost River gorge tour. Gorge tickets are sold in the main visitor center across the brook.

For your safety, please stay on the Kinsman Notch Ecology Trail and beware of exposed roots and rocks. Do not pick plants, peel bark from trees or disturb any natural features along the trail. Remember: Take only photos and leave only footprints.

## 2. Dilly Cliff Junction

At the fork, bear left to begin the Kinsman Notch Ecology Trail loop. Look up at the Dilly Cliff above. The right fork leads to the rugged, steep "Dilly Cliff Trail," which does not loop back to the parking lot. This challenging trail, which ascends gradually at first and then steeply to the Dilly Cliffs, is for experienced hikers in good physical condition who are wearing proper hiking boots.

## 3. The Mixed Forest

Look around. How many different kinds of trees grow here? This is a mixed forest because there are both deciduous broad-leafed (hardwood) trees and coniferous evergreen (softwood) trees. The most common evergreen here is the balsam fir. Can you smell it? You will also see broad-leafed paper birch, yellow birch, red maple and beech trees.

## 4. White Mountain National Forest

Listen: How many different sounds can you hear around you? While Lost River is often a busy place during the summer season, it is located at the edge of the vast 800,000-acre White Mountain National Forest in northern New Hampshire and western Maine. Located within a day's drive of 70 million people, the White Mountain National Forest is a destination for more than 5 million visitors each year.

There are many places in the White Mountains where natural sounds are the only sounds. As you hike, listen for natural sounds (like bird song, splashing water, and rustling leaves) and human sounds (like voices and passing cars). Which are more common?

## 5. Granite Boulders and Small Caves

This enormous granite boulder is called a "glacial erratic." It was plucked from the mountainside and deposited on the floor of Kinsman Notch by a mile-thick sheet of moving ice more than 10,000 years ago during the last glaciation.

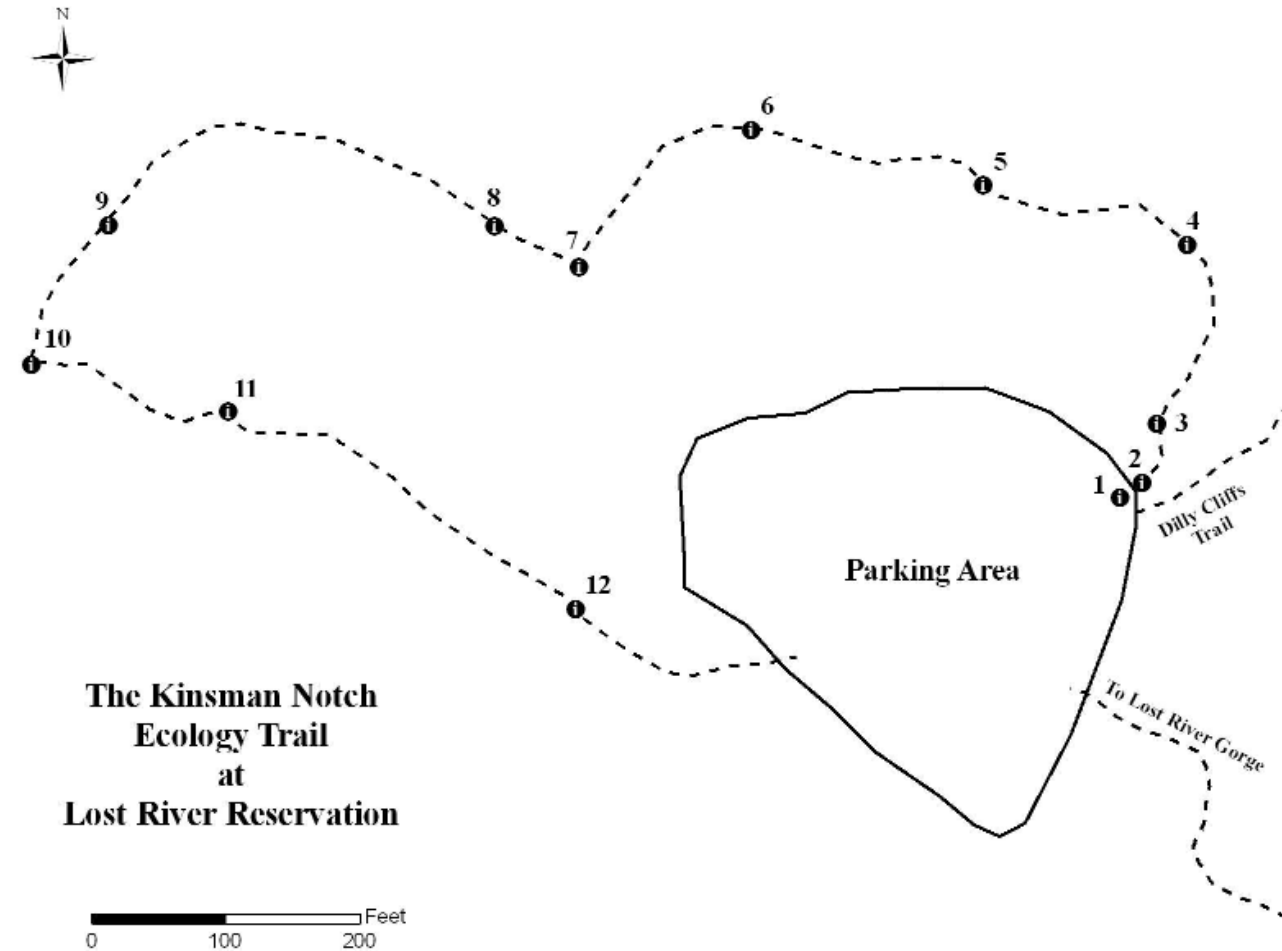
How tall is this boulder? How tall are you? Can you estimate the height of the boulder by calculating how many times taller this boulder is by comparison?

Caves between granite boulders and the crevices located in jumbles of boulders called "talus" fill with snow and ice each winter. In spring, cold running water trickles down to feed Lost River just as it has for thousands of years. Small caves like these are often used as den sites by wildlife including porcupines, bobcats, and bears. Turkey vultures use talus slope caves as ground nest sites.

You'll find more caves along this trail, but you're unlikely to find animals hiding in them. Why? Because most wildlife avoid places where people are frequent visitors.

## 6. Forest Succession

Look up. Many of the paper birch trees in the forest canopy or "overstory" here are dead or dying. Sunlight now reaches the "understory" of evergreen balsam firs. In time, the balsams will shade the trail again. Older dying trees are replaced by younger trees in a process called "succession." As dead trees fall and rot, nutrients are recycled back into the thin soil of the forest floor. Life in Kinsman Notch isn't easy - deep snow, high winds, winter and summer temperature extremes, and shallow, rocky soils create stress. Only the trees best adapted to harsh sub-alpine conditions - birch, spruce and fir - are successful, and most live shorter lives than trees growing in more sheltered locales.



## 7. Forest Floor

Look down. What creates the soft "carpet" of the forest floor? Fallen leaves, dead limbs, and twigs decay to create soil for spring and summer wildflowers, ferns, shrubs, and larger trees. What can grow on bare rock? Lichens are small plants that colonize bare granite through the process of succession. Lichens decompose rock to create enough soil for mosses and eventually ferns. Eventually, larger trees may grow on top of granite boulders with their roots anchored into expansion cracks formed by water freezing and splitting the rock. Watch for boulders along the trail that are colonized by plants.

## 8. Red Spruce Forest

You are now approximately halfway along the Kinsman Notch Ecology Trail. Notice the darker flaky bark of the largest trees here. Q: Are they broadleaved or evergreen? A: They are evergreen red spruce. The shade-tolerant spruce will replace sun-loving birch over time. Spruce and fir are a characteristic forest type common to the White Mountains and northern region. Can you tell the difference? Red spruce needles are scratchy and square-shaped, while balsam fir needles are longer, softer, and flat with tiny white stripes underneath. Which would you rather shake hands with: a spiky spruce or friendly fir?