10. A Savannah
Looking out across the woods, one of the first things you notice is the huge Red oaks and the Sedge ground cover. You are viewing what was once a savanna (an ecosystem more common in the drier Midwest). This area was once cleared of all but the biggest trees, which had been left to provide shade for livestock, and has since probably burned over several times. This savanna is made up largely of the large Red oaks you see interrupting the Hophornbeams and the Sedge ground cover. Do you see the scattering of glacial erratics?

11. Vernal pools
This pond may originally have been a vernal pool deepened by farmers in the 1850s to provide year-round water for their sheep, and more recently for recreation. Around the pond there are many evergreen (softwood) trees that make this stand appear darker than the nearby deciduous (hardwood) stands. The pond is still functioning as a vernal pool because it contains no fish. This permits Spotted salamanders and Wood frogs to breed there successfully. Natural vernal pools have no inlet and dry up annually, thus no fish. Please keep your pets away from the ponds and vernal pools along the trail because they could harm fragile life processes and environment.

12. Topography Change
You have just passed through a mostly deciduous forest and are now looking at a dense Hemlock stand. This is the result of a change in the topography. Hemlocks do well here because they are on a cooler and moister northwesterly slope. Hemlocks were once heavily logged in the past. Indeed, there is lots of evidence that this area has been logged multiple times. One of the first things to notice is that many stumps of different ages and the variety and mixed ages of the standing trees. Those stumps are the remains of both evergreen and deciduous trees. You can usually tell them apart because evergreen trees are more apt to decay from the outside in whereas deciduous trees decay from the inside out. We believe that the first logging occurred here during “sweep” logging in the 1830s. The wood was used largely for firewood and building construction. The area was then logged again about 1870, and most recently around 1990. This area helps to preserve the history of the Windmill Ridge.

13. The Windmill Ridge
You are now hiking on the spine of the Windmill Ridge, which runs through portions of Rockingham, Weston, Brookline, Putney, and Dummerston. The Ridge is about 16 miles long, averages 2½ miles in width, rises to about 1633 feet (at the Pinnacle), and covers approximately 25,800 acres. On its eastern slope it is the source of East Putney Brook and Sackets Brook, and on its western slope, of Long Creek and Grassy Brook. The Ridge provides valuable wintering areas for deer. And its north-south orientation makes it an important migratory route for various mammals and birds. Following its long-time use by the Abenakis as a hunting ground, this whole area was in the 17th century appropriated by the King of England. Soon thereafter to be acquired by him by the Holden family, and not to change hands again until the 1990s when it was purchased by the WINDBILL HILL PINNACLE ASSOCIATION. The Association maintains its more than 1800 acres for habitat protection, outdoor recreation, environmental education, and quiet reflection. In all, about 13% of the Ridge is now permanently protected from development. What could you do to help care for the Ridge?

14. Logging
We are in an area that has experienced substantial logging in the past. Indeed, there is lots of evidence that this area has been logged multiple times. One of the first things to notice is that many stumps of different ages and the variety and mixed ages of the standing trees. Those stumps are the remains of both evergreen and deciduous trees. You can usually tell them apart because evergreen trees are more apt to decay from the outside in whereas deciduous trees decay from the inside out. We believe that the first logging occurred here during “sweep” logging in the 1830s. The wood was used largely for firewood and building construction. The area was then logged again about 1870, and most recently around 1990. This area helps to preserve the history of the Windmill Ridge.

15. Sackets Brook
You are crossing the headwaters of Sackets Brook, a 7.5-mile stream entering the Connecticut River in Putney. Its 6500-acre drainage basin (which captures the rain that falls onto this catchment area (433.3 inches per year on average). Roughly half of this — about 120 gallons per second is discharged by the Brook into the Connecticut River. The upper 690 acres (11%) of the Sackets Brook drainage basin fall within the WHPA Windmill Hill Nature Reserve, thus insuring its continued flow and headwaters purity far into the future. Sackets Brook has been a major asset to Putney since colonial times, in the past providing water power to a variety of small saw, grist, paper, and other mills. The Thwing grist mill (on Water St), in operation from about 1796 to 1946, has been preserved by the Putney Historical Society for all of us to enjoy. Not far upstream from that mill (where Mill St becomes Hi-Lo Biddy Rd) is a very special stone arch bridge that was built in 1906 by James Otis Follett.

16. Stone Walls – II
The stone wall you are facing here must be thousands of feet long. In the 1830s a farmer would build a wall like this with the help of his family or neighbors, and might have been able to lay about 10 to 20 feet of wall a day. The walls were built to keep livestock either in or out of a field, and perhaps also to clear the farmland of rocks and brush. In many places, because of its height, this wall is thought to have enclosed a sheep pasture. This wall was most likely built in the early 1800s and is in fairly good condition for its age. Vermont’s stone walls are so extensive that they have been compared to the great pyramids of Egypt. There is also evidence here of barbed wire, which was put up after 1870 when it was invented, a far less labor-intensive means of fencing.

Recommended for further Reading

How to Use this Trail Guide
As you walk along the trail, you will notice wooden posts with symbols on them. Try to match the symbol on the post with one of the symbols in this Guide. Read the paragraph next to the symbol to learn why the site is significant. The tail of each symbol is a recommendation to follow the numbers in order (counter-clockwise on the map).
1. Stream and Bridge

The bridge you are looking at was probably built by the Holden family, which owned this land for hundreds of years. It was made for carts and wagons to cross the stream and to avoid ice in winter and sugaring season. The stream was so powerful owing to rains in the summer of 2004 that it washed great amounts of soil under the bridge and clogged it. This caused the stream to flow onto the trail and is a great example of how quickly and easily erosion can change the topography of an area. The WINDMILL HILL PINNACLE ASSOCIATION has since restored the stream to its former channel to decrease erosion.

2. Bedrock

Take a look at the amazing rocks in the middle of the trail. These giant rocks are not one-, not two-, but four-hundred million years old. They are pieces of the earth’s crust or bedrock. This bedrock is limy (calcareous) schist (a metamorphic rock with basic minerals similar to the calcium salts found in common hearthburn medications). The rock formed originally as mud under the ocean. Where calcareous schist occurs, the soils are richer for plants. This rock has been exposed by years of wagon, logging, sheep, and foot travel.

3. A Wolf Tree

Check out the enormous sugar maple tree with a forked trunk and bulging branches reaching out on all sides. This “wolf tree,” which stands alone like a lone wolf, is adjacent to the trail and has a trunk far thicker than the other trees in the area. This tree is here because in the mid-1800s it provided shade for sheep and other farm animals. When a wolf tree is young, its branches grow out wider from the trunk because when there are no trees nearby competing for sunlight it can quickly expand its branches sideways. There was no competition for the tree as a sapling because most of the other trees had been cleared by logging and for pasture.

4. Foundations – I

Here you are looking at the site of an old homestead. Look carefully and you will see an old well hole, the foundations of where a house and barn used to be, and signs of a nearby garden. This site used to have lots of pastured land, which is indicated by the scattered wolf trees in the area. The trail itself used to be a wagon road between Westminster and Brookline. These old foundations are interesting because they have been here since around 1870, and you can still tell that people used to live here.

5. Foundations – II

The many house foundations found in Vermont’s woodlands of today let us know that this land had once been cleared and occupied by busy farming communities. In fact, the very substantial foundation here is the remains of a home built by Stephen Holden (1745-1821) when he moved up from Massachusetts in the late 1700s or early 1800s. Just think how long these walls have held up against frost heaving, tree roots, etc.

6. Stone Walls – I

Vermont woodlands contain many thousands of miles of stone walls built by our early settlers for one or more reasons: to keep livestock in or out; to clear a field for tilling; and/or to mark property boundaries. Stone walls are now an essentially permanent feature of Vermont’s rural landscape. They are still useful in describing property boundaries, often prevent soil erosion, and also provide a habitat and thoroughfare for many small creatures.

Can you see that the land-use histories differed on the two sides of the well-built east-west wall found here?

7. [This station no longer exists.]

8. A Maple Stand

As you walk up through the mysterious woods of the Windmill Ridge, you will come to a large Sugar maple stand. In the 1800s, this was a place where sheep and grazed. When Vermont’s sheep farming became too difficult, the nearby farm was abandoned and the field was left to exist on its own. If you look toward the middle of this stand you will see a large old rotted Maple tree that has died of old age. Some think of this tree as the grandparent of all these Maples, but we think of it as one of the ancestors of the mountain itself! All of its grandchildren are growing around it because when the farmer abandoned the field it was subsequently neither mowed nor pastured and this, the grandparent maple, scattered hundreds of seeds, and those seeds have now become young adults.

Maple tree roots put chemicals into the soil that permit sedges to grow, but few shrubs or other flowering plants. You may also notice a scattering of large rocks. As the last glacier melted, it left behind these so-called glacial erratics which it had originally pushed there from the north.

9. The Pinnacle