



HANOVER CONSERVANCY

*Protecting land & water
in our community*

HANOVER HIKE OF THE MONTH

October – Girl Brook & Pine Park

A trail through two worlds.

Hiking distance: 1.6 miles round trip

Elevation gain: 90 feet

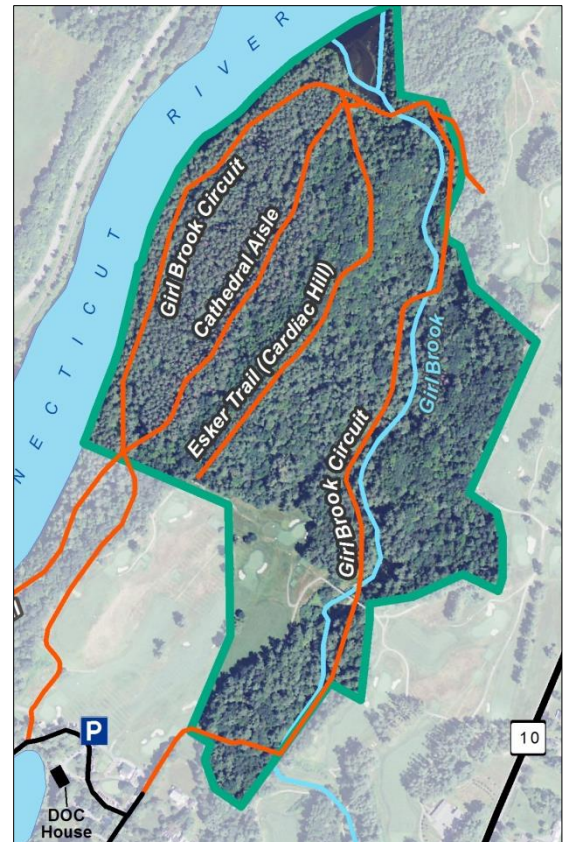
Time: under 1 hour

Driving directions:

- From Downtown Hanover and the Green, drive N on N. Main Street and Rope Ferry Road for 0.6 miles to the Hanover Country Club. Turn left down the hill.
- Park in the roped parking area at the road's curve.
- Today's hike is the Girl Brook Circuit on the map at R.

What you should know:

- ❖ You're about to visit the oldest conservation property in Hanover! Pine Park's 95 acres were protected in 1900 by a group of 17 Hanover residents who sought to prevent the Diamond Match Company from harvesting trees along the river. The park is owned by the private, non-profit Pine Park Association, with management shared by the Town of Hanover and Dartmouth College. Some seven acres of the golf course (parts of holes 1, 5, and 18) are thought to be on Pine Park property.
- ❖ The Girl Brook Circuit Trail skirts the golf course at its beginning and end. Please practice good golf etiquette by halting when a nearby golfer is preparing a shot. Duck if the ball heads your way!
- ❖ Dogs are welcome but must be under your control; please pick up after your pet.



HIKING DIRECTIONS

- Begin your hike at the end of Rope Ferry Road on the east (right) side of the clubhouse. Take the gravel path past the golf carts to a sign that welcomes you to Pine Park. You'll soon come to a second sign at R (amid a nice growth of poison ivy) at the forest's edge.



- The path draws you instantly into a different world than the sun-drenched, sculpted, and manicured land of the golf course, as the trail winds tightly down into the dramatic valley of Girl Brook.
- At the bottom of the hill, bear left at a fork.
- Six minutes into your hike, cross a wooden footbridge over the brook.
- What's this? No water? In late summer or fall you may well encounter a completely dry stream bed – an odd sight (photo L). There's a reason for this. Girl Brook is the most hydrologically challenged stream in Hanover. Its small and intensively developed watershed reaches from CRREL on the north to the summit of Balch Hill on the east and the Dartmouth campus on the south.

Much of its watershed lost its natural forest cover more than 150 years ago. Think farmland followed by pavement, rooftops, rugby field, and golf course. At the driving range on the east side of Lyme Road, swales lined with silt fencing show where this land sheds water toward the brook. Rain falling on all this mowed or developed land has nowhere to go but run off, and can't easily soak into the soil where it could feed the brook more consistently. During a drought and even in normal summers between rains, the brook runs dry. A summer rainfall will drain through quickly, leaving the channel empty. Not a healthy thing for amphibians, fish, and other creatures that require year-round wet habitat.

- Once you've gotten over the shock of seeing a nude streambed, follow the trail along the east side of what is left of Girl Brook. A cart path enters from the right, and you may notice a drainpipe directing golf course drainage into a bowl of rocks to help curb the effects of sudden heavy runoff.
- In five minutes, after passing through the cool shade of hemlocks, the trail and brook pass beneath a high, narrow bridge carrying golf carts across the Girl Brook chasm. This bridge is being fortified.
- Cross back to the west side of the brook channel over a set of rocks laid in the streambed.
- Continue north on the trail, noting occasional large trees strewn across the brook. Such large woody debris is actually healthy for a stream, as it slowly releases nutrients for aquatic life and creates habitat complexity – meaning lots of hidey-holes for fish and other creatures (when there's water in the stream). Now's also a good time to notice how differently-sized bits (sand, small pebbles, larger cobbles) were sorted by the stream when it was moving through. Faster water can carry a larger particle.
- Note the mix of plants here in a relatively wild area surrounded by human influence: many species of native ferns, hemlock, pine, and hardwoods, with occasional invasive non-native buckthorn and barberry. The barberry takes on a bold orange-red in fall, making it stand out. Cool temperatures under the hemlocks and pines contrast with the heat of the open golf course on a sunny day.
- The stream channel continues to fascinate as you follow it – in some places, the roots of trees valiantly holding the streambank together are spread out into thin air where rushing water has torn the soil from around them.
- The verdant landscape around you is as different from a flat farm field or fairway as it could possibly be. The steep, twisted valley of lower Girl Brook reminds you of Camp Brook in the Rinker-Steele Natural Area, Slade Brook in the Jim & Evalyn Hornig Natural Area at Lower Slade Brook, and Mink Brook in the Mink Brook Nature Preserve. They were all formed the same way – these brooks' ancestors carved their way through the clay sediments that lay on the bottom of glacial Lake Hitchcock, after the lake drained 14,000 years ago. Imagine – Girl Brook once flowed far above your head!



→ About 20 minutes after you first reached the brook, arrive at the new Carolyn Tenney Bridge. Named for a long-time Hanover conservationist and founder of the Hanover Conservancy, the bridge was built in 2014.

→ After crossing the bridge, bear left to head west as a cart road comes in from the right.

→ Suddenly, there's water in the stream. Where could it come from, if it wasn't flowing down the brook? Take a few more steps, and the answer becomes clear. This isn't Girl Brook's water – it's the

Connecticut's. Backed up behind Wilder Dam, the Connecticut River floods the lower ends of its tributaries, including Girl Brook. The heroine of our hike meets a rather inconspicuous end at a culvert under the trail, flowing into a small river backwater and on to Long Island Sound.

- In the middle of the trail, a manhole cover for the sewer line looks out of place. It reminds us that waste from nearby neighborhoods and businesses is no longer discharged to Girl Brook or the Connecticut, but is collected and treated.
- Leaving the backwater, head up hill and bear right at the top of the rise, toward the river. Find a spot to view the river but don't get too close to the edge – the riverbank is undercut from erosion.
- Turn left and follow the trail south, keeping the river on your right. You're walking beneath the handsome white pines and hemlocks that compose 79%¹ of the canopy here and inspired the founders of the Pine Park Association. Some of them are over 150 feet tall and 125 years old. Their heavy shade prevents the growth of understory plants. Note that in level places, the forest floor is smooth, without the mounds and pits of old blowdowns that one might expect in an undisturbed forest. This indicates that this old river terrace was once farmland, smoothed by plowing. After the farmland was abandoned around the time of the Civil War, the pines invaded. On steeper ground, the property has probably always been forested.
- A 2015 forest assessment² for Pine Park, supported by a grant from the Hanover Conservancy, warns that the white pines are in decline and that the forest is threatened both by non-native invasive plants and over-browsing of native plants by deer. At least 25% of the white pines have died in the last ten years, and more are in jeopardy. We should enjoy the peace of this "pine cathedral" while we can.
- About 15 minutes' walk south from the point, the Cathedral Aisle Trail comes in from the left. This trail returns to the point, giving another view of this impressive forest. Today, you'll continue heading south and in a few more minutes, come upon the log cabin-style pump house for the golf course's irrigation system. In 2009, an EPA study of river sediments³ in this area found traces of 11 kinds of pesticides, including DDT, some of which might have been used in golf course management in earlier days.
- From here, the trail starts to climb steadily uphill. Avoid the unmaintained trail that branches to the right.
- As you climb, you have the sense of walking between two worlds – to your right, below a steep and wild, heavily forested slope, flows the largest and most powerful river in New England. To your left, golfers are struggling to chase small white balls into little holes over vast expanses of cleared, shaped, planted, mowed, fertilized, and irrigated land.
- Soon you reach the boundary between these worlds at the top of the trail. Pause to be sure no one is trying to drive a golf ball off the tee to your right before proceeding down the trail and back to your car.

The Hanover Conservancy, New Hampshire's oldest local land trust, is a private, non-profit membership organization independent of the Town of Hanover. Learn more about Pine Park at www.hanoverconservancy.org/calendar/council-updates-2/pine-park.

¹ *Summary of Pine Park Visit, 2015. Tom Wessels*

² *Pine Park Forest Assessment, 2015. Jeffrey Smith of Butternut Hollow Forestry*

³ *Connecticut River Water Resources Management Plan, Upper Valley Region, 2009. Connecticut River Joint Commissions*