

Orchid walk #1: Mammoth Narrow Gauge Trail to Upper Terrace

Here's a great opportunity to see up to four species of orchids, plus walk within 2 feet of an active thermal right by the trail.

Kids will like: Seeing the Narrow Gauge Terrace right by the trail, and the upper terrace formation I call 'the elephant' (Orange Spring Mound). They might be better at finding orchids and other flowers along the trail than the grown ups.

Visitor Center/Ranger Station: The Albright Visitor Center front desk, in Mammoth Hot Springs

Orchid species: *Piperia unalascensis* (Alaska rein orchid, or Alaska orchid), *Corallorhiza striata* (Striped coralroot), *Goodyera oblongifolia* (Rattlesnake plantain orchid), possibly *Platanthera dilatata* (white bog orchid).

Best time for blooms: Late May to mid-June, possibly early July for *Piperia*, *Corallorhiza*, and *Platanthera*. Seed pods visible other seasons. Late July to August for *Goodyera oblongifolia* (its evergreen leaves visible other times).

Total roundtrip distance: up to 4 miles, minimum 1½ miles.

Elevation gain: Approx. 500 ft.

Time: 45 minutes to 2 hours.

Other attractions: Get safely up close and personal with the Narrow Gauge Terrace thermal feature, great views of Mammoth area, experience Mammoth without a crowd.

Watch for: Mule deer and elk are sometimes near the trail, give them a wide berth, or turn around. Don't make the mistake of following a buffalo trail rather than the main trail! Sometimes the trail is closed by the Park because of animals. Always follow park rules.

Other interesting flowers: *Lewisia rediviva* (Bitterroot, important food plant for American Indians), *Fritillaria atropurpea* (Spotted fritillary, sometimes also called 'leopard lily'), *Balsamorhiza sagittata* (arrowleaf balsamroot), has beautiful yellow flowers that boom in large colonies coloring whole hillsides. Seeds were used as food by American Indians.

GPS:

Trailhead, UTM 12T 523290 4980096

Piperia unalascensis (Alaska orchid):

UTM: 12T 522878 4979718, 12T 522817 4979519, 12T 522877 4979696

Corallorhiza striata (Striped coralroot):

UTM: 12T 0522878 4979768, 12T 0522808 4979499, 12T 522878 4979741

and other locations

Platanthera dilatata (White bog orchid): 12 T 523225 4980034

Goodyera oblongifolia (Rattlesnake plantain orchid): 12 T 522949 4979046

Let's Get Moving!

The trail starts north of the Liberty Cap from the parking area near the stone building that used to be the judge's house. Most people call this the "Beaver Ponds" trail, but it is also the start of the Howard Eaton Trail that runs through a lot of Yellowstone, and is the start of the Sepulcher Mountain trail. As you begin, the trail parallels a small stream that comes directly out of the Mammoth Hot Spring terraces. After the large trailhead sign (read it!), look to your left as you walk near that creek. In a wet year you might spot a bog orchid here (*Platanthera dilatata*). Continuing you will soon be beside a larger stream, Clematis Creek. Even in this section start

looking for orchids along the trail – I’ve found at least one striped coralroot hidden right next to the trail along here. You will cross a bridge, and in this short section there are often a lot of songbirds such as yellow-rumped warblers, and various kinds of sparrows. Occasionally there is an elk, deer or buffalo – keep your 25 yard distance. If an animal is in the trail, the trail belongs to the animal, not you. Come back another time, or back off and wait until the animal moves on.

You’ll come to a slightly larger bridge over Clematis Creek at a trail junction, and you will make a sharp left turn *without* crossing the bridge. The branch of the trail that crosses the bridge is the Beaver Ponds trail. The left-hand branch turns sharply and starts uphill. The sign calls this the Sepulchre Mountain trail. As you follow this uphill, you start to get nice views of historic Fort Yellowstone.

The trail levels off, and here is where the orchids grow. Usually I find the striped coralroots orchids (*Corallorhiza striata*) on the left-hand side of the trail, near the large Douglas fir trees (*Pseudotsuga menziesii*), but sometimes they are on the right. The Alaska rein orchids (*Piperia unalascensis*) are usually on the righthand side of the trail. The Alaska orchids are hard to spot, looking almost like an odd type of grass. They hide among other plants such as arrowleaf balsamroot (*Balsamorhiza sagittata*). Make sure you do the “sniff test” if you find an Alaska orchid in bloom – the scent is difficult to describe but pleasant. You should find the coralroots first as you ascend, and you might also spot some seed pods from the previous year. The striped coralroot orchids are a beautiful deep red wine color but have no fragrance. I’ve shown photos of both blossoms and seed pods. They begin at about 2/3 mile from the trailhead, at about 6700 ft elevation. The Alaska orchids start soon after you spot the coralroots, and extend in a scattered colony for about ¼ mile.

My guess is that this is probably the largest colony of *Piperia unalascensis* in Yellowstone National Park. I also found this orchid near West Thumb and Artist’s Paint Pots. The Rocky Mountain Herbarium records show them in the Norris area, Black Sand Basin, along the Firehole River, and near Old Faithful, but I haven’t found them in those places. A colony here in Mammoth was found blooming on July 21, 1899 by botanists Aven and Elias Nelson. That’s over 100 years ago! And another botanist found them in the same locality in 1906. The 1899 herbarium record includes the area where I’ve found these orchids. I like to think I’m looking at the orchid descendants of those 1899 collections.

Keep going or turn around?

After you enjoy the orchids, you can go back the way you came, or keep going. Keep going at least until you get to the “Narrow gauge terrace”, a thermal feature very close to the trail marked by a sign. This is about as close as you can safely get to a thermal feature in Yellowstone. Some warm water is running out of this terrace almost right into the trail. As you look across the top of it, the view is enchanting.

Keep going and you’ll soon see some formations of the upper terraces to your left. To me, one of them looks just like an elephant. There’s a boardwalk near a parking pullout on the road below you. You can descend from the trail to the road on the trail at a couple of points, but be careful on the road. Yellowstone National Park is the definition of distracted driving!

After checking out what I call “the elephant” (Orange Spring Mound) there are several ways you can go. 1) Go back the way you came and find more orchids on the way back! 2) Get back on the trail and explore a little further as it crosses a meadow with more thermals that are mostly dormant. There is some modern human history in the meadow too – some old wooden structures around some of the dormant hot springs, and finally a small cave with dangerous

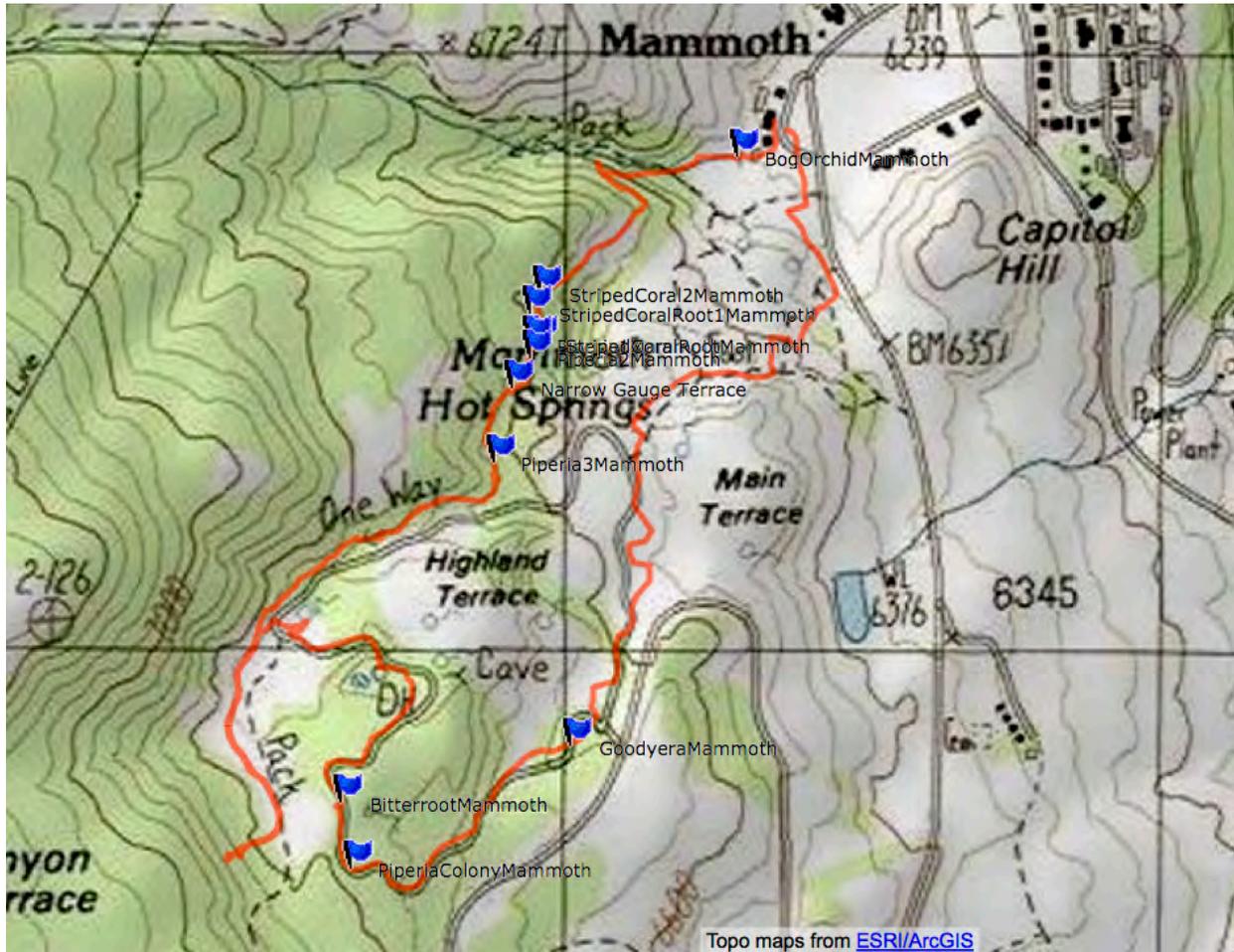
carbon dioxide levels. 3) Follow the edge of the Upper Terrace Drive down and around; then pick up the boardwalks that descend to the main terraces of Mammoth Hot Springs. If you follow the road, listen for cars behind you. Following the road, on the right you will see a sign for “Bath Lake”, and no lake, just a dry depression. Notice a steel cover over something near the road that looks like water utility works of some kind. And it probably was. Bath Lake was reportedly a place that people bathed, though women weren’t allowed.

Along the road edge further down, I found some bitterroot plants (*Lewisia rediviva*) in bloom in late June. Bitterroot was an important food plant to American Indians, and is mentioned in the journals of Lewis and Clark. It is a rich pink color in bloom. The historical herbarium records do not have many recorded instances of bitterroot in Yellowstone, but the records also show it was found here in Mammoth in 1885.

Not far before you come to the gate for the Upper Terrace Drive, you can look on your right for the green leaves of a colony of *Goodyera oblongifolia* (Rattlesnake plantain orchid). They grow under some small fir trees in the shade. Their evergreen leaves can form a ground cover in places. At the end of the Upper Terrace Drive you’ll see a parking lot and the boardwalks start to your left. Take the boardwalks down and enjoy the terraces of Mammoth Hot Springs. As you descend on stairs and boardwalks, enjoy the great view of Mount Everts across the valley. Are you glad you got out of the crowds on the Narrow Gauge Terrace Trail?

More trail information. This trail is not covered in Mammoth Hot Springs Trail Guide available at the lower terrace trailhead and visitor center. But it is shown on the Mammoth Area Ski Trails map. The trail is used for guided snowshoeing in winter. Narrow Gauge Trail is Hike #1 in Anderson & Anderson’s book, but they don’t mention the orchids. The trail is also described in Marschall & Marschall, p. 70-71 “Howard Eaton Trail – Mammoth to Glen Creek”.

Map of Narrow Gauge Terrace Hike



(Map created in GPSVisualizer from data recorded by me personally:
http://www.gpsvisualizer.com/map_input)

Striped Coralroot (*Corallorhiza striata*)

Locations: Mammoth Narrow Gauge Trail
Approximate blooming: Late May to mid-June
Found in Yellowstone since: at least 1936

Buds in Context



May 30, 2015
Mammoth Narrow Gauge Trail

Blooming Plant



May 30, 2015
Mammoth Narrow Gauge Trail
Seed Pods

Blossom detail



May 30, 2015
Mammoth Narrow Gauge Trail



July 6, 2015 Mammoth Narrow Gauge Trail

Alaska Rein Orchid (*Piperia unalascensis*)

Locations: Mammoth Narrow Gauge Trail, Artist's Paint Pots, West Thumb, Frying Pan Spring pullout

Approximate blooming: late June to mid-July

Found in Yellowstone since: 1886

Plant in context



July 6, 2015
Mammoth Narrow Gauge Trail

Blooming Plant



July 6, 2015
Mammoth Narrow Gauge Trail

Blossom detail



July 6, 2015
Mammoth Narrow Gauge Trail

Seed Pods



September 26, 2015
Mammoth Narrow Gauge Trail

Rattlesnake Plantain (*Goodyera oblongifolia*)

Locations: Mammoth Narrow Gauge Trail, Lone Star Geyser, South Rim Canyon

Approximate blooming: Late July through August

Found in Yellowstone since: at least since 1952

Blossom detail



August 9, 2016 Mammoth

Plants in Context



August 27, 2015 Canyon

Leaves



June 13, 2015 Lone Star Geyser Trail

Seed pods



August 9, 2016 Mammoth