

In Search of “Smokianum”

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For at least 25 years, I have observed plants of a small-leaf rhododendron with purple flowers hanging off rocky cliffs in the Great Smoky Mountain National Park. It reminded me of ‘Ramapo’ from a distance and seemed different from our other native lepidotes. The taxonomists claimed it was just *R. minus*.

The plants are not easily accessible and tend to bloom late in the season. Even when not in bloom, the dwarf habit and small foliage is distinctive. They can easily be seen along Rt. 441, the main road through the Great Smoky Mountain National Park, as it descends from Newfound Gap to Gatlinburg.

Since it is difficult to get near the plants to inspect the blooms, we tried to stop along that highway to photograph variations at the end our annual native azalea treks. The species usually flowers at the end of June to early July.

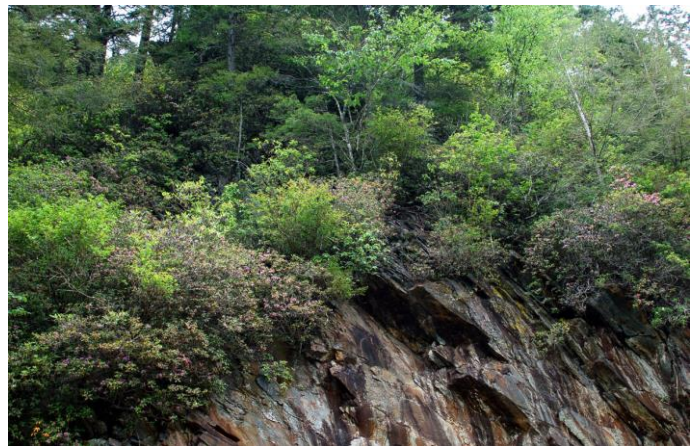
The most amazing thing is how that purple *minus* colonizes 90-degree rock faces, taking root in crevices seemingly devoid of soil. It obviously likes good drainage!

Recent Journal articles have discussed this plant including Ron Miller’s “Stalking the Wild Lepidote” (JARS: Vol. 67, No. 2, Spring 2013) and one by Don Voss titled “A Third Botanical Variety in *Rhododendron minus*” (JARS: Vol. 68, No. 2, Spring 2014). Miller calls the late purple *R. minus* “smokianum.” We favor that name over others that have been used since the variety does have a limited range at high elevations in the Great Smoky Mountains.

It doesn’t look like the other forms of *R. minus* that we grow. The garden favorite we knew as “carolinianum” or *R. minus* Carolinianum group (*R. minus* var. *majus*) is larger than “smokianum” in both plant and flower. Its flat flowers have a totally different color range, primarily white to light lavender pink, and some have a contrasting yellow blotch. It blooms in early spring, at least 6 weeks ahead of “smokianum.” It doesn’t grow in the Smokies but can be found at comparable altitudes 50 to 100 miles away (80 to 160 km) to the north and east near both Mount Pisgah and Grandfather Mountain, the same narrow range where *R. vaseyi* grows.



Rhododendron minus “smokianum”



“Smokianum” hangs off the cliffs along Rt. 441



R. carolinianum



R. minus var. *minus*



R. chapmanii

R. minus var. *minus* is found at low elevations in many areas throughout the south. In general, that plant is much larger than “smokianum” or “carolinianum,” has tubular flowers, and blooms in midseason. Its flowers are pink to white, and some have a blotch. The endangered *R. minus* var. *chapmanii* is smaller in stature, and also has tubular flowers of light pink.

None of our native lepidotes come in the purple shades we see with “smokianum.” Its flowers are small, less than an inch across (2.5 cm), and can be widely funnel shaped to more narrowly bell shaped with little to no floral tube. Most of the plants seem to have flowers in the strong lavender to purple range, but we have seen some that can be lighter shades of lavender and variants that are purplish rose to even rose pink. We have never seen white forms. Some flowers have obvious spotting on the upper lobes of the corolla that can range from a greenish yellow, to brownish orange, to red. In others, the presence of spotting is negligible.

To get to the larger populations of this rare rhododendron species requires a significant hike along the Appalachian Trail toward Mount LeConte, elevation 6,594 ft (2,010 m). I have seen pictures of the dwarf purple *minus* in that area. However, to get to Mt. LeConte and back is a two-day hike round trip. There are cabins at LeConte where one can spend the night but they must be reserved well in advance.



Some flower color variations of “smokianum”

There is a large population of the dwarf purple *R. minus* a bit closer, a day’s hike on the Appalachian Trail from Newfound Gap to Mt. Kephart, elevation 6217 ft (1895 m), a high peak prior to Mt. LeConte. After 3 to 4 miles (5.0 to 6.5 km), as the trail crosses Mt. Kephart, there is a side trail to one of its northern spurs that goes out to a place called the “Jump Off.” The Jump Off, elevation 6133 ft (1869 m), is a steep cliff that drops off 1000 ft (300 m) to the valley below. The views are spectacular, and its rocky crags are covered with that dwarf purple rhododendron. Trail guides do warn that the Jump Off can be dangerous. One careless step could prove fatal!

The strange weather patterns this year caused us to miss much of the native azalea and rhododendron display we normally admire in mid to late June. However, that gave us an opportunity to search for other plants including “smokianum.” Rather than hiking up to Gregory



Karel Bernady climbs over rocks and roots on the Appalachian Trail to Mt. LeConte

Bald to catch the end of that display, we decided to hike out the Appalachian Trail to the Jump Off. There was a good chance we might see that area in peak bloom.

George McLellan and I had gone out that trail once, but we didn't get all the way. The purple *minus* wasn't opened yet, and we were already rather tired from hiking to Gregory Bald the day before. A round trip hike of 7 miles (11 km) doesn't sound too taxing, but it all depends upon the trail and, of course, the physical condition of the hikers. Having spent too many hours in front of the computer, I knew I was out of shape. Karel Bernady had been there once before, and he affirmed that it was a challenging hike. This year, the three of us decided to hike to the Jump Off to photograph that plant.

We had nice weather for most of the day, but carefully watched the building cumulus clouds on the horizon. Thunderstorms did roll in about 4:00 p.m., but by that time we were in our cars heading home. One has to be careful of storms when hiking!

It is a very pretty trail but challenging in places, harder than anything we encounter on the Gregory hike. The round trip is only about half the distance of

our Gregory Bald trips, but it seemed every bit as exhausting. This trip requires good hiking gear – heavy boots, hiking poles, and plenty of fluids to drink on the trail. The round trip took us nearly 7 hours, and we were sore and tired when we finished.

Much of the trail was a steady climb, but hikers do encounter some rocky places that are quite steep and difficult to navigate along the way. We often had to scale giant boulders and rock outcroppings entangled with roots. I was amused many times when I grabbed onto a small tree beside the trail to help pull me up a slope. The bark was as smooth and polished as any fine furniture, obviously due to the hands of countless hikers before me. The side trail to the Jump Off was even more rugged. Many times I muttered aloud expletive-laced versions of, “Are you kidding me?”

Soon I realized that going down some of those transitions was often more difficult than going up. A few years ago, I tore some ligaments in my knee when I slipped on ice. The weight I gained recently put additional stress on my knees. One has extra momentum on descents, and I envisioned rolling all the way to Gatlinburg if I should lose my balance!



Side trail to the Jump Off

We reached the Jump Off about noon. It was gorgeous vista with breathtaking views, billowing clouds, and the purple *minus* was in full bloom. Some plants did have dead branches, but it wasn't winter damage this year but possibly some past drought. I gazed over the edge a number of times but held firm to my glasses. I had lost them once on Roan, and if I dropped them here there was no hope of retrieval. I am not fond of heights so overcoming that fear was another personal challenge.



Looking over the cliff to the valley below, a 1000 ft Drop



Karel Bernady and George McLellan taking photographs from the Jump Off

Most of the prime viewing spots have room for only one or two people, so it is important to go with a small group rather than a big crowd. In the image to the left, Karel is using his tripod to hold the camera over the edge of the cliff while George was operating the cable to snap pictures. If you look at the ground about 2 ft from where they are standing, you can see where someone stepped too close to the edge and it had given way.

I crawled out on the rock behind them to get my picture of the wall of *R. smokianum* on that cliff. My picture can be seen on the next page.

Viewing these plants in the wild convinced me that the purple *minus*

deserved its own unique identity. It is very different from any of the other lepidote forms we see.

Spring is fleeting and it is really hard to predict when peak bloom will be in the mountains. The purple *R. catawbiense* was completely through on Roan Mountain when we were there but was in tight bud just ten days before we arrived. It must have lasted only a few days, probably due to adverse weather conditions. *R. calendulaceum* has a longer season, so we did see that in bloom.

Yes, we missed the bloom in some places we try to visit every year. However, when something is not in flower, we can usually find plants at different elevations or other locations to admire. For years we have been anxious to see "smokianum," and this year we were not disappointed!

I traveled almost 1800 miles by car on that week-long trip but probably hiked less than 25 miles. Seeing native plants in the wild is an annual focus for me. I am captivated by the beauty of those mountains and their botanical riches.

Now we know! We recently learned that the research by one of our German hiking friends who joined us for the first time in 2015, Dr. Ralf Bauer, showed that *R. smokianum* indeed deserves its



Vista from the Jump Off on Mt. Kephart
with *R. minus* “smokianum”

own species status. Ralf did extensive field work and raised plants from seed. He lives in Offenburg, Germany, and worked with Dr. Dirk Albach from the nearby university who conducted laboratory studies. They officially described it as new species in *Systematic Botany* published by the American Society of Plant Taxonomists on March 29, 2021.

Ralf has been developing a website that focuses on his travels in the United States where he is documenting the native azaleas and rhododendrons he has been admiring. He has an English version for most of the pages on his website. Here is the link to the English version:

www.pentanthera.de/en/

To see his trips just for *R. smokianum*, click on the link:

Habitat Pictures/Travels

Then check the box for

R. smokianum

and apply the filter. It will bring up images from five regions documenting his travels to see the species from 2015 to 2019. It is all in English! Thanks for your efforts, Ralf!



***R. smokianum* – Officially a New Species**