



# BOTANICAL BEAUTIES OF THE ALABAMA APPALACHIANS

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Excitement builds every winter as I plan my annual natural history foray to a part of the county where I've never been before. This terra incognita of mine gradually fills in as I delve into plant notes that I've accumulated over the decades along with the wealth of online photos and information (usually accurate but often wanting) about the region's vegetation, geology, and climate. For August 2022, I chose the Appalachian region of northeastern Alabama. Why? Well, for several reasons. First, I was curious to see the southernmost terminus of the Appalachians. Quartzite Cheaha (Kee'-hah) Mountain, elevation 2,407 feet (734 m), is not only the southern and western



A dry sandstone glade

tip of the Blue Ridge Range but also of the Appalachian Mountain System as a whole. Secondly, I was curious as to whether montane species mingled there with species from the nearby coastal plain. Thirdly, having previously explored the Appalachians of Georgia and the Carolinas, I was eager to compare and contrast the vegetation on acidic soils in the two laterally distant regions. Lastly, I am a horticulturist and find myself irresistibly drawn to novel plants that could potentially be grown successfully in my part of the country, which happens to be northern Wisconsin. You're probably saying to yourself, "Yeah, right. Alabama plants an hour's drive south of Lake Superior. Give me a break." Well, yes. Remember, I did my research. In our front yard stands an impressive southern catalpa (*Catalpa bignonioides*) which I grew from seed in 1981. The native range of this tree extends from west-central Georgia to central Alabama, yet it thrives here in the far north, having taken  $-43^{\circ}\text{F}$  ( $-41^{\circ}\text{C}$ ) without injury. There are numerous examples of other southern plants tolerating cold well beyond expectation. Two possible explanations for this come to mind. One is that, during ice ages, such cold temperatures were not uncommon that far south. Even in recent times, temperatures in this portion of Alabama have plunged to  $-27^{\circ}\text{F}$  ( $-33^{\circ}\text{C}$ ), though this is still



Top left: *Chimaphila maculata* Top right: *Carex* sp.

Bottom: *Clitoria mariana*



Top: *Yucca filamentosa* on a sandstone ledge.  
Bottom left: *Sabatia capitata*. Bottom right: *Ruellia* sp.

a far cry from -43°F. The other possibility is that the current population has been unable, for whatever reason, be it unsuitable soils or extinct dispersers, to reclaim its preglacial range to the north. Whichever it may be, this does present some exciting horticultural possibilities.

A broad observation was that there are notably fewer herbaceous perennials present in the region of Alabama that I explored than in the woods of Wisconsin. The majority of species in the ground layer are woody plants. The soils are, just like the soils in much of northern Wisconsin, sandy and acidic. They developed over millennia on bedrock ranging from the widespread sandstone of the Cumberland Range to the more unusual quartzite of Cheaha Mountain.

As I hiked numerous trails and delved into deep untrodden ravines I rarely saw another soul. Why did I have this cornucopia of natural beauty all to myself? The answer is simple: August in Alabama. Even within the woods the heat and humidity were almost unbearable. Normally, I enjoy hopping from rock to rock at a brisk pace while hiking. I tried this when I started on my first trail and soon learned of my folly. For the rest of the day, I remained overheated. I'd planned on camping my first night but instead had to get into my car and drive quite a distance to find a hotel room just to cool down. However, the incredible natural wonders encountered on my hikes made enduring the heat entirely worthwhile. Also motivating me was my desire to collect plant cuttings (obtained with permission) to root and subsequently test outdoors back home. Importantly, I do my best to ensure that the cuttings are healthy. For instance, any foliar diseases which are present or show up later are promptly excised. I do not want the gift that keeps on giving. In the future, if there is interest, my successes and failures with these plants might be the subject of another article.

Even though my passion is plants, I could not ignore the geological features sculpted through untold ages of weathering and erosion acting upon lofty mountains. They were simply breathtaking. Also fascinating and beautiful were the different giant millipedes encountered in deep ravines, along with exquisite unfamiliar mushrooms.



The view from Cheaha Mountain



Top: Unknown mushrooms.

Bottom: *Persea borbonia*

My hunch that montane and coastal plain plants would mingle there proved correct. Strangely, Catawba rhododendron (*Rhododendron catawbiense*), mountain-laurel (*Kalmia latifolia*), and galax (*Galax urceolata*) grew with typical coastal plain species such as longleaf pine (*Pinus palustris*), redbay (*Persea borbonia*), and yellow jessamine (*Gelsemium sempervirens*). What an odd, but fascinating, juxtaposition.

Strangely absent from the parts of northeastern Alabama that I visited were eastern white pine (*Pinus strobus*) and Canadian hemlock (*Tsuga canadensis*) which are common at similar elevations in Georgia and South Carolina. Piedmont rhododendron (*Rhododendron minus*) is replaced in Alabama by Catawba rhododendron (*Rhododendron catawbiense*), which even grows on distant Cheaha Mountain. Rosebay rhododendron (*Rhododendron maximum*), which grows luxuriantly in hemlock-filled valleys farther east is absent here too, although an old, naturalized plant in a park is thriving, but not reproducing. South Carolina's variable-leaved wild-ginger (*Asarum*



Yellow jessamine (*Gelsemium sempervirens*) on a dry sandstone ridge under a pine.





*Hydrangea quercifolia* growing as an understory tree.

*heterophyllum*) is replaced by the closely related Shuttleworth's wild-ginger (*Asarum shuttleworthii*). Besides galax and mountain-laurel, there are many other attractive plants common to both regions including the evergreen vernal iris (*Iris verna*), striped pipsissewa (*Chimaphila maculata*), partridgeberry (*Mitchella repens*), and muscadine grape (*Vitis rotundifolia*).

Two kinds of unique woodland shrubs are absent farther east but thrilled me with their conspicuous presence in Alabama. Oakleaf hydrangea (*Hydrangea quercifolia*) is widespread in woods throughout the region and was not at all what I expected. I'm used to hydrangeas being mounded shrubs. This species was more like an understory tree, with huge lobed leaves. I had never

seen anything like it. Hopefully, some of the cuttings which I collected from various populations prove to be USDA Zone 3-4 hardy. The other shrub had already proven its merit in the north. Many years ago, I had planted a seed of bottlebrush buckeye (*Aesculus parviflora*) in my woods, which has since grown into a beautiful shrub. Seeing it in the wild was exciting. It is more exacting in its habitat requirements than oakleaf hydrangea, as I found this low, clonal shrub only near the foot of deeply shaded ravines.

I found and often propagated many more wonderful plants, particularly those of merit for woodland gardens. I also kept in mind, while selecting material to propagate, my deep involvement in a long-term assisted migration study, as climate change alters tolerances for species at their current range limits. Thus, northern Wisconsin may provide genetically variable populations of these



*Aesculus parviflora* in a shaded ravine.

plants with an eventual haven. Some, unfortunately, are either impossible to root from cuttings and/or unethical to dig, such as the gorgeous yellow fringed orchid (*Platanthera ciliaris*) or striped wintergreen. The latter, although common in places, is also virtually impossible to transplant due to it being a mycoheterotroph, meaning it derives much of its nutrition from other plants via a specific fungus attached to its roots. I found a particularly lovely robust form which I would have propagated had I been able.



Yellow fringed orchid (*Platanthera ciliaris*)



Lichen and plant communities on dry sandstone .

One type of plant community that I found particularly stunning was that of the sandstone glades found atop dry ridges, which, in the American Southwest, would be called slickrock. These had a uniquely artistic appearance from their highly contrasting mingling of lichens, mosses, and specialized wildflowers, some endemic. Yellow jessamine, which typically carries its fragrant blossoms in the spring, has variable tastes in its habitat preferences. Here, near the glades, it formed an evergreen to semievergreen ground cover beneath the pines, a niche reminiscent of that of bearberry (*Arctostaphylos uva-ursi*) in our northern jack pine barrens. At another location, it grew on a moist wooded slope near a riverbank, deeply shaded by Catawba rhododendron and mountain laurel. I'm hoping, but not really expecting, that some cuttings prove hardy here in the north, at least as a ground cover.



Top: *Asarum arifolium*

Bottom: *Asarum shuttleworthii*

Since my family lives in the depths of the Northwoods, I have plenty of opportunity to woodland garden. I'm always on the lookout for particularly beautiful and interesting forms of native plants to propagate in an ethically sound manner. One genus whose exotic appearance has enraptured me is *Asarum*, the wild gingers. Sometimes you will find some of these listed as "*Hexastylis*," but this is a ridiculous aberration created by taxonomic splitters simply because some species happen to be evergreen. As you can tell, I am opinionated on the matter. Anyway, for foliage effect, I find the hardy

evergreen species dramatic and on a par with the genus *Cyclamen*. Both Shuttleworth's wild ginger (*Asarum shuttleworthii*) and arrowleaf wild ginger (*Asarum arifolium*) were commonly encountered in sheltered woods and sometimes, much to my delight, even grew together. Years ago, I obtained both of these wild gingers from other sources and they have proven fully hardy and evergreen here in northern Wisconsin. The complex variations in foliar mottling and veining along with differences in leaf shapes were a wonder to behold. I was able to successfully propagate small cuttings from the best forms from large clumps. Some smaller plants were gorgeous, but unfortunately for me, too risky to safely propagate without doing them harm.

Another favorite southern woodlander of mine, fully evergreen here, is galax. Wherever else I've encountered it in the wild, whether it be in Kentucky or South Carolina, the species is quite uniform, except for the huge-leaved tetraploids occasionally encountered in the Blue Ridge. However, in the Georgia and Alabama Appalachians, and particularly in Alabama, one sees



*Galax urceolata* with ruffled, glossy leaves.



*Galax urceolata* with scalloped leaf margins.

a veritable galaxy of galaxies. Their foliage varies not only in size, but also in the shade of green, cuticle glossiness, dentation, whether the margin undulates and, if so, to what degree. It is hard to believe that these are wildflowers and not some fancy garden cultivars. Why the intense variation? I suspect it is because galax has inhabited this region uninterrupted for an immensely long time.

Last, but not least, is another plant propagated on my botanical foray: the famous, delectable, muscadine grape. I first saw it in the South Carolina Appalachians, carpeting a hemlock grove. It makes an exquisite woodland groundcover with its relatively small, glossy, deeply dentate leaves. A cutting from that plant has proven hardy in my woods back home. In Alabama, this grape was a common groundcover in many woods that I visited. It would be nice if my cuttings would not only deign to create such a beautiful groundcover, but, as an added bonus, produce the muscadine grapes which I relish. One can only hope...and keep on trying.



Top: Muscadine grape (*Vitis rotundifolia*) growing as a ground cover.

Bottom: *Coreopsis verticillata* near a sandstone glade.