

# Azaleas in the Cornfields– Lessons Learned

Andrew P. Whipple, Upland, Indiana

You want to grow azaleas here in central Indiana? That can't work. The soil is wrong, the winters will kill them, and they're too fussy and fragile. No wonder nobody grows azaleas in Indiana!

This is what I heard from various friends, though not from friends in the Lake Michigan Chapter of the ASA who were already growing azaleas throughout the region. I could also look to the deciduous azaleas planted around my home as evidence these statements about the difficulties of being an azalea lover in the midst of corn and soybean fields were exaggerations. Perhaps most of my azaleas weren't thriving, just surviving, but they were here, in the ground, blooming and growing a bit each year.

Presently, and for the past 31 years, I have lived in Grant County, Indiana, specifically just outside Upland, where I teach at Taylor University. Perhaps Upland is better recognized, at least locally, for Ivanhoe's, an ice cream and sandwich eatery renowned for their 100 sundaes and 100 shakes. But azaleas? No. Horticulturally the closest thing we have are a few *Ilex verticillata* in sedge peat bogs at the edges of some local lakes. But azaleas? Not a one in sight. Having flat topography with a clayey soil worked for generations in row crops, and being located in zone 5b (more like 6a lately, save the 5a winter of 2013-14), the common climax vegetation is remnants of the eastern deciduous forest. Indiana still has oaks, hickories, black walnuts, and maples, but the chestnuts, elms, and ashes are now missing. There are many plants associated with the disturbances of agriculture – poison ivy, ragweed,



goldenrod, chicory and the like. But azaleas? No, not even close. Native azaleas can be found hundreds of miles to the south or east, but none occur any closer to Upland than the Ohio River.

Hence the question, what prompted me to plant deciduous azaleas in corn country? Answer – all of the preceding. If it can't be done, well then, of

course I'll do it. And azaleas would go well with the several species of bamboo, and with the many species and cultivars of *Magnolia* that I've planted. Since I had learned that an acidic, well-drained soil – a bed of pine bark mulch works well here – was necessary

for success with blueberries, cranberries, and wintergreen, all of which I've grown here, then surely those provisions would give me success with deciduous azaleas. And so I planted a few standard azalea cultivars– 'Gibraltar', 'Northern Hi-Lights', 'Golden Lights' and such, and they have done reasonably well.

Then a friend, Paul Lightfoot, talked me into attending the joint

2002 ASA/ARS meeting in Atlanta. Oh my! What extraordinary plants these deciduous azaleas are. And at one home – that of Earl and Verdie Sommerville – Earl had such an amazing collection of diverse, beautiful deciduous azaleas that I was hooked. In addition to collections such as Earl's and Kelly Strickland's, the various groupings of deciduous azaleas that caught my interest are those comprising several species that when growing in the wild generate complex mixtures of interspecific hybrids, as well as retaining the several parental species. To the south *R. flammum*



x *R. canescens* and possibly other species, to the east coast *R. atlanticum* x various species, and up in the mountains *R. cumberlandense* x *R. arborescens* and *R. viscosum* are well known examples. So many plants, so much opportunity to test whether some of these could survive, even thrive, in the corn country of east central Indiana. But before planting, I had to consider siting.

Site preparation in gardening largely determines success or failure in the ensuing plantings. I proceeded to make several raised beds of pine bark mulch around my flat, clayey home site. One bed was intentionally sited out in full sun (and full wind), and two were set back in my woods where I cleared out all the woody competitors inside perimeters enclosed by three-foot-wide heavy plastic set 2-½ feet deep in the soil to block prickly ash and other woody competitors from growing back. Other beds closer to the house were enclosed with landscape timbers. In all of these, deciduous azaleas have been planted and all have lived, but without really growing to their full potential. Based in part on Paul Lightfoot's greater success around his home where the soil has some sand and some slope (and perhaps greater skill on the part of the gardener tending it), I suspected that my raised beds were not raised enough to provide adequate drainage for the plants to thrive. Lessons learned: Deciduous azaleas will grow in corn country but need to be planted in a raised overlay of well-draining acidic soil, pine bark mulch on a sloping site providing the best environment. Protection from prevailing wind and from all-day direct sunlight is beneficial.

In these beds were many of the species native to the East – *R. arborescens*, *R. austrinum*, *R. calendulaceum*, *R. cumberlandense*, *R. periclymenoides*, *R. prunifolium*, *R. vaseyi*, and *R. viscosum* - plus interspecific hybrids and commercial cultivars. All of these survived the

winters here, with the hot dry periods in the summer being a climactic challenge overcome by watering deeply. **Lessons learned:** Deciduous azalea species from across their native geographical distributions can be grown in corn country. *R. austrinum* from the Deep South on up to northern highland species including *R. cumberlandense* and *R. calendulaceum* will do well if the site is properly prepared and water is provided during the hot, dry summer. Climactic zones are less important than often portrayed for the planting of deciduous azaleas.

As all of this planting of azaleas purchased one-by-one around my home was proceeding, I was also developing the abilities to micropropagate deciduous azaleas (a topic for another time) as well as to grow azaleas from seed. Both of these led to hundreds of azaleas in pots, filling up greenhouse space at Taylor University and needing a place to be planted out. All of this was part of a larger “azalea project” involving students



and with several educational objectives. One of those objectives was to create a demonstration/preservation azalea garden on campus, to demonstrate that indeed deciduous azaleas can thrive in corn country, that tissue culture can be used to micropropagate specific azaleas with desirable characteristics but whose cuttings are difficult to root, and to make available the plants of the garden as a resource for further study of these plants. The beauty of the azalea garden on campus during bloom time is an added bonus to the overall preservation-by-propagation objective of the project. In addition to the already listed species growing at my home, the Taylor University Azalea Garden also has *R. alabamense*, *R. atlanticum*, and many *cumberlandense/arborescens/viscosum* interspecific hybrids. There are plants from Earl Sommerville's (Marietta, Georgia) collection, from

Kelly Strickland's (Tallahassee, Florida) collection, and from Vivian Abney (East Fork Nursery, Sevierville, Tennessee) as well as other sources.

**Lessons learned:** Deciduous azaleas originating from wide geographic/climatic locations can thrive in corn country with proper site preparation and attention to summer water needs. Students can learn many lessons working with azaleas as small as shoots in culture to as large as mature, enthusiastically blooming shrubs.

Enthusiastically blooming shrubs? The university was good enough to allow us to convert a sloping area along a creek on campus to an azalea garden. Over several seasons many loads of bulk pinebark mulch (hard to come by in corn country) were spread over the azalea garden site to an initial depth of 8 – 12 inches, and then planted with deciduous azaleas grown from seed and tissue culture. The first, and largest, planting was done on April 14, 2009 by a rotating crew of students who came and went as their schedules allowed. The plants were set at 3-½ foot centers. That was too close if they grew well, but the expectation was for a good bit of loss. There have been several additional plantings since, as well as the addition of mulch as needed and limited fertilizing. While there has been some plant loss over the years, it is far less than anticipated. Loss has occurred at the edges of the garden where the mulch layer thins out, and more on the south-facing side of the creek than on the north-facing side. Although some individual plants have grown better than others, the differences appear to be due to variations in the immediate site characteristics across the garden and not to a specific kind of plant faring poorly. Most impressively, the initial 1 – 3 foot plants set in the bed five years ago are now growing into each other, and the past two seasons' bloom display has been explosive! That is, not only are most plants (species from the mountains and their interspecific hybrids) blooming, but the seedlings are pushing out ball trusses far in excess of similar plants, including their



seed parents, in the wild. The show is remarkable and unanticipated. **Lessons learned:** A north-facing slope is a preferred site for an azalea garden. Planting too closely (3-½ foot centers) does have some short-term benefits. It fairly quickly reduces the need for weeding, and fairly quickly allows the shrubs to shade their roots, thus reduc-

ing water need and stress during hot dry spells. Give a deciduous azalea a bit of pampering and its foundational genetics may be more fully expressed, resulting in vigorous vegetative growth and floral displays beyond any expectation based on flowering in the wild.

**Bottom line:** Come to Taylor University in Upland, Indiana, in May and June, just a few miles off I-69 halfway between Indianapolis and Fort Wayne, to see the garden in bloom. The garden is on a nearly flat

path with parking not too distant. The last two years' bloom times have been gorgeous, and the present bud set portends another explosive spring bloom this year. The early bloomers (mostly of younger, smaller plants from tissue culture, derived from Sommerville and Strickland plants) bloom mid-May, and the larger, later blooming plants (*R. cumber-*

*landense*, *R. arborescens*, *R. viscosum*, and their hybrids) peak around June 10, with total bloom-time spread over all of June. *R. calendulaceum* bloom time bridges between these two, occurring late May – early June. If you've been unable to travel to the Southern Highlands to see our native deciduous azaleas in bloom – or even if you have – do the counterintuitive thing and come to Indiana to see the show.

*In addition to growing azaleas in corn country, Dr. Whipple annually plants a 30 x 70 vegetable garden, has planted a small orchard of about 50 apple, pear, and peach trees, and harvests the majority of the Grant County Indiana blueberry crop. He also has planted ornamentals including various magnolias, hollies, woodland spring ephemerals, and 5 species bamboo. However, he is yet to spot pandas in the bamboo patch.*