

Today, My Favorite Azalea Companion Plant of an Herbaceous Perennial Type Is....

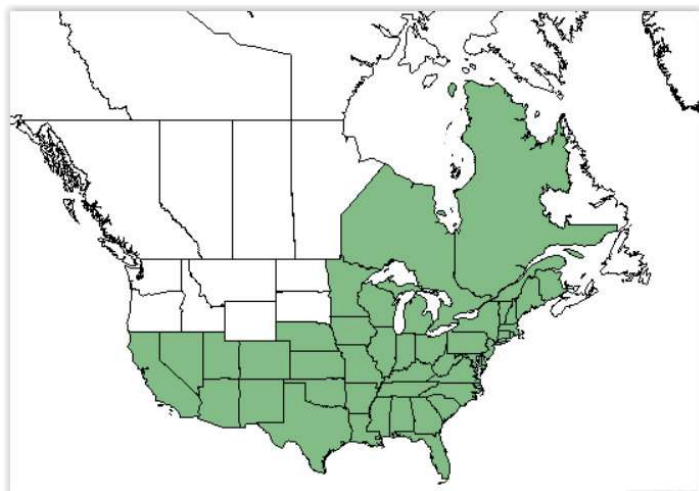
By William C. Miller III—Bethesda, Maryland

This is the third in a series of “favorite” articles. The azaleas ‘Ambrosia’ and ‘Opal’ were previously identified as my favorite Glenn Dale and Linwood Hardy Hybrids respectively.¹ It occurred to me that it would be useful to expand my focus to the rest of the plant kingdom, since very few people have gardens that are limited to azaleas.

Companion plants, often overlooked in the homeowner garden planning process, comprise a surprisingly significant feature in every garden. There is the canopy and the understory trees, above the azaleas, represented by the taller trees (e.g., oak, beech, pine, maple) and the smaller trees (e.g., dogwood, maple, redbud, and stewartia). There are plants that share the profile level with the azaleas (e.g., holly, viburnum, hydrangea, and other rhododendrons). Finally, there are the plants that reside below the azaleas (e.g., ground covers, annuals, perennials, and weeds).

After considerable thought, I am pleased to report that today my favorite herbaceous perennial is *Lobelia cardinalis*, commonly called cardinal flower. A hardy native American plant of the bellflower family, it has become increasingly popular as an ornamental feature in gardens around the world. The USDA Natural Resources Conservation Service distribution map probably represents where it can be found growing naturally in the US.

Photo 1. USDA Natural Resources Conservation Service Distribution Map (<https://plants.usda.gov/core/profile?symbol=LOCA2>). The interpretation of the map is that *Lobelia cardinalis* is found within the state and not necessarily found everywhere in the state. Photo Credit: USDA.



The natural distribution, however, extends into Canada and Mexico and private gardens across the US where it is a very popular element in water and rain gardens and might not be represented on the government map. It was introduced into Europe in the mid-1620s and has become naturalized. Since it isn't overly competitive, it is technically considered non-native rather than “invasive.”

Lobelia, the Genus

The genus was named after Matthias de l'Obel, a Flemish physician and botanist (1538-1616) by Charles Plumier, a French priest, botanist, and New World plant explorer (1646-1704).^{2,3} They both were significant influences on Linnaeus who is often called the father of taxonomy. Taxonomy or systematic botany is the system of classification that we use today.

In the genus *Lobelia*, there are large, small, annual, and perennial plants, which are sometimes referred to as wildflowers or herbs. Some are tender, while others are hardy, and one is even characterized as alpine. They exist in a variety of habitats, but are generally found in tropical to temperate regions in fresh tidal and non-tidal marshes, bogs, wooded swamps, wet thickets, seeps, stream edges, and river banks in everything from full sun to light shade.

According to Dr. Thomas G. Lammers, a retired plant taxonomist from the University of Wisconsin at Oshkosh, *L. cardinalis* is one of 415 species in the genus *Lobelia*. For many years, the focus of his interest was *Campanulaceae*, the family of flowering plants that includes *Lobelia*. In 2011, he published a revision of the intrageneric classification of the genus based on phenotypic data.⁴ Basically, there is something in *Lobelia* for everyone. See Table 1, for a modest selection of representative species.

Lobelia cardinalis

There are a lot of common names for *L. cardinalis*: bog sage, hog's physic, Indian pink, red bay, scarlet lobelia, slinkweed, *kardinalslobelie*, and water gladiole to name a few. To add to the confu-



Photo 2. Juvenile ruby-throated hummingbird (*Archilochus colubris*) on cardinal flower. Photo Credit: William C. Miller III.



Photo 3. The dark green rosette form of *Lobelia cardinalis* from which the flowering spikes arise. Shown with a Washington quarter for comparative size. Photo Credit: William C. Miller III.

sion, the general literature lists *Lobelia splendens* and *Lobelia fulgens* as synonyms.

I have lots of experience with *L. cardinalis* and *L. siphilitica*, but I have a strong preference for the former. Nathaniel Hawthorne, the American short story writer and novelist, was sufficiently enamored with *L. cardinalis* that he wrote: “The world is made brighter and sunnier by flowers of such a hue... it arrays itself in this scarlet glory. It is a flower of thought and feeling too; it seems to have its roots deep down in the hearts of those who gaze at it.”⁵

Jordan Cunningham, a greenhouse technician at the Stephen F. Austin University in Nacogdoches,

Texas, expressed similar thoughts in an article she wrote on their experience with *L. cardinalis* and *L. puberula*. Like Hawthorne, she admits the “wonderful shade of red” speaks to her heart.⁶

The additional draw for me is that the showy, eye-pleasing, vibrant-red hue is an absolute magnet for humming birds. Humming birds are quite territorial and it is prudent to have multiple stands of *L. cardinalis*, so that one individual bird cannot successfully monopolize the lot. It has been suggested that the intense color is similar to the vesture (red robes) worn by Roman Catholic cardinals, and I also find a favorable comparison with the plumage of the northern cardinal (*Cardinalis*

Table 1 - Table of Select *Lobelia* Species.

Species	Common Name	Native to	Use	Flower Color
<i>L. cardinalis</i>	cardinal flower	US	garden ornamental	red, white is known
<i>L. chinensis</i>	Asian lobelia	China	traditional Chinese medicine	white
<i>L. deckenii</i>	giant lobelia	Tanzania	alpine habitat, not typical ornamental	pale yellow green
<i>L. erinus</i>	edging lobelia	South Africa	hanging basket and window box ornamental	blue to violet
<i>L. inflata</i>	Indian tobacco	US	medicinal herb	violet with yellow tint inside
<i>L. puberula</i>	downy lobelia	US	garden ornamental	blue to violet
<i>L. siphilitica</i>	great blue lobelia	US	garden ornamental	blue, white is known
<i>L. spicata</i>	pale spiked lobelia	US	?	white to pale blue
<i>L. tenuior</i>	slender lobelia	Australia	not easily grown in garden, better greenhouse/pot plant	blue with yellowish tube

cardinalis). Of course, if the bright-red flower of *L. cardinalis* is not your thing, there are more understated members of the genus like the similar, but blue- or white-flowering *L. siphilitica*.

While all parts of *L. cardinalis* are poisonous, due to the presence of a number of toxic alkaloids (e.g., lobelamine and lobeline), a number of Amerindian tribes used leaf and root preparations (e.g., teas and poultices) internally and externally to treat typhoid, stomach ailments, colds, fevers, headaches, rheumatism, syphilis, and worms. Some of the tribes dried and smoked or chewed the leaves. Toxicity was reported to be a function of the quantity consumed and adverse reactions included salivation, nausea, diarrhea, convulsions, coma, and possibly death.

Plant Description

While *L. cardinalis* is routinely referred to as a perennial, I don't see why it isn't a biennial. The life cycle is very similar to great mullein.⁷ In my Mid-Atlantic garden, self-seeding is common, which is fortunate since *L. cardinalis* does not

Photo 4. Multiple racemes emanating from the central stem showing mature seed capsules at the end of the season. Photo Credit: William C. Miller III.



Photo 5. *Lobelia cardinalis* leaves, (bottom) obverse surface, (top) reverse surface. Lower leaves have short petioles (the stalk that joins the leaf to the stem) and upper leaves are sessile (stalk-less). Photo Credit: William C. Miller III.

have a reputation for being long-lived.

In the first year from seed, it takes the form of a dark-green, weedy-looking rosette, which you could mistake for an undesirable. In the second year, however, it manifests itself by adding a three- to five-foot stalk with a single terminal spike (raceme) at the top of the main stem (a timely early spring pinch or a nibble by individuals unknown, might explain the comparatively short, additional secondary flower-bearing branches that I often see).

In my experience, the taller plants are subject to being blown over by the wind, so from a practical standpoint, some thought might be given to staking the larger plants. The 4- to 6-inch, lance-shaped, rough-textured leaves with coarsely serrated margins are alternate and found on the lower reaches of the stalk. Leaf color varies from green to bronze and some of the recent introductions like 'Black Truffle' are described as having deep, dark-purplish, nearly black foliage.

Like mullein, the flowers bloom from the bottom up and the bloom period is essentially from July to October. The eye-catching, 1 to 1.5 inch, red flower (described as having a "velvety texture") has five petals or lobes and is said to be two lipped. The upper lip has two small lobes and the lower lip has three prominent lobes. Five stamens are present and are joined forming a red tube around the style, which reaches upward between the upper lobes. A deeply divided foliaceous calyx is present, there is no fragrance, and pests don't appear to be a significant problem (in my experience), although snails and slugs are mentioned in

the literature. While the flowers are usually the remarkably rich red, white forms and pink forms have been observed in nature. Jordan Cunningham says the “flowers look like little birds in flight.”⁶ I can see it.

Availability

Letting one’s finger walk through the internet, there are specialty nurseries that will ship plants, both species and cultivars. Additionally, plants are probably available from most garden centers or box stores of any size. Finally, plants can be obtained from your local native plant society chapter in conjunction with their annual fundraiser sales.

There are many products of the breeder’s art (cultivars) to choose from. Some of them are patented and some differ from the species in that they were selected for plant size, the color of the flower, or the foliage: ‘Queen Victoria’, ‘Black Truffle’, ‘Bee’s Flame’, ‘Mrs. Furnell’, ‘Russian Princess’, ‘Gladys Lindley’, ‘Golden Torch’, ‘Frielings Ghost’, ‘Elmfleur’, ‘Illumination’, ‘The Bishop’, ‘Shrimp Salad’, ‘Rose Beacon’, and ‘Chocolate Truffle’.

Photo 6. Red, two-lipped, and pentamerous *Lobelia cardinalis* flower. Photo Credit: William C. Miller III.



Photo 7. *Lobelia cardinalis* seeds juxtaposed with a Lincoln penny. Quite small and golden in color, the seeds are wind-borne. Under magnification, they resemble tiny golden raisins. Photo Credit: William C. Miller III.

If you enjoy growing from seed, Amazon has got some deals for you. I saw one offer for 700 *Lobelia cardinalis* seeds for \$11.94. Bear in mind, the seeds are very small.⁸ I can’t help but wonder who had to collect and count out 700 seeds... and who might, on the receiving end, go to the trouble to verify the count?

Additional Recognition

Lobelia cardinalis has received recognition in recent years:

In 1991, the Virginia Native Plant Society honored *L. cardinalis* as Wildflower of the Year. Recipients have to be native to Virginia; not invasive; neither a pest nor an obnoxious weed; be attractive, showy, colorful, or unique in some fashion; and be interesting in some aspect regarding the organization’s focus on habitat.

In 1993, the Royal Horticultural Society (RHS) awarded *L. cardinalis* and ‘Queen Victoria’, a cultivar, its Award of Garden Merit (AGM) in recognition of its availability; its utility as a garden decoration; that it not require specialized growing conditions or care; that it is not particularly susceptible to pests or disease; and that it “not be subject to an unreasonable degree of reversion.”

In 2003, the Missouri Botanical Garden selected *L. cardinalis* for its Plant of Merit Award in recognition of its outstanding quality and dependable performance in the lower Midwest. The criteria included that it was easy to grow and maintain; that it was not invasive; that it was resistant or tolerant of insects and diseases; that it had outstanding ornamental value; and that it was reasonably available in the market place.

Article notes, references, and author credits on page 38.

Notes and References

1. The articles in *The Azalean* about ‘Ambrosia’ and ‘Opal’ were Winter 2014-15 36(4) and Fall 2020 42(3) respectively.

2. L’Obel practiced medicine in England and Belgium and participated in botanical expeditions which resulted in a number of major publications. During the course of his career, he was the personal physician to several monarchs including James I of England. Of botanical significance, L’Obel made an effort to develop a classification system based of leaf morphology and was said to have been a major influence on Linnaeus. In addition, he is remembered for being the first to recognize the difference between monocots and dicots. His name takes several additional forms: Matthew Lobel (anglicized) and Matthaeus Lobelius (latinized).

3. Plumier, a monk of the order of St. Francesco di Paula after whom the genus *Plumeria* is named (think frangipani), is regarded as one of the most important botanical explorers of his time. Serving as botanist to Louis XIV of France, he discovered, drew, and described many plants and animals during his many trips to the New World. A number of his generic names were kept by Linnaeus: *Fuchsia* named for Leonhart Fuchs, *Begonia* named for Michel Begon, and *Magnolia* named for Pierre Magnol.

4. Lammers, T.G. “Revision of the Infrageneric Classification of *Lobelia* L. (Campanulaceae: Lobelioideae),” *Annals of the Missouri Botanical Garden* 98(1), 37-62, (1 April 2011). <https://doi.org/10.3417/2007150>

5. *Passages from the American Note-books of Nathaniel Hawthorne*, [edited by Sophia Hawthorne, Copyright 1858 by Sophia Hawthorne, Copyright 1883 by Houghton, Mifflin & Co. Vol. IX of the Riverside Edition, Boston: Houghton, Mifflin and Company, 1883], <https://www.ibiblio.org/eldritch/nh/pfanb01.html>, Saturday, August 13, 1842.

6. Cunningham, J.: 2018 “The Lobelia Sisters.” *SFA Gardens News*, 13(3), pp 4-5.

7. Miller III, W.C.: 2012 “Great Mullein.” *The Azalean*, 34(3), pp 46, 51-52.

8. The round seed capsule is initially green with red markings, but turns brown as it ages. As the seeds mature, the capsule opens at the top. The tiny seeds are gold in color and covered in a rough network of ridges. The seeds are small enough to be wind-borne and volunteers are the rule rather than the exception.

About the Author:

William C. Miller III is a recipient of the Brookside Gardens Chapter’s Frederic P. Lee Commendation (1988) and is twice the recipient of the ASA’s Distinguished Service Award (1995 and 2002). He was chairman of the ASA’s Glenn Dale Preservation Project, and co-chairman of Dick West’s Ten Oaks Glenn Dale Project. He is past president of the Brookside Gardens Chapter, a former vice president of the ASA, a past member of the ASA Board of Directors, past co-chairman of the ASA’s Membership Committee, past chairman of the ASA’s Public Information Committee, the longest serving member of the ASA’s Editorial Advisory Board, and a frequent contributor to *The Azalean*.

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