

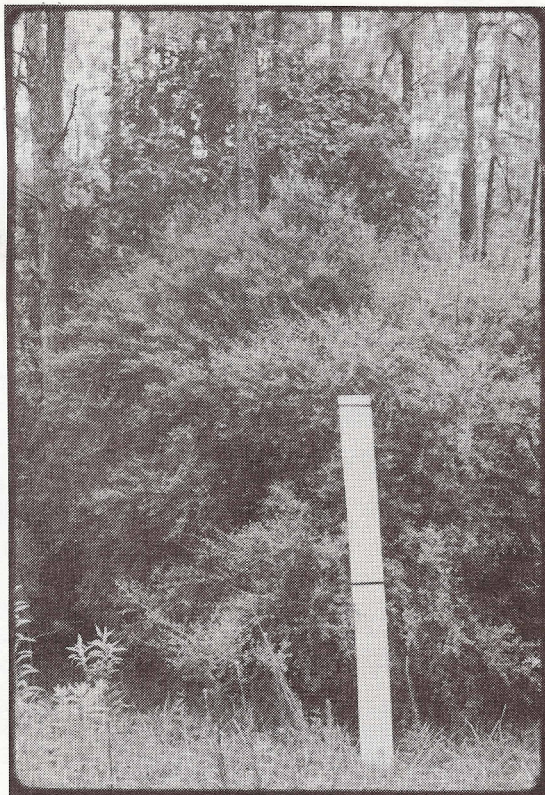
The flowers of *V. elliottii*. A distinctive feature of this species is that the styles are shorter than the corolla.



The lower branch of a *V. elliottii* plant growing in a forest near Tallahassee, showing the attractive fanlike arrangement of the leaves of shade-grown plants.

In Defense of *Vaccinium elliottii*

by Paul Lyrene



Vaccinium elliottii growing in a pine forest near Pensacola. The measuring stick is 2 meters long.

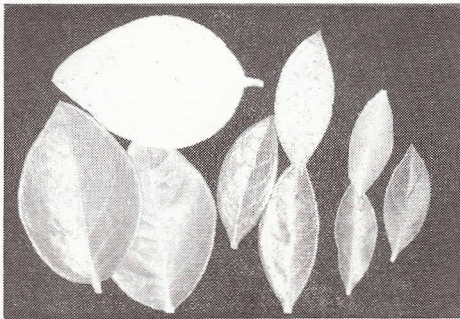
Photos by Paul Lyrene

In the 1994-1995 *Plant and Service Directory* of the Association of Florida Native Nurseries, the mayberry, *Vaccinium elliottii*, is listed as a race of *V. corymbosum*, the highbush blueberry, and not as a separate species. This article explains why the mayberry should be treated as a distinct species.

V. elliottii was described and named by Chapman in 1860. The name honors Stephen Elliott (1771-1830), an early student of the flora of South Carolina, and apparently the first to recognize *V. elliottii* as a distinct species.

A popular common name for *V. elliottii* is "mayberry," which comes from the fact that the berries ripen in May, at least in the southern part of its range. However, Wendell H. Camp, who studied the blueberries of eastern North America during the early 1940s and wrote a treatise on their classification ("The North American Blueberries with Notes on Other Groups of Vacciniaceae," 1945, *Brittonia*, Vol. 5, No. 3, pp. 203-275), noted that the mayberry ripens in June in the northern part of its range (southeastern Virginia and southern Arkansas), and he recommended that the common name be changed to "Elliott's blueberry." Old-timers in the Florida Panhandle often call *V. elliotti* "huckleberry." Common names have a life of their own, but I agree with Camp that the name "huckleberry" should be reserved for species in the genus *Gaylussacia*, which has several species that are commonly called huckleberries.

I have studied blueberries for 18 years, both professionally and avocationally, and my admiration for Camp and his taxonomic treatise on blueberries has grown year by year. However, I must agree with blueberry workers who believe that Camp split the genus into too many species, some



Leaves from the two parents and an F-1 hybrid produced by hand-pollination of flowers in a greenhouse: on the left, three leaves of *V. corymbosum*; on the right, three leaves of *V. elliotii*; and in the center, three leaves from the hybrid. Dozens of other features were also intermediate in this hybrid.

of which should be combined. For example, the area in southeast Georgia east of Valdosta and west of the Withlacoochee River is home to numerous 48-chromosome highbush blueberries that clearly form one cross-pollinating population, although some plants have black fruit and some blue. Camp's keys would put the blue-fruited plants in *V. australe* and the black-fruited plants into *V. fuscatum*. However, few taxonomists see any value in dividing a freely cross-pollinating population into two species based on one variable trait.

Clearly, Camp's taxonomic system needed revision in light of new observations. The person who undertook this revision with the greatest energy was Sam Vander Kloet, a Canadian plant taxonomist from Arcadia University in Wolfville, Nova Scotia. Vander Kloet is no stranger to Florida, having spent several months at the Archbold Biological Station near Lake Placid, studying the wild blueberries of Highlands County. He and I have also hiked together through some of the blueberry forests of North Florida.

Vander Kloet began working on blueberry classification in the late 1960s. In 1972, he published his Ph.D dissertation from Queen's University in Kingston, Ontario: "The North American blueberries revisited: A taxonomic study of *Vaccinium* section *Cyanococcus*." After 16 more years of work with blueberries, he published a monograph in 1988, "The Genus *Vaccinium* in North America." In this book, Vander Kloet changed the names of many North American blueberry

species, combining 13 of Camp's species into one species under the name *V. corymbosum*. Three of Florida's species that disappeared into this taxonomic black hole were the mayberry (*V. elliotii*), the rabbiteye blueberry (*V. ashei*), and the highbush blueberry (*V. corymbosum*).

Because of the extensive work on which it was based, and because of the energy with which Vander Kloet promoted his new classification of *Vaccinium*, it was quickly adopted by most biologists who were not blueberry specialists. Most blueberry specialists, however, thought Vander Kloet had gone too far. Vander Kloet argued that if even a few plants can be found that are intermediate between two species, those species should be combined. This rule would combine all species that produce natural hybrids, since hybridization normally produces plants that are intermediate between the parents.

Is this the system to follow? Should the loblolly pine and longleaf pine be combined? Their natural hybrids are so common that they have been given their own name, Sonderegger Pine, by foresters. Should the slash pine be com-

bined with the sand pine, the longleaf pine, and the loblolly pine? Slash pine forms viable hybrids with all three species. Should there only be one species of pitcher plant in north Florida? Natural hybrids occur between virtually all *Sarracenia* species. Are the water oak and the turkey oak the same species? For years there was a fine natural hybrid in Morningside Nature Center in Gainesville.

Examples of species that hybridize naturally in the southeastern U.S. could go on for dozens of pages. In fact, most genera of cross-pollinating plants in eastern North America produce occasional interspecific hybrids. There is no reason to single out the blueberries as the genus in which the species are lumped if intermediate plants can be found. I believe that Camp created too many *Vaccinium* species and Vander Kloet allowed too few.

If species are defined very broadly, as Vander Kloet has done with *Vaccinium*, the names of plants become too general to be very useful. For example, if I order *V. corymbosum* from the *Plant and Service Directory*, what will I get? I could get *V. elliotii*, which is highly deciduous, flowers from late



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January through February, ripens in April and May, and produces small, black berries. The leaves would be small. The branches would be spreading, and the twigs would be delicate and gracefully arranged, especially when grown in partial shade under pine. The plant would thrive on sandy, acid soils, and would require little organic matter in the soil to grow well. This plant would eventually reach a height of 10 to 15 feet, and might produce a small colony of daughter plants from underground rhizomes. On the proper site, it would be one of the most beautiful native shrubs that could be grown in north Florida.

Or, when I order *V. corymbosum*, I could get a rabbiteye blueberry (Camp's *V. ashei*). The surface area of the leaves would be about 20 times larger than that of *V. elliotii*. The flowers would open in March, 6 to 8 weeks after those of *V. elliotii*, and the berries would ripen in July and August, two to three months later than mayberries. The plants would be more upright in growth habit, and the twigs would be much coarser. Although the berries and flowers would be much larger than those of *V. elliotii*, the plant

would lack the delicate beauty of the mayberry.

If I wanted to buy two *V. corymbosum* plants, to assure a good crop of fruit (wild blueberries set little fruit if not cross pollinated), I can only hope that the nursery does not send me one plant of *V. elliotii* and one of *V. ashei*. I have personally hand-pollinated over 5000 flowers of *V. ashei* with pollen from *V. elliotii*, without obtaining a single viable seed. The mayberry is diploid (24 chromosomes) and the rabbiteye is hexaploid (72 chromosomes), and this makes them almost impossible to cross. The mayberry and the rabbiteye have similar habitat requirements, and are frequently found together in the piney woods of the Florida Panhandle from Tallahassee to Pensacola. Although I have looked at thousands of plants of both species, I have never seen one that looked like a natural hybrid.

Finally, if I order *V. corymbosum*, I could get Camp's *V. fuscatum*, the southern highbush blueberry. Unlike mayberry and rabbiteye, this would be a plant of the wet flatwoods. Unlike *V. elliotii* and *V. ashei*, it would be highly

shade tolerant, and would grow well on the organic debris that accumulates among the cypress knees in a cypress swamp. Although it would be an interesting plant with attractive flowers and leaves, its requirements for a loose, organic soil would make it a poor choice for most dooryard landscaping situations.

I am a strong advocate of retaining *V. elliotii* (mayberry), *V. ashei* (rabbiteye blueberry), and *V. corymbosum* (high-bush blueberry) as three separate species. There are both practical and theoretical reasons for this opinion. *V. elliotii* is a beautiful plant, is easy to propagate, and deserves wider use in native plant landscapes in the southeastern U.S. But attempts to use it more widely will be frustrated if it is not listed under its own name in native plant catalogs.

• *Dr. Paul Lyrene, Horticultural Sciences Department, University of Florida, is a specialist in Vaccinium.*

[The taxonomic conclusions expressed in this article are those of the author, and may not be in agreement with other specialists. —Editor]