Wildflower in Focus: Virginia Creeper

Parthenocissus quinquefolia (Linnaeus) Planchon
Family Vitaceae

> *"Ubiquitous in an **extraordinary range** of wet to very dry, forested to open habitats; tolerant of a range of soil types, tolerant of deep flooding, capable of rooting in deep outcrop crevices and boulder-filed interstices that exclude other plants; scarce at the highest elevations."* Flora of Virgina, p 977. (emphasis added)

What a wonderful plant! So common that it's often neglected on our field trip plant lists. In fact, of the 46 Maryland locations for which the MNPS website has plant lists, only 16 include Virginia creeper. But I'll eat my garden gloves if it's not present at every one of the other 30.

Virginia creeper sphinx moth, Darapsa myron

Climbing Mechanism. Like other members of the Grape Family, Virginia creeper is a "liana" – meaning that it's a woody vine. It climbs when it encounters a structure and can also grow a considerable distance along the ground. Some lianas, such as poison ivy (*Toxicodendron radicans*) and English ivy (*Hedera helix*), climb and attach using adhesive adventitious roots. Virginia creeper employs different strategies, having branched tendrils that coil around twigs and that have small adhesive pads at their tips. Charles Darwin was fascinated by adhesive mechanisms in climbing plants, but strangely, Virginia creeper is one of the few species whose adhesive properties have been studied since his time. Upon touch stimulus, the tendril tips swell and flatten against the substrate. Epidermal cells in the tips become papillate, that is, they develop tiny projections, which are believed to produce a polysaccharide adhesive that may become woody and weather resistant as the tendril ages.

Virginia creeper's twining and branching tendrils

Similar Species. Virginia creeper is often confused with poison ivy but they're easy to distinguish. Poison ivy has three leaflets and Virginia creeper has five. They are often seen growing on the same tree, as in the photo on page 9. So-called Boston ivy (*Parthenocissus tricuspidata*) is actually an Asian species, often used as decorative climber. As the name implies, it has three leaflets.

Wildlife Value. The fruit of Virginia creeper is a true berry, meaning a fleshy fruit produced from a single pistil. The deep blue berries are eaten by many animals, especially birds, but they are toxic to humans. Virginia creeper's thick foliage provides excellent cover for small animals, and provides birds with perches, nesting places and leaf surfaces to find insects to eat.

The larvae of the Virginia creeper sphinx moth (*Darapsa myron*, also called hog sphinx) feed on Virginia creeper and other members of the Grape Family. The females lay translucent yellow-green eggs in twos or threes on the underside of host leaves. The larvae are "hornworms," so called because of the pointed tail-like "horn" at their end. Sphinx moths are named for the caterpillars' habit of resting motionless in a reared-back, head-up position reminiscent of the sphinxes of Egyptian mythology.

Landscape Value. Michael Dirr, the guru of woody landscape plants, describes Virginia creeper as "excellent for tough low-maintenance cover," noting that many apparently ivy-covered walls are in reality covered with creeper. Although creeper may leave an adhesive residue on walls, it does not damage buildings the way English ivy does, by inserting adventitious roots into cracks.

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I enjoy having Virginia creeper on a fence in my garden. It needs annual pruning, but is not invasive when compared to English ivy, porcelainberry (*Ampelopsis brevipedunculata*) or the native trumpet vine (*Campsis radicans*).

~ Kirsten Johnson

Virginia creeper and poison ivy coexist on this tree, creating a spectacular autumn display of color. Photo: Janice Browne

References

Dirr, M. A. 1998. Manual of Woody Landscape Plants, 5th ed. p. 698. Stipes Publishing LLC, Champaigne, IL.

Isnard, S. and W. K. Silk, Moving with Climbing Plants from Charles Darwin's Time into the 21st Century. American Journal of Botany 96(7): 1205–1221. 2009.

PROGRAMS

All MNPS programs are free and open to the public. For details and up to date listings, see mdflora.org.

July 28, Tuesday – 7:30 PM, doors open at 7:00
Nature Serve – A Network Approach to Conserving Plants
Silver Spring, Silver Spring Civic Center (note location for this program)
Speaker: Anne Francis, Lead Botanist, NatureServe
Anne Francis will address methods of assessing plant species' extinction risk. She will also describe Explore Natural Communities (http.//www.explorenaturalcommunities.org/), a new way to engage with nature in National Parks. Rock Creek Park is the first National Park to be featured in this program.

August 18, Tuesday – Western Mountains Chapter, 7:00
The topic to be announced
Frostburg State University, Compton Science Center, Room 327
Speaker: Sam Droege, Wildlife Biologist, USGS Patuxent Wildlife Research Center

August 25, Tuesday – 7:30 PM, doors open at 7:00
What's in a Name? Botanical Names Explored
Silver Spring, Silver Spring Civic Center (note location for this program)
Speaker: Margaret Chatham
Many botanic names are useful for identification. Margaret Chatham has a lifelong interest in words and how they came to mean what they do. We hope to increase your knowledge and your comfort level with botanic Latin (and Greek!).

September 19 and 20 – Saturday and Sunday
MNPS Annual Fall Conference, at Salisbury University, Salisbury
See pages 3 & 4 – and the MNPS website – for details, including field trips.

September 29, Tuesday – 7:30 PM, doors open at 7:00
Ecological Restoration of Invaded Urban Forests: What Is Possible?
Montgomery County, location: Wheaton Library
Speaker: Lea Johnson, Ass't Professor, UMD
Lea Johnson is a plant ecologist working on applications of ecology to land management including urban land restoration. Her work in New York City included places where oriental bittersweet and porcelain berry were major concerns. (This is an uplifting presentation!)

October 20, Tuesday – Western Mountains Chapter, 7:00 PM
An Evaluation of Pest and Disease Vulnerability of Urban Street Trees in Washington, DC
Frostburg State University, Compton Science Center, Room 327
Speaker: Laura G. Smith, Graduate Student, Department of Biology, Frostburg State University
Laura Smith's research prioritized specific neighborhoods in DC in need of monitoring to avoid pest and disease outbreaks. She will discuss her findings and management concepts for the future.

October 27, Tuesday – 7:30 PM, doors open at 7:00
Botanical Artists for Education & the Environment
Montgomery County, location: Wheaton Library
Speaker: Pamela Mason
See page 8 for a description of *American Botanical Paintings: Native Plants of the Mid Atlantic*, book of contemporary botanical paintings. Pamela Mason is one of the contributors.