



Smilax – Not Just a Pain!

A bright spot of green in the grey-brown woods of winter may well be a species of Smilax, also known as catbrier, greenbrier, sawbrier, and many less complimentary names such as hellfetter, blasphemy vine, and tramp's troubles. Another common name, carrion flower, likely refers to the herbaceous and prickly-free *Smilax hugeri* (Small) J.B.S. Norton ex Pennell, an inconspicuous member of our spring flora and the only deciduous Smilax yet found on the Domain. The stems of the woody vines are almost always green and they often retain their leaves through the winter. They are the only woody vine in the northeastern United States that has both thorns and tendrils. The tendrils occur in pairs attached to the base of the leafstalk and have an interesting structure, a spiral at the base followed by a straight section and terminating in another spiral that twists in the opposite direction as the one at the base. This feature lends interest to an otherwise often-maligned plant.

There are four species of woody Smilax vines on the Domain. The very thorny and thick-stemmed knee-high briars catching at your pant legs as you walk through the woods may well be *Smilax bona-nox* L., which one might distinguish as the sawbrier or bullbrier. Its leaves are usually variegated, with lighter patches between the veins, lobes at the base (hastate) and margins usually thickened and sometimes prickly.

Big tangles of another species up in the trees and shrubs may be *S. rotundifolia* L. or round-leaved greenbrier. If the backs of the leaves have a whitish cast, it is *S. glauca* Walt. or cat greenbrier. The bristly

greenbrier, or *S. tamnoides* L., has more needle-like bristles and is often found in bottomland or riparian forests, as is *S. rotundifolia*. The "L." after the scientific name indicates that it was given by Linnaeus, so these plants caught the attention (and the garments, no doubt) of the earlier European explorers in the New

World to complain about wading through thorny patches. The berries are not very nutritious but those remaining in the spring provide food for migrating birds.

Smilax is of limited use to humans, though new shoots and growing tips as well as uncurling leaves and tendrils may be eaten raw or steamed or boiled. These are also very palatable to white-tailed deer. One only wishes that the deer would also eat the heavy thorny vines. However, these thick masses are home to birds such as the gray catbird, brown thrasher, and yellow-breasted chat, and the cottontail rabbit. Remember Brer Rabbit's chant: "Bred and bawn in the brier-patch, Brer Fox"?

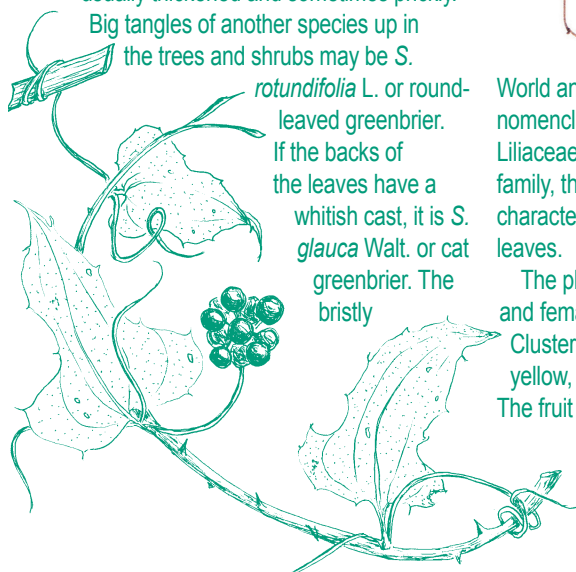
Some tropical Smilax species, relatives of those on the Domain, have been used by humans as medicine and flavoring. These were observed by Spanish explorers to be similar to a Smilax in Spain from whose roots compounds were extracted which were used as a blood purifier and a beverage, and which was called *zarzaparrilla* from the Spanish words for bramble, *zarza*, and vine, *parilla*. The dried root of *Smilax aristolochiaefolia* (Mexico), *S. regelii* (Honduras), and *S. febrifuga* (Ecuador) were used similarly in the New World and became known in English as sarsaparilla. These roots do contain saponins, which would have some effect on the human body, though not necessarily curative. They are not to be confused with the plant called wild sarsaparilla in Appalachia, *Aralia nudicaulis* L., which has been used medicinally but is not at all closely related to Smilax.

— Yolande Gottfried



World and were sent back for identification and nomenclature. Once included in the lily family, Liliaceae, they now belong to their very own family, the Smilacaceae, and are monocots, one characteristic of which is the parallel veins in the leaves.

The plants are dioecious, meaning that male and female flowers occur on separate individuals. Clusters or umbels of small flowers, greenish, yellow, or brown, may be noticed in the spring. The fruit is a blue or black berry containing seeds enclosed in a membranous elastic sac, which explains another common name, stretchberry. This is another feature worth exploring when inclined



References:

- Eastman, John. 1992. The Book of Forest and Thicket: Trees, Shrubs, and Wildflowers of Eastern North America. Stackpole Books.
- Elias, Thomas S. and Peter A. Dykeman. 1990. Edible Wild Plants: A North American Field Guide. Sterling Publishing Co., Inc., New York.
- Harris, Joel Chandler. 1880. Uncle Remus: His Songs and Sayings. Grosset and Dunlap, New York.

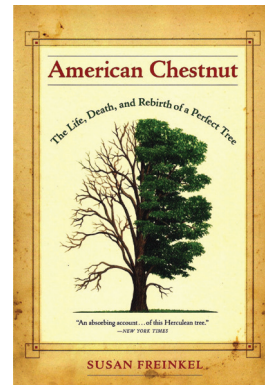
Botany Books

American Chestnut: The Life, Death, and Rebirth of a Perfect Tree, by Susan Freinkel. Berkeley: University of California Press, 2007.

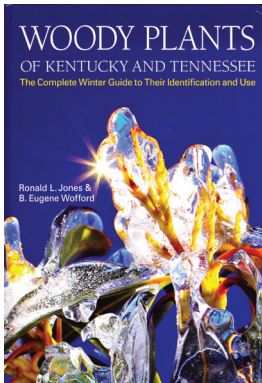
Even for someone long interested in the chestnut, I learned a lot from this good read. Did you know, for instance, that a huge chestnut nut industry existed prior to the blight and that its epicenter lay in Stuart County, VA, just up the road from Andy Griffith country in NC? When the blight began, the government and scientists struggled to accept, first of all, that the chestnut ever could be eliminated. Once they began to see that possibility, they sparred among themselves to decide what to do in the face of an enigmatic enemy.

Freinkel engagingly chronicles these events, the scientists' struggle to understand what the blight was, and the fascinating individuals engaged in the effort. Along the way the reader learns a lot about the quirky chestnut organism and its wily antagonist. Then she describes the ongoing efforts to bring the chestnut back. It turns out that there are three, not two, main strategies out there. I was aware of the backcrossing program of the American Chestnut Foundation and the attempts to use surviving mature chestnuts as breeding stock, but I did not know about the efforts to change the very nature of the fungal foe itself. All three stories involve interesting personalities and scientific sleuthing.

If you're looking for a book that makes you admire both the chestnut and its foe and the complexity involved when humans try to get involved in their struggle, this may be the book for you. —Robin Gottfried



Woody Plants of Kentucky and Tennessee, the Complete Winter Guide to Their Identification and Use, by Ronald L. Jones and B. Eugene Wofford. Lexington: The University of Kentucky Press, 2013.



If you'd like to increase your enjoyment of winter botany, look no further. Ron Jones and Gene Wofford, curators of the herbaria at Eastern Kentucky University and the University of Tennessee, respectively, have collaborated to produce a beautiful and useful volume. First to catch your eye are the striking color photographs of live plants, showing diagnostic characteristics that can be used for winter identification—buds, stems, cones, fruit, needles, remnant leaves, and even twig pith. The book includes keys for identifying genera and species in winter. Descriptions of these and lesser taxa (subspecies and varieties) include scientific and common names, habitat, distribution, conservation status, invasiveness, wetland affinities, and geographical ranges.

This guide is intended for a wide range of people who enjoy and work with plants: professional and amateur botanists, farmers, landscape architects, agricultural agents and more. Also, those interested in uses of wild plants in winter will find it a helpful resource. Beech nuts, for instance, are a great survival food, but the authors advise moderation. And I learned that rose stems can be used as arrow shafts, but holly branches are better.

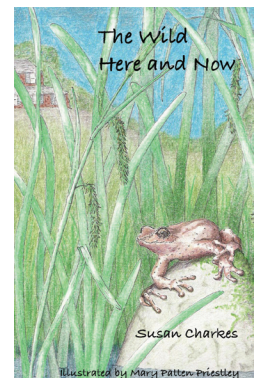
The book covers 457 species and lesser taxa of trees, shrubs, and woody vines that are native or naturalized in Tennessee and/or Kentucky. Because plants ignore political boundaries, the book is useful far into the Blue Ridge, Valley and Ridge, Appalachian Plateau, Interior Low Plateau, and northern Coastal Plain provinces in surrounding states. In addition to its use as an identification manual, the book is also an informative read. Morphological features of plants in winter—twigs, buds, bark, cones, and fruit—are described and illustrated. There is a section on uses of woody plants for food, medicine, fiber, and weapons, appendices listing them, and notes about uses under each of the species.

I am grateful to Jones and Wofford for this fine work. It's an enjoyable fireside read, and as soon as it stops snowing I look forward to working through some of the keys. —MPP

The Wild Here and Now, written by Susan Charkes and illustrated by Mary Priestley. Arboreality Press, 2012.

Susan Charkes, who lived in Sewanee, Tennessee, in 2006, writes about nature where you least expect to find it: right in front of you. Nature in *The Wild Here and Now* is not something you go somewhere else to discover. It's all around you: a squirrel in a tree cavity, a mayfly on the hood of a car, a turkey vulture overhead, a gnat under the collar. Both a poet and a writer of nonfiction (including several books on the outdoors), Charkes has a supple style that conveys the same quality of surprise that she finds in nature. *The Wild Here and Now* inspires the reader to see, hear and feel nature with newly sharpened senses: to discover a new world, right outside the front door.

Priestley's pen and ink drawings throughout capture this spirit. Charles comments, "When I moved to Sewanee it was Mary Priestley's writings about the outdoors that first drew me to the community's unique natural wonders, and also initiated a personal relationship that is based on a shared love for the small things in nature that Mary's drawings convey perfectly."



All of these books are available through [amazon.com](https://www.amazon.com). Enjoy! —Ed.

For the latest botanical news from the Domain check out our blog:
sewaneeherbarium.wordpress.com

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Illustrations, by the herbarium nature journaling group, are of Smilax auriculata (Latham Davis), S. bona-nox (Mary Priestley), S. hugeri (Margaret Woods), and S. tamnoides (Maren Johnson).



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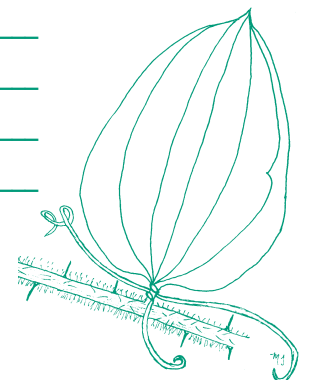
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Herbarium Tour and Mountathon Sewanee Herbarium, Spencer Hall

Sat., Feb. 22, 9:30–11:30 a.m., Mary Priestley
Your chance to see where and what the herbarium is and to help in the work! Spending a morning mounting pressed plants can be a satisfying and fun experience. The finished product is always useful and often quite beautiful. Come help us mount our backlog of specimens. Learn methods that have been passed down through generations and are still used today, and take home a guide to mounting pressed plants. Meet in the herbarium on the first floor of Spencer Hall. The main entrance is across from duPont Library and there is parking behind the library.

Hunt for the First Hepatica Shakerag Hollow, Sat., Mar.1, 1:30 p.m., Yolande Gottfried

We'll see if March comes in like a lion or a lamb and see what might be out early in Shakerag—maybe some hepatica, pepper-and-salt, or star chickweed.

Winter Calendar of Events

Since this is a little later than we usually do this walk, there might be more in bloom. Meet at Green's View for this moderate-to-strenuous 2-mile walk that may include a steep rocky section of the trail. Come prepared for muddy, wet, icy, and/or rocky conditions.

Early Spring Wildflowers Shakerag Hollow, Sun., March 30, 2 p.m., Yolande and Robin Gottfried

Spring is officially here and it's time to head out to Shakerag Hollow. If you don't get out about now you might miss the beginning of the big show—bloodroot, trout lily, Dutchman's breeches, and spring beauties bloom early and fade fast. Meet at Green's View for this moderate-to-strenuous 2-mile walk that may include a steep rocky section of the trail.

Nature Journaling

A nature journaling group, sponsored by the herbarium, meets Thursday mornings, 9-11 in the herbarium. An informal gathering, participants share observations and writing, and sketch plants or other natural objects. Everyone is welcome.

All times are CST or CDT.

Wear appropriate shoes on all of these walks. Risks involved in hiking include physical exertion, rough terrain, forces of nature, and other hazards not present in everyday life. Picking flowers and digging plants are prohibited in all of the above-mentioned natural areas.

For more information on these or other Sewanee Herbarium events, please contact Yolande Gottfried at the Herbarium (931.598.3346) or by email at ygottfri@sewanee.edu. Directions are available on the Herbarium website, lal.sewanee.edu/herbarium/, under the calendar of events.

Other events of interest:

Native Plant Symposium sponsored by the Tennessee Valley Chapter of Wild Ones

Saturday, March 8, 2014, 8:00 a.m.–4:00 p.m.

University Center Auditorium at UTC, Chattanooga, TN

Practical information about using native plants in the home landscape to get more birds & butterflies, biodiversity, beauty, and a healthy environment.

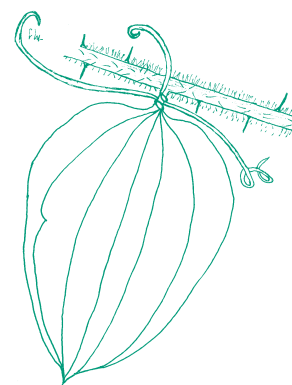
Go to chattanooga natives.blogspot.com/ for more information and to register.

11th Trails & Trilliums, April 11-13, 2014, Monteagle, TN

Sponsored by the Friends of South Cumberland and held at the historic Monteagle Sunday School Assembly grounds, featuring "Teddy Roosevelt," wildflowers and unique hikes.

Please visit the Trails and Trilliums Facebook page Trails & Trilliums, and the website, trailsandtrilliums.org, for a detailed schedule of events.

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