



Bulletin

A publication of the VIRGINIA NATIVE PLANT SOCIETY

Conserving wild flowers and wild places

<http://www.vnps.org>

Library of Virginia to spotlight our flora

Big news at the *Flora* office: our work is just about done curating the exhibition, "Flora of Virginia," poised to open to the public March 17 at the Library of Virginia in Richmond. The free exhibition will run through Sept. 13.

Please be sure to plan a visit. As you know, the Virginia Native Plant Society's fund drive for 2013 was targeted to support this exhibition, and we are all grateful that you chose it. And such support! VNPS members gave more than \$11,300 to help fund preparation of the exhibit spaces, as well as the creation of traveling panel exhibits that will visit libraries and museums around Virginia. The net amount of about \$10,100 was to be donated to the Library.

"It's terrific of the members of the Virginia Native Plant Society to help this effort so strongly," said Barbara Batson, exhibitions coordinator at the Library. "We are delighted to be working with the Flora Project to mount an exhibition on Virginia's plants that speaks to the interconnection of science and art."

(See Library exhibit, page 2)

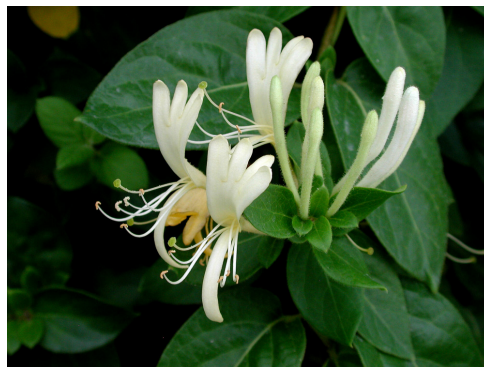
Two honeysuckles

A tale of Dr. Jekyll and Mr. Hyde

There are about 180 species of *Lonicera* (honeysuckles) widely distributed in the north temperate zone. These are mostly shrubby plants, but in Virginia, we have two species that are woody vines (lianas). These two lianous honeysuckles should be familiar to all Virginia Native Plant Society members. One is this year's VNPS Wildflower of the Year, *Lonicera sempervirens* (coral honeysuckle), and the other is *Lonicera japonica* (Japanese honeysuckle), widely and deservedly reviled as one of our most aggressive invasive exotic species. Together, these two plants make an odd pair, a sort of botanical Dr. Jekyll and Mr. Hyde. What is it, exactly, that makes their biology so different?

In terms of floral structure and visual recognition characters, these two honeysuckles are distinctly different. Coral honeysuckle has bright-red and nearly actinomorphic flowers that are pollinated by hummingbirds and produce red berries, whereas Japanese honeysuckle has white to tan, strongly zygomorphic flowers pollinated (in its native land) by hawkmoths and bees and produce shiny black berries. But do differences in their reproductive biology explain why Japanese honeysuckle is so rampantly invasive? Perhaps not, because—believe it or not—there is evidence that invasive Japanese honeysuckle flowers have a low success rate in setting fruit.

(See Honeysuckles, page 6)



Dueling cousins: Japanese honeysuckle, left, and coral honeysuckle, provide opportunities for comparison and contrast. (Courtesy John Hayden)

Coral honeysuckle: 2014 Wildflower of the Year (brochure inside)



From the president

Plants need support on the legislative front

Under our new Conservation Chair Marcia Mabee Bell, the VNPS is becoming re-energized in engaging with legislation and conservation funding at both the state and federal levels. By the time you read this, the General Assembly will be close to ending its session, and you will know whether our efforts have been successful. Sally Anderson, Marcia, and I have all been to Richmond to seek additional funding for the Natural Heritage Division of the Department of Conservation and Recreation, and we will probably visit again. Although the natural area preserves have more than doubled in both numbers and acreage in the past 10 years, staffing has been cut. We sought to increase staffing to 47 employees, which is still lower than its high of 48. We posted an action alert on our website and sought to engage you, our members, in contacting legislators. Another issue before the General Assembly was the permanent protection of Stadium Woods, a remnant old-growth forest on the campus of Virginia Tech.

On the federal level, we have joined with other conservation groups in support of H.R. 2692, "The Saving America's Pollinators Act." At the direction of your board of directors, Marcia drafted a letter that I sent to the members of the Virginia congressional delegation who are not currently co-sponsoring the bill to urge them to do so. The bill would impose an immediate

moratorium on the use of neonicotinoid pesticides and allow the Environmental Protection Agency time to study their effects and make a recommendation.

Did you notice our new logo? It's really an update on our old logo, which was adopted in the 1980s as part of a contest for graphic arts students at Northern Virginia Community College. The new logo, developed by Web Strategies, sharpens the outline of the tree and other vegetation and deletes the mirror image. We hope to offer shirts and other swag sporting this enhanced new logo.

Spring will be here soon enough, but be sure to take time to walk in the wintertime woods. Conifers, mosses, and some ferns provide greenery even on the darkest days. You'll enjoy the crisp, clean air and quiet atmosphere punctuated with the sounds of woodpeckers and rustling squirrels.

Your president,
Nancy Vehrs



**VIRGINIA NATIVE
PLANT SOCIETY**

•*Library exhibit*

(Continued from page 1)

We at the Flora Project are delighted too. The collaboration began in the summer of 2010, and the people at the library have been every bit as enthusiastic as we are! The exhibit spaces and the quality of the Library's execution will beautifully showcase the diverse objects on display, and the exhibition is going to be astounding. It will feature herbarium specimens, sculptures, fossils, photographs, illustrations from the *Flora of Virginia*, conservation information, and beautiful and surprising books,

engravings, and even plant specimens (!) from the library's collection.

Some of the others providing objects for the exhibition are Mountain Lake Biological Station, the University of Richmond Herbarium, the biology department at the College of William and Mary, the University of Virginia Libraries, the Nature Conservancy, Oak Spring Garden Library, the Garden Club of Virginia, the Longleaf Alliance, and the Virginia Department of Agriculture and Consumer Services.

The Library will also offer a se-

ries of educational talks and activities during the six months of the exhibition's run. Stay tuned!

From the Flora Project's perspective, the exhibition helps us with two other purposes. It will culminate the fanfare surrounding publication of the *Flora*, and it will give form to the Flora Project's future: education and outreach regarding use of the *Flora* and conservation of Virginia plants.

Let me know when you're coming to the exhibition!

—Bland Crowder, associate director, *Flora of Virginia Project*.

Richmond park showcases wildness on the James

Signed into existence as a Richmond park by Governor Mills Godwin in the 1970s, James River Park is a miracle. The park system exists in disparate units and extends from Huguenot Woods in the west to Ancarrow's landing in the east. Both Huguenot Woods and Pony Pasture occur where the river is fairly narrow. I grew up just uphill from the penultimate western unit known as Pony Pasture.

The shoreline at Pony Pasture is just a foot or two higher than the river at non-flood stage, and there among the tall green ash (*Fraxinus pennsylvanicus*), bitternut hickory (*Carya cordiformis*) and red maple (*Acer rubrum*) are boulders extending into the river where anyone can observe and contemplate nature in the shade of towering American sycamores (*Platanus occidentalis*). These reveries are readily disturbed by loudly complaining Double Crested Cormorants that argue among themselves for rights to captured fish. A spectacular sight is to witness Ospreys crashing into the water for their own fish. Because floods scour the shoreline, few wetland plants occur, but once I did see a tenacious swamp rose-mallow (*Hibiscus moscheutos*) with white petals and vivid red throat. A rather unfortunate introduction to this unit of the park is Amur honeysuckle (*Lonicera maackii*). I saw many mature, fruiting specimens encroaching on the trails by the river's edge.

For a wider and wilder river view I go to the 42nd Street unit of the park. Here a topographical mosaic yields a greater habitat diversity and hence floristic diversity. You enter the unit from the top of a steep bluff and descend a stone stairway under the dense shade of red maple, northern red oak (*Quercus rubra*), sweetgum (*Liquidambar styraciflua*) and some American elm (*Ulmus americana*), bitternut hickory and hop hornbeam (*Ostrya virginiana*). It's not easy to get close to the understory here—it is both steep and slippery with deep leaf litter. I once ventured there and saw some leaves of spring beauty (*Claytonia virginica*). One undesirable plant also venturing onto the slopes is garlic mustard (*Alliaria petiolata*).

At the end of the stone steps I descend a spiral staircase to arrive at the floodplain. Here is a gravel trail paralleling the river and sometimes crowded with joggers, dog walkers and bicyclists. A right-angle turn toward the river immediately leaves you alone to botanize. From here on, botanizers scramble over low-rise boulders, across pits of accumulated organic matter, sand or mud beneath a dense canopy of tulip-tree (*Liriodendron tulipifera*), red maple, sweetgum, black gum (*Nyssa sylvatica* var. *sylvatica*), willow oak (*Quercus phellos*), and green ash. Closer to the river, emergent boulders jut higher into the air, but also more gaps appear in the canopy allowing more wetland wildflowers to colonize. On a few exposed and drier uplands I found an unusual azure Virginia spiderwort (*Tradescantia virginiana*). Nearby, a pair of lavender-flowered riverside residents: mistflower (*Conoclinium coelestinum*) and Carolina elephant's foot (*Elephantopus carolinianus*). In the water nearby I found several sprigs of the intricately structured green alga *Chara vulgaris*. And on a shadier and muddy bank I saw a single specimen of dwarf St. John's-wort (*Hypericum mutilum*). From this point to the river I jump a four-foot gap between boulders to access an island covered by at least two clones of pawpaw (*Asimina triloba*). There must be at least two clones on this island because the trees often produce copious fruit. A single clone would not produce fruit.

West of pawpaw island past a backwater channel among more and higher boulders and 15 feet or more above the river is a return to river bluff woody species such as red maple, hop hornbeam and spicebush (*Lindera benzoin*). The solid tops of these boulders show that rushing water long ago covered them as well. Their surfaces are perforated by dozens of nearly circular potholes. Evidence of recent flooding is often evident with juvenile fish that remain caught in the potholes as the water level dropped. A fascinating naturalized tree that I found sporadically north of my pawpaw island

reference point that also seems to fuse seamlessly into the riverside forest is royal paulownia (*Paulownia tomentosa*). I tend to notice the trees when they flower in mid-spring with clusters of lavender blooms that inspired me to name paulownia the fox-glove tree.

On the pawpaw island, few herbs occur because pawpaw stem density is extremely high, but in a clear gap in the island's center, I discovered a large clone of the aggressive giant sunflower (*Helianthus giganteus*). On the island shoreline beneath some towering sycamores and large black willow (*Salix nigra*) grow a few sparse stands of bladder-nut (*Staphylea trifolia*), an occasional muscular-boled American hornbeam (*Carpinus caroliniana*) and a willow oak or two mixed in a dense thicket with shrubs of Virginia sweetspire (*Itea virginica*) mixed with one of the irrepressible species of *Rubus*. The island is situated about three feet above the river with access to a plethora of boulders. Especially during drought I can venture far into the river by jumping from boulder to boulder. From pawpaw island you also have a vantage point to see the completely forested opposite river bank. This view might convince you that civilization is very far away. There is nothing to indicate a large city to the north, the dissonant noise of traffic drowned by the crash of water against resistant boulders and the general spirited gurgle and rush of the river. The only sign of the bustling city on the north shore is the iconic tower in Byrd Park called the Carillon.

Once you are accustomed to the majestic view, you will begin to see flowers. Growing profusely in the tight junctions of river boulders are little thickets of juvenile red maples and willow oaks and dense stands of water willow (*Justicia americana*) all competing to colonize alluvial soils that gather in the interstices of the boulders and their junctions. Great Blue Herons are omnipresent, looking much like Jurassic pterosaurs as they patiently stalk smallmouth bass, sunfish and frogs. Leaving the island headed east along a well-worn trail I

(See *Richmond park*, page 5)

VNPS celebrates one year of outreach on Facebook

VNPS celebrated its first anniversary with Facebook in December. Our page features news and information about native plants and conservation issues. We post almost every day, items such as plant profiles or links to new maps, research, endangered species, success stories, warnings about invasives, planting guides, and news of what organizations like ours are doing. We get comments from experts who want to share further information, and we also get thank-you notes from people who have learned something from reading our posts.

We thought you might enjoy hearing some of the stories from the Facebook outreach effort. Here are a few recent thank-you comments.

- People who learned how to identify a plant from our photos. Some of the plants identified were Christmas fern (*Polystichum acrostichoides*), poison ivy (*Toxicodendron radicans*), monarda (*Monarda punctata*), and blue wild indigo (*Baptisia australis*). We get funny comments like this one: "This is the plant I was talking about!"
- People who were unaware of the invasive quality of plants such as butterfly bush (*Buddleja davidii*), tree-of-heaven (*Ailanthus altissima*), and beefsteak plant (*Perilla frutescens*), along with pledges to remove these and replace them with natives.
- One person about to cut down a sweet gum (*Liquidambar styraciflua*) thanked

us when she learned that the corky extrusions called wingstems on her tree were not a weird disease and this saved the life of her tree!

- Several folks who learned about and pledged to plant native alternatives to popular, commonly planted, non-native yard trees and shrubs.
- People who want to know where a plant grows in Virginia, which gives us the opportunity to share the Digital Atlas of the Virginia Flora. It's here if you haven't seen it vaplantatlas.org.

Our posts are also shared or reposted on other pages by a variety of individuals and organizations. Just a few of these include websites from the Master Gardeners and Master Naturalists from the Blue Ridge to the Eastern Shore, the Virginia Nursery & Landscape Association, Herring Run Nursery, Virginia Society of Landscape Designers, Richmond Community High School Environmental Club, Arlingtonians for a Clean Environment, Earth Sangha, Reedy Creek Coalition, *Chesapeake Style* magazine, Piedmont Environmental Council, in addition to many other native plant societies including Alabama, Georgia, Florida, North Carolina, and Illinois. Why does that matter? In numbers there is strength. We share not only many native plants with those other societies, but also many goals.

We get great comments from our own members too. Recently:



- Cris Fleming, who praised the use of winged sumac (*Rhus copallinum*) as an alternative to *Spiraea japonica*.
- Catherine Tucker, who proclaimed, in response to our New Year query "What will you do in 2014 to support, conserve, plant, and teach others about the native plants that are anchoring earth's ecosystems, which in turn support us?" "I am not a gardener, but in 2014 I will teach others, look for great habitats and lead walks."
- John Hayden, who keeps us straight on all manner of botanical complexities.
- Alonso Abugattas who recommended buttonbush (*Cephalanthus occidentalis*) as a superior pollinator-attracting shrub.
- John Magee, who commented that his firm had planted thousands of sweetspire (*Itea virginica*), a testament, he said, to how easy they are to grow, and added his endorsement of buttonbush, clethra (*Clethra alnifolia*), and calycanthus (*Calycanthus florida*) to replace both buddleia and the exotic burning bush (*Euonymus alatus*).
- Richard Stromberg, who has donated generously from his photo cache. (Thank you, Richard!)
- And last but by no means least, Nancy Vehrs and Nicky Staunton, who not only make excellent informational comments but also submit photographs.

We sure would like to have your photographs to share, too! Facebook has been a very worthwhile, no-cost outreach platform. It's a great way to share our love and knowledge of native

(See Facebook, page 5)



• Richmond park

(Continued from page 3)

spotted white wood aster (*Eurybia divaricata*).

Farther east are fewer and shorter boulders, occluded backwater marshes and swamps and even some open sandy beach. Here in the open sun of the marsh I saw a completely pink-flowered form of swamp rose-mallow. Beside it, a beautiful flowering specimen of mimosa (*Albizia julibrissin*), a plant that French botanist André Michaux introduced into the southeastern United States in the 18th century and that has since naturalized. Perhaps 50 feet farther east I found a swamp chestnut oak (*Quercus michauxii*), named for Michaux.

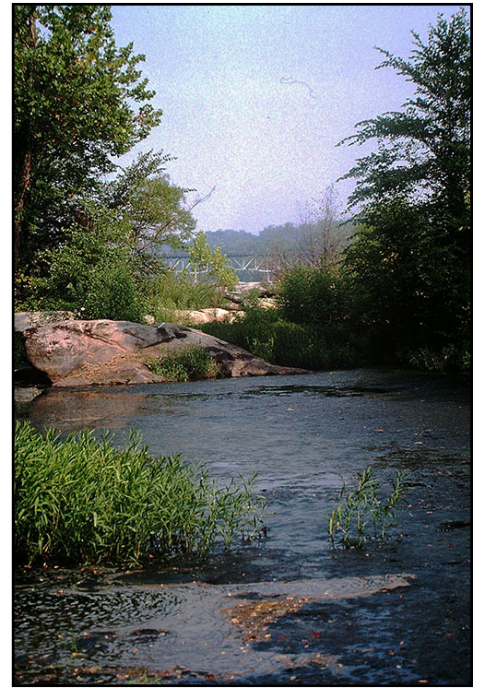
Among the lower boulder east of pawpaw island it is possible see the flowers of water willow very closely. You may even notice that in their intricate delicacy they somewhat resemble orchid flowers. In a deep backwater south of these water willow plants, I came upon a vividly yellow-flowered aquatic emergent in a position I usually expect of a carnivorous bladderwort (*Utricularia*). The canary-yellow flowers belonged to water stargrass (*Heteranthera dubia*) that showed bright contrast to the leaf-choked, tea-colored water. Later I found a few more water stargrass plants growing in saturated sand along with other wetland plants such as slender seedbox (*Ludwigia linearis*) and sharp-winged monkey flower (*Mimulus alatus*). I found bordering a swamp a plant often associated with the upper limits of a flood—long-

stalked false pimpernel (*Lindernia dubia* var. *anagallidea*). Once while searching for aquatic macrophytes on submerged boulders and adjoining muddy banks I found a cluster of quillworts (*Isoetes*) looking like immature onion plants. These were most likely the common *Isoetes engelmannii*. On higher ground farther east I found thickets of vining plants like trumpet creeper (*Campsis radicans*) intertwined with man-of-the-earth (*Ipomoea pandurata*) and even one specimen of groundnut (*Apis americana*), all climbing riverside trees.

Alas, many of the plants on the sandy beaches and back channels were washed away by Hurricane Isabel in 2003. Water willow—in its secure boulders—survived. Ann Woodlief in her book about the James River, *In River Time*, writes: “Though to the short-lived creatures on its banks its works seem indelibly etched, the river erases as much as it creates.”

The proximity of these plant communities to an oft-raging river makes for frequent and sometimes dynamic change. The spring floods that deposit young fish onto boulder tops may also escort propagules of plants such as long-stalked false pimpernel, water stargrass and water willow to safe harbors, but summer and fall hurricanes may just as easily rip these plants away and send them farther downstream to start the colonization process anew.

—Stephen Johnson, a freelance plant ecologist from Virginia, is now living in Iowa. He enjoys sharing plant memories from the Old Dominion with his fellow VNPS members.



James River backwater looking west.
(Photo by Stephen Johnson)

GWNF Wildflower event

Shenandoah Mountain stretches across Augusta and Rockingham Counties in the George Washington/Jefferson National Forest (North River Ranger District). It is a biodiversity treasure, with native forestland for native species habitat, recreation, hunting, fishing and clean water. In celebration of this natural area and its diverse and abundant wildflowers, join the Headwaters Master Naturalist guides and wildflower experts in the Shenandoah Mountain Wildflower Tournament Saturday, May 10. Multiple guided hikes are planned for the day with a focus on photographing the diverse, abundant wildflowers that should be blooming. Visit www.headwatersmn.org for info.

• Facebook

(Continued from page 5)

plants, and our vision for the future. We need photos of natives, native-based gardens, and native plant communities from your part of the state! If you have something to say along with the photo, great, but if not, don't worry, —we'll think of something!

One of the non-profit schools that always sends me an end-of-year summary gave a big chunk of space

this year to inviting members to start their own Facebook pages, so that they could join in on the activity of the online community. I'd like to extend the same invitation to each of you, too. All you need is an email address. You can check your privacy settings to exclude everyone but friends and family if you wish to view only and not be seen. There is a lot to enjoy and to learn on

Facebook, and your joining will not create any security issues for your home computer. Here's our page: <https://www.facebook.com/VirginiaNativePlantSociety>

Thanks to all of our fans and supporters. I hope to see you on the VNPS Facebook page in 2014! And remember to send your photos to sue@dingwell.net.

—Sue Dingwell, VNPS webmaster

• *Honeysuckles*

(Continued from page 1)

According to a study conducted in Arkansas (Larson et al. 2002), fewer than one in five flowers yielded any fruits at all, a ratio that, anecdotally, seems about right from casual observations in central Virginia. In my experience, Japanese honeysuckle blooms profusely, yet its fruits are relatively sparse. And as country kids know so well, the flowers are typically loaded with sweet nectar—because there are no local co-evolved pollinators to lap up these floral exudations.

So, perhaps, invasive versus non-invasive tendency is a matter of photosynthesis. After all, for woody perennials like these honeysuckles, a key characteristic of being invasive is the accumulation of biomass that smothers or crowds out other species—and biomass production is what photosynthesis is all about. Schierenbeck and Marshall (1993) conducted a comparative study of photosynthesis in coral and Japanese honeysuckles. Over the course of a year, the investigators measured photosynthetic rates in multiple plants of both species in two environments, a sunny open field, and under a closed forest canopy; study plants were carefully controlled for size and age. As would be expected, photosynthesis rates for both species were greater in the sunny location than in the forest, but per leaf, throughout the year, little difference was found between coral and Japanese honeysuckles when samples from the same environment were compared. But because the study was conducted for a full year, the investigators noticed a significant difference in leaf phenology. At the study site (near Aiken, S.C.), both species began producing new leaves in January. Coral honeysuckle, however, dropped most of its old leaves in mid-December whereas Japanese honeysuckle held its old leaves through March. The invasive exotic species thus got a boost in overall photosynthetic output because for several months total leaf area per plant included both new and old leaves. So, in this case, the evidence suggests that invasiveness has little to do with differences in photosynthetic physiology per se. Rather, a subtle difference in the

seasonal pattern of leaf development may well contribute to invasiveness of exotic Japanese honeysuckle.

A classic explanation for the success of invasive species is the hypothesis that there are no predators or pathogens with which it has co-evolved. First articulated by Charles Darwin, the idea is that species introduced to a distant new environment are no longer burdened with predators trying to eat them up or pathogens making them ill or killing them outright. Freed from such ecological constraints, the exotic species can devote more resources to growth, reproduction, and dispersal, resulting in thuggish behavior in its new home. Schierenbeck et al. (1994) investigated the effects of herbivory on coral and Japanese honeysuckles. With proper controls, the investigators measured growth and biomass in test plants of both species grown under three different conditions, exposure to both mammalian and insect herbivores, exposure to insect herbivores only, and full protection from both insect and mammalian herbivores. In confirmation of the hypothesis, it was found that unprotected coral honeysuckle suffered more herbivore damage than unprotected Japanese honeysuckle. But another effect emerged from the study: in response to herbivore damage, Japanese honeysuckle allocated more biomass to new leaf and stem production than did coral honeysuckle. So, not only does Japanese honeysuckle have an advantage in avoiding, to some degree, the predators that plague coral honeysuckle, it also appears to have an inherently more effective recovery response when some leaves are lost to herbivores.

Yet another subtle biological distinction between these species contributes to the invasive/non-invasive dynamic: details of circumnutation—the tendency for plant shoot tips to trace a 360-degree helix during extension growth. Virtually all plants exhibit some degree of circumnutation, but this process is exaggerated in twining vines, a feature that is clearly adaptive in encountering support structures and, once a support is found, wrapping around it while growing upward.

Larson (2000) studied circumnutation in coral and Japanese honeysuckles. No difference was detected between the two for erect stems growing, either with or without support. But, in addition to vertically oriented stems, both species routinely produced horizontally oriented stems that trail along the ground. Horizontal stems of coral honeysuckle circumnutate about as much as its erect stems do. In contrast, horizontal stems of Japanese honeysuckle undergo hardly any circumnutation at all, and this seemingly small difference is interpreted by Larson as exerting significant effects on growth and the lateral spread of the plant. In essence, circumnutation, or the lack thereof, impacts other aspects of horizontal stem extension growth. For example, rotating horizontal stem tips of coral honeysuckle tend to encounter objects that deflect their direction of growth, and, probably because the stem tips are moving more, they tend to be slow to strike adventitious roots. On the other hand, horizontal stem tips of Japanese honeysuckle are seldom directionally displaced, and they are quick to form roots. The result, according to Larson, is that horizontal stems of Japanese honeysuckle increase the lateral spread of a clone at rates roughly twice that of coral honeysuckle. Over a period of just a few years, this small difference in growth physiology could easily contribute to its aggressive intrusion into stands of existing vegetation.

The above is by no means an exhaustive summary of the sorts of studies comparing our beloved and “well-behaved” Wildflower of the Year with its surly, exotic, cousin. But it does exemplify the sorts of studies that biologists interested in the dynamics of invasive species undertake to understand this phenomenon, one of the greatest threats to conservation of native biodiversity. In the case of these honeysuckles, none of the differences brought to light seems to be a slam dunk causative explanation for invasiveness. Rather, multiple small influences seem to be at play, each, no doubt, interacting synergistically with the others, with these effects multiplied (See *Cousin comparisons*, page 8)

Book on central Appalachians a delight

A Natural History of the Central Appalachians by Steven L. Stephenson, West Virginia University Press 2013, \$29.99.

We were browsing through the book sales area in the Canaan Valley National Wildlife Refuge Visitor Center when a cleverly-displayed new book caught my eye: *A Natural History of the Central Appalachians*. The Central Appalachians. That's us! I bought it.

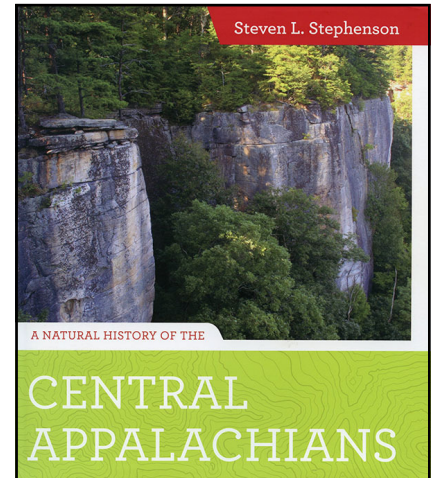
I knew the author from a book he edited some years ago, *Upland Forests of West Virginia*. In it, a cadre of academics describes plant and animal life above 3,000 feet in the Mountain State, bears and bryophytes, spruces and springtails. It's accompanied me on many trips to West Virginia. Now, Stephenson widens his view to the Central Appalachians, which he describes as extending from the Virginia-North Carolina border north to the southern limits of the last glaciation (you all know where that is), bounded on the east by the eastern foot of the Blue Ridge and on the west by an arbitrary line trending northeast-southwest.

A Natural History follows a pre-

dictable and comfortable path through the subject matter, starting with an introduction to the region, with lots of geology, some plate tectonics, uplift and erosion. Subsequent chapters describe the plant life, the forest types, and then the various groups of plants and animals to be found in the region. Color photographs—and a few historic black-and-whites—nicely illuminate the writing.

The final two chapters deal with, well, us: Humans in the Central Appalachians spans the years from Native American occupancy to the coming of Europeans with farming, logging, mining and recreational development. Past, Present and Future, the final chapter, reminds us of all the things we love to hate about the colonial-style resource and energy extraction that has characterized much of the region for a century or more. Stephenson describes in balanced, dispassionate language the effects of hydraulic fracturing, mountaintop removal and wind farms.

A Natural History of the Central Appalachians gives special treatment to this region that we know and love.



Reading it, sometimes I would nod knowingly and say, "Yeah, I've seen that," or I'd find a revelation—"So that's what that is!" It's always good to see your home terrain through another's eye.

Though not a field guide, *A Natural History* seems to be built for hard use, with a sturdy binding and a plastic-coated soft cover (like the Sibley guides). It's a book to carry on travels through the region and should delight tree huggers and frond fondlers for years to come.

—Mark Gatewood, Shenandoah Chapter

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 The deadline for the next issue is **March 1, 2014**.

Sign up now for a West Virginia field trip with fellow members

Wild and wonderful West Virginia is calling you to visit some special places June 22-28, when we hope to see *Rhododendron maximum*, the state flower of West Virginia, making quite a show. We'll meet after dinner Sunday evening at Elk River Inn in Slatyfork, West Virginia, where we'll spend two nights. While in the area, among the destinations we'll visit are the Cranberry Glades Botanical Area, the largest expanse of bogs in the state, and the Highland Scenic Highway with its diverse roadside habitats and beautiful vistas of the surrounding moun-

tains and valleys.

On Tuesday, we'll travel north to Blackwater Falls State Park, where the lodge will be our home for the next four nights. Scenic wonders abound in the area. Although our itinerary is not yet final, we'll certainly spend time in Canaan Valley, famous for its limestone flora, northern-affiliated flora and huge wetland complex. Also not to be missed is Dolly Sods, the highest plateau of its type east of the Mississippi River. Heath barrens, grass balds, sphagnum glades and rocky hardwood and spruce forests are all a part of what makes this area one of

enduring interest to botanists.

Please reserve your space on this field trip no later than March 15 as deposits are required to reserve rooms. Included with your payment will be six nights' lodging, double occupancy, six breakfasts and five lunches. VNPS members will pay \$700, \$300 of which is due March 15. Please note that \$25 to \$75 may be non-refundable after that date depending on when you cancel and whether we can fill your space. Send your deposit and reservation information to, VNPS, "West Virginia Field Trip," 400 Blandly Farm Lane, Unit 2, Boyce, VA 22620.



Wild, Wonderful West Virginia

It is hoped that cinnamon fern, top left, cranberry plants, top right, and *Rhododendron maximum*, the West Virginia state flower, will be in seen in all their glory during the VNPS field trip.

•Cousin comparisons

(Continued from page 6)

season after season by the inexorable passage of time.

Let's resolve this year to fight back, at least a little. Let's plant some coral honeysuckles to celebrate our Wild-flower of the Year and let's also destroy some of its brutish cousin. Mother Na-

ture can use a helping hand now and then, why not right now?

—W. John Hayden, VNPS Botany Chair

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