

A publication of the VIRGINIA NATIVE PLANT SOCIETY
Conserving wild flowers and wild places

www.vnps.org

Workshop focuses on state orchids

Join your fellow VNPSers on March 8 at the University of Richmond for an all day symposium on Virginia's native orchids. Our lineup of speakers will focus on orchid ecology and distribution. Members should be receiving flyers soon and registration will open at that time.

Douglas Gill, professor in the Biology Department at the University of Maryland, has studied a single population of pink lady-slipper orchids (*Cypripedium acaule*) for over 30 years, and will talk about answers to some questions concerning the life cycle of this orchid, and new questions that have come from his research.

Speaking about his research on the



Corallorhiza bentleyi
Bentley's coral-root

fungal partners of orchids will be Dennis Whigham of the Smithsonian Environmental Research Center in Edgewater, Maryland.

Nancy Van Alstine of the Virginia Natural Heritage Program will share new survey work involving small whorled pogonia (*Isotria medeoloides*) and Bentley's coral-root (*Corallorhiza bentleyi*).

A noted photographer and contributor to the Flora of Virginia Project on the Orchidaceae, Hal Horwitz, will take participants on a photographic tour of the orchids of Virginia.

A tale of discovery for three orchids

Orchidaceae is one of the largest plant families. The most recent estimates vary from 18,000 to 20,000 species worldwide. Although popularly thought of as tropical, these are found growing on every continent except Antarctica. The *Flora of North America* (2002) recognizes 208 species on the North American continent.

This is the tale of three Virginia orchids - three species recently found in our state for the first time. Virginia now boasts 58 orchid species among its flora. The manner in which each of these "new" orchids was found is instructive for all wildflower enthusiasts, especially orchid lovers, as we educate ourselves and, if we are lucky, make our modest contribution to the complex field of botany.

Some years ago, I was sitting in a

VNPS 2008 Wildflower of the Year



Tradescantia virginiana
spiderwort

Illustration by
Nicky Staunton
See page 4

classroom at the College of William and Mary listening to a master's student report on his study of the flora of a section of Rappahannock River drainage in Lancaster County. The county, which is in an area of Virginia known as the Northern Neck, is on the coastal plain and borders both the Rappahannock River and Chesapeake

(Three orchids, page 7)

INSIDE

- **Laurel Fork
Highland County** Page 5
- **Mountaintop
Removal** Page 6

From the president

Society members need to remain vigilant on political issues

First a great big Thank You to those of you who contributed to our 2007 fundraising campaign to build our Founders Fund. As of this writing, we have raised about \$10,000. The interest on this will provide a much needed boost to our operating funds.

Our Annual Workshop this year focuses on native orchids, and will be held at the usual University of Richmond location on March 8. We are also happy to announce that next year's Annual Meeting will be hosted by the Potowmack Chapter, the weekend of September 19-21. Watch this newsletter and our website for more information. I'm always amazed at the beauty and diversity of the Potomac River's parks. A trip to the Tallgrass Prairie and a new round of VNPS sponsored field trips are also in the works. It's time to start a new wildflower year!

In this issue you will find an article on strip mining and a new coal burning power plant. VNPS has sent a letter opposing the plant. In my part of the state, energy issues loom large because of the National Interest Electric Transmission (NIET) Corridor that was designated this fall in spite of fairly intense opposition

(Thanks to our elected officials, a re-hearing is scheduled).

We all use energy, and it is our common problem to get and use energy in a way that leaves more of our natural world unharmed. Alternative energy is the buzzword, but how many of us have seen what that entails? I highly recommend a trip to a developing windfarm such as the one on Route 93 on the Allegheny Front near Mount Storm, W. Va. Construction of a huge gravel road and clearcut pads for the turbines are fragmenting forests on these ridgetops. One of the three turbine blades takes an entire truck. The windfarm described above will have up to 200 turbines on nearly 200 acres. All of that for something that, according to some people, has not stopped one coal mine. This installation is predicted to fuel 60,000 homes. One estimate I've read is that 4,000 turbines would be needed to replace 10 percent of demand in Pennsylvania. That's a lot of land to strip and gravel on our mountaintops.

I know people get tired of hearing what we are against, so I'll move on to what I am for. First and foremost, I am for changing attitudes and building

styles and devices that can cut down power use. For example, during briefings on the transmission line we were told of a device that is given away by some of the northern Virginia power companies. This little box attaches to your heat pump and is said to save up to 15 percent of your heat pump's electricity. And we all know about compact fluorescent lightbulbs. Perhaps the new federal energy bill will accomplish some of that.

However, what I would really like to see is power generated at home, or close to it. You don't go anywhere in Europe now without seeing a few solar cells attached to a water tank on the roof. I have heard of, but not seen, rooftop wind generation. Local generation should ensure cleaner sources--who would stand for the type of pollution that comes from these huge coal plants in a populated area? Think of the advantage of local generation over industrial sized power installations, without the need for accessory roads and huge transmission lines. I'm FOR that. I hope I'll see many of you at events and hikes this spring!

**Your President,
Sally Anderson**

Industrial windfarm sparks controversy in Highland County

Another industrial sized windfarm that is moving forward despite strong opposition is in Highland County, Va. This beautiful and historic county borders West Virginia on the west and the Shenandoah Valley on the east. Nicknamed "Little Switzerland," this rugged and remote county has large tracts of high elevation national forest from

which the National Christmas Tree was harvested several years ago. The county boasts one of the nation's most pristine Civil War battlefields at McDowell and, because it encompasses the Allegheny Front, Highland has one of the highest mean elevations east of the Mississippi. It is also among the least populated counties with something like 2,000 souls.

Because of its remote location, high elevation, and lack of development, Highland is host to a number of plant and animal species that are globally rare or unique to Virginia, such as the snowshoe hare.

A proposed industrial windfarm that would place about 20 turbines, each almost 400 feet tall, along the **(See Highland windfarm, page 4)**

Visit Kansas prairies with VNPS

Join us for a trip from May 31 to June 7 to the Flint Hills of Kansas to experience the beauty of the Tallgrass Prairie that once covered 400,000 square miles of the North American continent. Less than four percent of this prairie remains, primarily in the Flint Hills. In the spring, long before the native grasses reach their peak, native wildflowers are in full bloom, many of them federally endangered. Birds and butterflies are plentiful as well.

Tours will include the National Tallgrass Prairie Preserve in Chase County Kansas, the Konza Biological Station and Tallgrass Prairie, Coblenz Prairie, Chase County Lake, a private prairie near Cottonwood Falls, Kansas, and more. Lodging will be in a guest house/motel near the preserves in Council Grove. The guesthouse will be on a first-come first-serve basis, and later registrants will have rooms in a motel one block away. Council Grove offers many historic sites and museums. The annual Flint Hills Rodeo in nearby Strong City is another option.

Participants will be meeting in northeast Kansas on the evening of May 31 for a reception and orientation. Participants travelling by air should arrive in Kansas City, Mo. Cost of the trip is \$500 and includes lodging, lunches in the field, tour fees, guide fees, and a tax deductible gift of \$50 to VNPS.

Transportation to Kansas and breakfast and dinner are the responsibility of the participants. Food is available in local restaurants. Arrangements can be made for all participants to use the guesthouse kitchen for meals.

Transportation while on tour will be by private car/carpool for those who plan to drive or rent their own car. For those who fly, we plan to arrange group transportation if needed. The cost of this transportation will be based on vehicle rental fees, gas and insurance costs, and will be determined when we know how many people will choose this option. Those who need transportation please contact Helen Hamilton or Linda Wilcox at the numbers below before making travel arrangements.

Reservations and a deposit of \$200 are needed by March 15. Full payment of the remaining \$300 is due May 1. Space is limited to 14 participants, so sign up early. For more information, contact Helen Hamilton at 757-564-4494, helen44@earthlink.net or Linda Wilcox at 757-468-4346, W8n2FotoF14@cox.net.

Plant Diversity is focus of Annual Meeting

The 2008 VNPS Annual Meeting will be hosted by the Potowmack Chapter the weekend of September 20. The focus of the event will be the diversity of plant communities along the Potomac River, which forms the eastern boundary of the Potowmack Chapter. The Potomac River is often referred to as "the nation's river" and flows 380 miles from a small spring in West Virginia to the Chesapeake Bay. Just upriver from Washington, D.C., is a dramatic area of rocky cliffs and waterfalls known as the Potomac Gorge. It harbors over 1,400 plant species and many natural communities in a variety of habitats. These include the river and its tributaries, upland forests, dry bedrock terraces, floodplain woodlands and prairies, and pools, ponds, and marshes that support what is perhaps the most diverse flora on the entire East Coast, according to the Na-

ture Conservancy. The Potomac flows past Washington into the coastal plain where marshes and meadows abound. The chapter plans to offer a full complement of kayak trips, plant hikes and butterfly and wildflower walks.

Northern Neck Chapter offers winter walks

The Northern Neck Chapter of VNPS will be hosting a number of winter walks. On March 6 at 10 a.m. participants can view green building techniques at the Burgess home with Judy Burgess as group leader. On March 20 at noon, participants will meet at Wicomico Church for an evergreen tree identification project. For more information about these and other chapter walks, contact: Nick Ferriter, 804-462-6242; ferriter@aol.com.

Maymont garden show bigger and better

Plan a visit to the Maymont Flower & Garden Show in Richmond from February 21-24. This year's theme is "The Entertaining Garden: Party among the Petals." Highlights will include more than a dozen gardens, an eclectic marketplace, seminars, how-to demonstrations and guest speakers Paul Tukey, founding editor and publisher of *People, Places and Plants* magazine and HGTV host and Joe Lamp'l, master gardener, certified landscape professional, author, syndicated columnist, and national television host and radio personality who currently hosts GardenSMART on PBS television. In addition, the MacEvents Home Show-Richmond will be held simultaneously and entrance is included in admission. Visit www.maymontflowershow.com.

Potowmack Chapter sale

The Potowmack Chapter Native Plant Sale will be held on Saturday, May 17, from 9 a.m. to 3 p.m., at Green Spring Gardens during the gardens' Spring Garden Day event. With over 40 vendors, Spring Garden Day is the largest plant sale in the Northern Virginia area and is a great place to find a wide variety of plants at good prices from local growers. The Potowmack Chapter will be selling plants that day from its propagation area that is located behind the horticultural center. Fern, shrubs, trees and perennials for shade and sun will be available with discounts for VNPS members. Green Spring's address is 4603 Green Spring Rd., Alexandria, VA 22312. Visit www.greenspring.org.

Jefferson Chapter plant sale

The Jefferson Chapter Annual Native Plant Sale will be held Sunday, April 27, 1-3 p.m. at Ivy Creek Natural Area's Educational Building in conjunction with Natural History Day's other environmental group displays. Spring ephemerals including bluebells, trillium, columbine, numerous other perennials, ferns, shrubs, and trees will be sold. The natural area is located in Charlottesville on Earlysville Rd. just south of Woodlands Rd. intersection. Call 434-293-4217.

Rock Outcrop Management Plan update

Following up on an article in the September 2007 issue of the *Bulletin*, VNPS is poised to comment in favor of the "Environmentally Preferred" Alternative on Shenandoah National Park's Rock Outcrop Management Plan and Environmental Assessment. Last fall the National Park Service withdrew the Shenandoah National Park Rock Outcrop Management Plan Environmental Assessment for technical reasons and will revise it and reopen the comment period some time this year. Some confusion occurred because the park's September Environmental Assessment labeled the alternatives differently from what had been given to the public earlier. In our September newsletter, we asked members to support Alternative A. But the Rock Outcrop Management Plan & Environmental Assessment dated September 2007 had the following alternatives: Alternative A (No Action); Alternative B (Administratively Preferred); Alternative C (Environmentally Preferred); Alternative D (Visitor Use and Enjoyment). The park service's Administratively Preferred Alternative B is an attempt to balance visitor use with natural resources protection, but in our view does not fully protect the park's unique natural resources including some plant communities which can be found nowhere on the earth except in the park. Therefore, we continue to support the Environmentally Preferred Alternative C. We will try to keep chapters apprised of the status of the plan and assessment, so that members can send in comments at the appropriate time.

Mary Ann Lawler, VNPS Conservation Chair

Wilderness bill advances in House

Political reporters watching happenings on Capitol Hill reported that in October HR 1011, the 2007 Ridge and Valley Act, was passed by the U.S. House of Representatives. The bill protects 43,000 acres of the Jefferson National Forest as wilderness and 12,000 acres as National Scenic Areas. Additions to other existing wilderness areas are also included. The senate version (S. 570) must still be passed for the bill to become law.

The act designates certain lands in Virginia's Jefferson National Forest as wilderness such as Brush Mountain and Brush Mountain East, Seng Mountain and Raccoon Branch, Stone Mountain, Hunting Camp Creek and Garden Mountain, Mountain Lake, Lewis Fork Addition and Little Wilson Creek Additions, Shawvers Run Additions, Peters Mountain Addition, and Kimberling Creek Additions. For information, visit www.vawilderness.org.

Spiderwort is VNPS Wildflower of the Year

The VNPS 2008 Wildflower of the Year (WOY) is spiderwort (*Tradescantia virginiana*). This herbaceous perennial plant occurs throughout much of the eastern portion of the U.S. and is widespread in Virginia. Spiderwort blooms from April to July. The small flowers occur in clusters at the ends of the stems, atop several elongate bracts. Flowers have three petals that range from purple to rose or, rarely, white. Densely hairy stamens provide, perhaps, the easiest way to recognize spiderworts. Also, stalks of spent flowers droop below the flower cluster yielding an aspect reminiscent of spindly spider legs.

Not all local spiderworts, however, are Virginia spiderwort. This year's WOY has two close relatives that also occur at scattered locations throughout the state:

T. ohioensis and *T. subaspera*. These three spiderwort species are quite similar, differing in leaf dimensions, leaf waxiness, and hairiness of stems, leaves, and sepals. The species are sufficiently closely related that both natural and artificial (horticultural) hybrids occur. In fact, *Hortus III* indicates that most garden plants labeled *T. virginiana* are probably hybrid combinations of all three of these species and should be called *T. x andersoniana*. Wild plants with leaf blades about as broad as their sheaths and not prominently glaucous (waxy), uniformly hairy pedicels and sepals, and smooth (hairless) stems can be identified as "true" *T. virginiana* and can be expected to be much more abundant than hybrids with other combinations of these characteristics.

John Hayden, VNPS Botany Chair

Highland windfarm

(Continued from page 2)

Allegheny ridgetops has been approved by the board of supervisors on a 2-1 vote and is moving forward despite heated opposition. One agency expressing concern is the Virginia Department of Game and Inland Fisheries that cites a body of evidence supporting claims that industrial sized turbines could have negative impacts on bats (there are several federally listed species in the area) as well as migratory bird and raptor populations. The proposed location for the windfarm is also prime habitat for the rare northern flying squirrel.

As part of the approval process for the windfarm, the owners have agreed to participate in regular wildlife studies and dedicate significant sums of money to mitigating the turbines' effects, but opponents fear that such efforts will not be enough to offset environmental effects and negative impacts on tourism. Outdoor recreation, including bird watching, hiking, fishing, and hunting, is a significant part of the county's economy.

For more information on wind energy on a large or small scale as well as specifics about the controversies in Highland and in West Virginia, visit: <http://www.responsiblewind.org/index.php> or <http://johnrsweet.com/Personal/Wind/>. The second website has the entire document from the Virginia Department of Game and Inland Fisheries that cites concerns regarding the Highland project.

Nancy Sorrells
VNPS Bulletin Editor

Highland County's Laurel Fork contains special habitats

What if you could lift a piece of Montana's backcountry or remove a snippet from Maine's Baxter State Park and set it down in Virginia? Actually, there is no need – it is already there in Highland County's Laurel Fork, the special management area of the George Washington National Forest. This 11,500-acre tract of magnificent Potomac Highlands is 15 miles north, as the crow flies, from Monterey, and is wedged up against Pendleton County, W.Va. It takes some effort to get there. In fact, if you weren't trying to visit you never would, which is exactly the point.

Laurel Fork is a leftover from the last Ice Age when the climate was much colder and different plants and animals dotted Virginia's landscape. The sheets of glacial ice that engulfed North America never made it to Virginia, but their presence just to the north affected what lived here. When the glaciers retreated, the climate warmed and the landscape and its accompanying plants and animals evolved into basically the habitats we are familiar with today. But in the higher elevations, conditions were still okay for those more northern species, and they never disappeared. Today there is a higher concentration of rare plants and animals in Laurel Fork, where the elevations range from about 3,000 to about 4,000 feet, than in any other part of the GW National Forest. Living here are stands of red spruce and a rare flying squirrel that prefers those trees over all others and Laurel Fork is the only place in Virginia where snowshoe hares – those that turn white in the winter – are found.

My first visit to this special place was amazing. We hiked through deeply-shadowed, fern-covered ravines and emerged into the same types of open mountain meadows that I have always enjoyed in more northern parts of the nation. Civilization was far, far away. As we gazed across a series of beaver ponds that stair-stepped up and through a spruce-dotted meadow I fully expected to see a

moose emerge from the shadows to browse. I must admit that we saw no moose because they are not indigenous to Virginia, but we did see evidence of some very large deer.

Serious birders and botanists savor Laurel Fork, but the area is equally enjoyable for those just wanting to hike and get away. Hunters and fishermen proclaim it among the best places in the state. Anyone visiting during hunting season should wear blaze orange. In the winter, Laurel Fork can experience significant snowfall, which I hear is enjoyed by cross country ski enthusiasts.

If you visit, be prepared for cooler temperatures, particularly at night, and plenty of insects at certain times of the year. The parking area at Locust Spring Trail has a bathroom, picnic table, and camping area, but that is the extent of civilization.

Prepare your footgear carefully at Laurel Fork. There are stream crossings,



A beaver dam has created a small pond in the high mountain meadows of Laurel Fork.

marshy seeps, and outright bogs. It was in one of the bogs that we saw a rare butterfly – or so it was declared by the biologist accompanying our group.

To get there: From Staunton, Va. (where I-81 and I-64 intersect), take Rt. 250 west to Monterey. From Monterey turn north on Rt. 220 for 7 miles before turning left (west) on Rt. 642. This turns right half a mile after passing through Blue

Grass. Stay on Rt. 642 for about 13 miles (it becomes gravel). Turn onto Forest Road 106. Travel 7 miles and turn right onto Forest Road 60. Travel half a mile and turn right onto Forest Road 142. Drive half a mile to the Locust Springs parking area. Buck Run and Locust Spring Run trails form a loop here, however bushwhacking off the main routes is fun as well. For more information and a more detailed map, visit www.highlandcounty.org (Highland County Chamber of Commerce website).

Nancy Sorrells, VNPS Bulletin Editor

Piedmont landscaping conference to be held

The Piedmont Landscape Association (PLA) in cooperation with Virginia Cooperative Extension and Albemarle County and sponsored in part by the Jefferson Chapter of VNPS will be hosting the 25th Annual Central Virginia Landscape Management Seminar on February 14 from 8 a.m. to 5 p.m.

Speakers include Rick Darke, "Grasses and the Design of Mid-Atlantic Livable Landscapes"; Dr. Jay Stipes, "Experiences as a Tree Doctor"; Nancy Ross Hugo, "Remarkable Trees of Virginia"; and Ridge Schuyler, "Collecting Rainwater: Is a Practice of the Past a Wave of the Future?" The seminar will be held in the Albemarle County Office Building Auditorium at 401 McIntire Rd., in Charlottesville.

Advance registration (by Feb. 7) is \$25 for PLA members, students, and seniors, and \$35 for non-members. Inquiries should be directed to April Pekary at 540-894-9228.

Mountaintop removal wipes irreplaceable habitat off planet

When we hear about mountain top removal and the strip mining of coal, we think of West Virginia, but those activities go on in our own state, and their environmental consequences are equally as deadly for Virginia's native flora. The westernmost corner of Virginia is much like its Kentucky and West Virginia neighbors with forested hills, ridges, valleys, and mountains on the western side of the Appalachian mountain chain. And, like West Virginia, eastern Kentucky, and western Pennsylvania, this portion of Vir-

ginia is underlain with coalfields transformed over time from peat bogs of the Carboniferous Era, 300 million years ago.

The method of mining that coal is literally earth-shattering. Using hundreds of explosives, companies blow away up to 1,000 feet off the tops of mountains to expose coal seams. Gigantic machines, over 20 stories tall with a base the size of a gymnasium, dump millions of tons of leftover rock and debris into ravines and valleys—500 such valley fills in Virginia alone. They level mountains into terraced wastelands leaving not a single home for the smallest insect and causing permanent damage to ecosystems. Over 1,000 miles of streams have already been destroyed in the coalfields region, disrupting drinking water supplies, flooding communities, eliminating forests, and destroying wildlife habitat.

You can now take a tour of those strip mined areas, using Google Earth. Click on Layers and under the Global Awareness layer you will see Appalachian Mountaintop Removal. Explore the southwestern Virginia area. Or go to <http://www.samsva.org/> a website by the Southern Appalachian Mountains Stewards to view photos of the devastation in Virginia. Another website is www.ilovemountains.org.

The areas subject to surface mining in Virginia are in the Clinch and Powell River watersheds and the Big Sandy watershed all of which drain west into

the Tennessee and Ohio Rivers, places to which many of us rarely travel. The Big Sandy watershed is 94 percent forested. The Clinch and Powell Rivers watersheds are 79 percent forested. These watersheds encompass nearly 3,000 square miles and are a major component of this country's eastern forests, home to thousands of species of vertebrate and inver-

tebrate wildlife. The Appalachian chain and the forested ridges and valleys are a green corridor for the migration of wildlife from boreal birds to monarch butterflies. They also provide breeding habitat for numerous bird species, such as blackburnian warblers and yellow-bellied sapsuckers. Our native flora in varied and rich plant communities creates this habitat for wildlife.

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Southwestern Virginia is in a particularly vulnerable area of the Southern Appalachians—one of only six regions in the country that are biological "hotspots" with unusually rich diversity as well as rare and threatened species.

The Virginia Native Plant Society is particularly concerned about the effect of mountaintop removal on the ecosystems in the Clinch, Holston, and Powell watersheds. These last free-flowing rivers of the Tennessee River system harbor more at-risk fish and mussel species than any other river in the nation and the highest concentration of imperiled species in the mainland United States. The watershed is home to 29 rare mussels and 19 rare fish. And the headwaters of these streams are in the coalfields, where surface mining occurs and where mining waste is dumped. We believe this practice must be stopped, not encouraged.

But a recent proposal by the Department of the Interior's Office of Surface Mining Reclamation and Enforcement (OSM) would loosen restrictions that pro-

hibit coal-mining activities from disrupting areas within 100 feet of streams. Numerous conservation organizations are opposed to the rule change saying it would allow more than 1,000 more miles of streams to be destroyed each decade into the future and, along with them, habitat for living creatures. VNPS has written a letter to OSM opposing the rule change.

Although companies are required to reclaim the lands that are surface mined, such reclamation can never replicate the species richness that has been lost, nor can it ever replace those species or natural communities that are globally rare and critically imperiled. The planting of a handful of non-native grass species, a few shrubs, and trees for timber is an insult to the natural world.

What can we do about it? First of all, learn where your energy comes from. If you put your zip code into this website, you can find out: <http://www.ilovemountains.org/myconnection/#map%3E>. Most likely your energy comes from a coal burning power plant. If we truly want to protect Virginia's forests and the habitat within the Appalachian region, we must reduce our energy use and support measures to find alternative energy sources.

Secondly, oppose any new coal burning power plants like the one proposed for Wise County, Va. VNPS has written a letter to the State Corporation Commission opposing the construction of the plant on the grounds that it will result in more deforestation and habitat destruction by mountaintop removal. Finally, support legislation that would support energy conservation, renewable energy resources, and reduction of carbon emissions. For example, a bill has been introduced in the Congress which would mandate that a Clean Air Act permit for a new coal-fired power plant could not be issued

(See Act now, page 8)

"If we destroy the mountain, do you know how much electricity we get out of that mountain for the coal? An entire mountain provides an hour's worth of electricity for the U.S."

---Mike McKinney, University of Tennessee geology professor,
June 2007 *Highlands Voice*.

• Three orchids

(Continued from page 1)

Bay. The student's thesis had taken two years and involved choosing a well-defined area and going back season after season, recording every species found. Most of the species noted were routine, known to grow in the study area. However, I nearly came out of my seat when slides of *Cypripedium kentuckiense* flashed on the screen. This largest and most wonderful of the lady's slippers in North America had never been found east of Kentucky before this discovery. An incredible colony of more than 400 plants had been located over 500 miles from its closest neighbor. It is the only known population of the southern lady's slipper (a.k.a. ivory lady's slipper) on the coastal plain. The plant grows up to 38 inches and the flower lip can measure 2.5 inches. The lip color varies from nearly white to ivory to pale lemon yellow as contrasted with the golden yellow of similar species. The lip opening is formed by margins that fold neither inward nor outward. Finally, the lip is not slipper-shaped either, but more like a rounded oval. *Cypripedium kentuckiense* became the 56th orchid for the state of Virginia.

A year later while I was visiting the Virginia Division of Natural Heri-

tage, the state agency responsible for maintaining an inventory of rare native plants, animals and natural communities, their chief botanist showed me some satellite images of Virginia. These were color infrared photographs taken from space in winter, when the trees are bare. This specialized view gave scientists new ways to evaluate land cover. Infrared images show soil as red, ponds as black, and exposed rock as blue. Since the underlying rock formations in this part of the state are limestone, the blue splotches among the predominant red on the map looked promising and begged further investigation. Perhaps these represented limestone barrens and harbored botanical communities unusual to Virginia.

All the promising-looking areas were on private land and it took some time to gain the approval of landowners to search their property. Another limiting factor was the location; the sites were all about 400 miles from the Natural Heritage offices and not close to any large town. Nearly a year later, after multiple visits in different seasons, an orchid new to Virginia, *Spiranthes magnicamporum*, (great plains ladies' tresses), a Midwestern species, was found growing on three of those "splotches on the map." This find was quite a shock, since the near-

est known population was over 300 miles away.

The infrared images that allowed a trained observer to discover limestone barrens eventually helped researchers find multiple elements of Midwestern prairie plant life. High-tech science had located Virginia's 57th orchid.

Now let me tell you about Native Orchid Conference member, Stan Bentley, an amateur plant hunter from the western part of Virginia who loves native orchids. He has used every spare minute of the past quarter century walking the byways and trails of western Virginia and the adjacent West Virginia, botanizing. A few years ago, he ran across a little plant unknown to him in West Virginia, not a mile from the Virginia state line. What he saw was a stand of plants that looked for all the world like young, stout stems of *Corallorhiza maculata* var. *maculata* (spotted coral-root), an orchid flowering in the mountains of Virginia and West Virginia from mid to late July.

The two observations that eventually led him to examine the plants in much greater detail were: the flowers never seemed to open and the stems were thicker than those of spotted coral-root. It was obvious that this was a species he had neither seen before nor read about. He called Dr. John Freudenstein,

(See Surprises remain, page 8)

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The Bulletin

ISSN 1085-9632

is published five times a year
(Feb., April, June, August, Nov.) by

Virginia Native Plant Society

Blandly Experimental Farm
 400 Blandly Farm Lane, Unit 2
 Boyce, VA 22620
 (540) 837-1600

vnpsoc@shentel.net
 www.vnps.org

Sally Anderson, President
 Nancy Sorrells, Editor

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 The deadline for the next issue is **Feb. 14**

Surprises remain in nature for those who seek them

(Continued from page 7)

the recognized authority of the genus *Corallorhiza*, who visited the site and confirmed the uniqueness of this orchid. According to Dr. Freudenstein, this orchid is similar to a Mexican species of coral-root, but quite unlike anything north of the Mexico-United States border. In December 1999, the plant, *Corallorhiza bentleyi* was officially described in a botanical journal as one new to science.

In the intervening years, Bentley's coral-root has been located in several places in mountainous southwestern Virginia, adjacent to the original West Virginia site. In some locations the flowers never open fully and the lip is dark red, while in others the lip is yellow and open. All discoveries of Bentley's coral-root to date have been in deciduous Appalachian forest on somewhat disturbed sites. Stan Bentley "contributed" orchid species number 58 for Virginia.

I find these three stories interesting because of the lessons they teach: 1. There are still lots of botanical discoveries to make if you are persistent, if you use all the tools at your disposal, and if you stay inquisitive; and 2. Just because something looks familiar from

a distance does not guarantee that it is. Investigate anyway; it just might be something different. You may have been down that road previously, but you might have overlooked a rare plant or perhaps it did not bloom the year you searched. Do not assume that all botanical exploration is complete. There is still much to discover. And, imagine the thrill of finding a plant never described before!

When I was first getting involved in photographing wildflowers, one of my early mentors, an elderly man, would literally jump up and exclaim to the searched-for plant, "Wow, you're the most beautiful flower I've ever seen." At the time I thought it a little silly, but as time progressed, I came to appreciate his outbursts. His reaction was a wonderful expression of joy and a blessing that someone could maintain such enthusiasm and freshness of outlook throughout his or her life.

I invite you to join the hunt and maintain your persistence and enthusiasm. Delights await.
*This article (or parts thereof) was originally published in **Blazing Star**, the newsletter of the North American Native Plant Society. It was reprinted in the **Native Orchid Conference Journal** 3(2), April 2006. Hal Horwitz is from Richmond, Virginia.*



Cypripedium kentuckiense
ivory lady's slipper

• Act now

(Continued from page 6)

unless the plant uses state-of-the-art technology to reduce emissions of carbon dioxide and other greenhouse gases.

With the threat of global warming, wild plants and animals need our eastern forests more than ever. These forests are vital for absorbing carbon and helping cool the planet. They may also serve as corridors for species migration if we have already reached the tipping point of climate change. Let's do all we can now to save our native forests.

Mary Ann Lawler, VNPS Conservation Chair