NATIVE NOTES

WEST VIRGINIA NATIVE PLANT SOCIETY

Volume 11, Number 3 **December 2003**

HIGHLIGHTS OF THE 2003 ANNUAL MEMBERSHIP MEETING

NEWSLETTER SAVINGS AND CHANGES

CREATIVE !! INNOVATIVE !! TIME TO WORK !!

A small step for individual members but a huge step for our WV Native Plant Society. After a lot of discussion, over the past 2 years, your Board of Trustees voted to take the plunge. It is not sink or swim because we still have a towline attached to the dock.

We agreed to send future Native Notes Newsletters via Email. Thus, we need your email address, if you want to receive your newsletter only by electronic means. Note: If you don't have a computer, you will not be left out in the weed patch. You will still receive your printed newsletter, as you always have. If you own a computer, you still have the choice of a printed copy (that is the tow line tied to the dock). The fewer printed copies and mailings, the more $$$ for projects.

A single copy of the Native Notes Newsletter costs an average of $0.80 to print and $0.65 to mail. We hope to save $500 – 800 each year. The board would like to divert as much of this money as possible to projects. Some potential projects could be:

- locate and manage native plant sites
- monitor and eradicate or control invasive exotics
- provide education programs to the general public and our members
- print educational materials

ACTION: Will those who prefer Email Native Notes please notify President Lynn Wagner that you want to receive future newsletters and notices by Email. Contact Lynn at this address: lwagner2@earthlink.net

If you prefer printed newsletters and notices you (members and exchanges) you need to let us know by email, postcard, or phone call. Thanks!!!

Annual meeting highlights

Lynn Wagner presided over the annual meeting on September 13th in Elkins.
The treasurer's report listed $7800. Lynn Wagner proposed that we have an obligation to use some portion of this money in ways that will benefit native plants and our membership. Lynn proposed the following projects:

- Contribution to the WVU Herbarium
- Organizational membership in the WV Highlands Conservancy - $50
- Small scholarship such as $500 to a student. WVNPS would develop criteria for awarding the scholarship
- A grant to Save Our Natives from Invasive Plants (SNIP) for an educational project such as a packet of information for distribution; more equipment to eradicate non-native plants and shrubs; T-shirts.

Lawrence Beckerle suggested a project to collect seeds of our rare endemics. Larry Stritch suggested we should join the efforts of the Plant Conservation Alliance if this project is approved. Donna Ford-Werntz said that the Center for Plant Conservation propagates seeds or germ plasm, and we might sponsor a WV plant.
Bill Grafton suggested:

- Updating the invasive plants checklist
- Pay for fees and expenses of trustees when they attend board meetings, or represent the WVNPS at other meetings
- Prepare a list of conservation plants for West Virginia

A budget committee of Lynn Wagner, Bill Grafton, Larry Stritch, and Steve Mace will prepare a report for the March 27, 2004 board meeting in Elkins. **NOTE: If you have ideas or support any of the above suggestions please let us know!!!**

$100 was approved for P.J. Harmon for reprinting and mailing of the West Virginia Invasive Plants Checklist
$200 was approved for the WVU Herbarium and $100 for the Marshall University Herbarium.

After 2+ years of discussion the Board agreed to start sending newsletters and notices by email. Lynn Wagner said she does not have email addresses for 27 member. These 27 and others who notify her that they prefer to receive a printed copy of the newsletter will continue to receive mailed versions. This will also apply to our exchange newsletters with other Native Plant Societies. **Note: All members and exchanges will be contacted and offered the chance to respond "yes" or "no" on receiving <u>all</u> newsletters and notices by email.**
A Bylaws Committee of Helen Gibbins (chair), Romie Hughart, Steve Mace, and P.J. Harmon was appointed to determine changes needed to get a quorum at every Board meeting.
Lawrence Beckerle reported on his attempts to work with the Departments of Highways and Environmental Protection to use more native plants for reclamation.
Romie Hughart will have a display at the National Hunting and Fishing Days at Stonewall Jackson State Park. P.J. Harmon will also have our WVNPS display set up for viewers.
Donna Ford-Werntz suggested WVNPS help publicize the list of outstanding botanists when it is completed.
The present officers and board of trustees were reelected by acclamation for 2004.
Lawrence Beckerle's term will be for 3 years.

Mountain Holly

American Holly

Winterberry

Contact your Officers

We really do want your ideas on how your dues money is spent. Let us hear from you!!

Lynn Wagner – President
PO Box1268
Shepherdstown, WV 25443-1268
Ph: 304/ 876-7027
Email: lwagner2@earthlink.net

Mary Sansom – Vice-president
106 Ashley Lane
Cross Lanes, WV 25314-1604
Ph: 304/ 776-7852

Helen Gibbins – Secretary
6128 Gideon Road
Huntington, WV 25705-2241
Ph: 304/ 736-3287
Email: gibbins@marshall.edu

Steve Mace – Treasurer
PO Box 122
New Haven, WV 25265 – 0122
Ph: 304/ 882-2450
Email: sdmace@citynet.net

Showy or Queen Lady's Slipper

BOTANICAL BONANZAS OF WEST VIRGINIA
(bogs, balds, and beaver ponds to barrens, bedrock, and bluffs)

Altona-Piedmont Marsh Nature Preserve

This marl marsh is located about 1 mile west of Charles Town in Jefferson County. It is mostly managed by the WV Chapter – TNC. TNC has been given conservation easements by two of the three primary landowners (Henry Davenport and Jim Lehrer). Marcus Brothers housing development company owns the remainder of the marsh. All visits to Altona-Piedmont **must** be with permission of the WV Chapter – TNC (phone: 304/ 637-0160.

Altona-Piedmont is a botanical jewel that contains 15 rare plant species known from 5 or fewer West Virginia locations. Twelve species occur only in marl wetlands. Marl is soft calcium carbonate material that forms in some limestone areas and is mixed with clay and organic materials. Altona-Piedmont consists of 94 acres of marl marsh, open swamps and thickets and is located on Evitts run at an average elevation of 515 feet. The marsh is bisected by tracks of the CSX Railroad.

Access to Altona-Piedmont Marsh is a narrow dirt road on the north side of WV Route 51. A short distance out the road is the Washington Chapel ruins that are a tourist/historical attraction. Parking is limited to 2 vehicles. The CSX Railroad is another 1100 yards or so north of the ruins and the marsh is immediately to the east (downstream).

The marl marsh consists of swamp forests, shrubby thickets, and open herbaceous and grass-like plants. Most of the marl marsh is too fragile for a group to walk through. However, many of the rare plants can be seen from the railroad. Note: This CSX railroad is active, so be prepared to move to a safe spot at the marsh margin, if a train appears.

Some plant communities at Altona-Piedmont Marsh are:

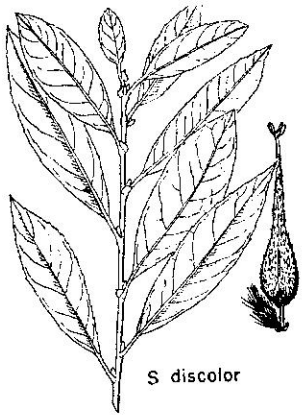
Reed Canary grass	Watercress - water speedwell
Calamus (Sweet flag)	Broad-leaved cattail – water horsetail
Carex stricta	Juncus balticus – marsh fern
Broad-leaved cattail	Tall goldenrod – purple stem aster

Scirpus acutus
Green ash – sycamore
Glaucous willow – silky cornel

More common plants of Altona-Piedmont Marsh are:

Sedges, grasses, and rushes

Carex granularis	common rush
Carex lurida	American three square
Carex scoparia	great bulrush
Eleocharis smallii	Scirpus lineatus
Eleocharis tenuis	Sphenopolis obtusata
Redtop	Glyceria canadensis
Bluejoint grass	reed canary grass
Bottlebrush grass	



Glaucous Willow

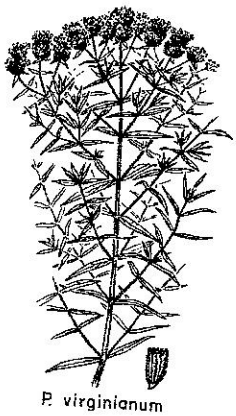
Spring and early summer plants

Marsh fern	Ranunculus sceleratus
Broad-leaved cattail	watercress
Narrow-leaved cattail	dame's rocket
Calamus (sweet flag)	tall meadowrue
Callitriche heterophylla	Jack-in-the-pulpit

Calamus or Sweet Flag

Late summer and autumn plants

American burreed	spotted touch-me-not
Common mud plantain	turtlehead
Elodea canadensis	common dodder
False nettle	water speedwell
Cowbane	common monkey-flower
Mentha arvensis	blue vervain
Pycnanthemum virginianum	purple gerardia
Yellow sneezeweed	grass-leaved goldenrod
New England Aster	purple sneezeweed
New York ironweed	purple-stem aster
Desmodium canadense	cut-leaved teasel



Virginia Mountain-mint

Trees and shrubs

Buttonbush	sycamore
Black haw	black willow
Silky cornel	white ash
Green ash	

Rare plants at Altona-Piedmont Marsh

Sedges, grasses and rushes

Carex buxbaumii	Carex comosa
Carex conoidea	Carex lacustris
Carex lanuginosa	Carex lasiocarpa
Carex leptalea	Carex prairea

Carex utriculata (rostrata)
Carex suberecta
Eleocharis intermedia
Scirpus acutus
Hierchloe odorata
Carex stricta
Carex tetanica
Eleocharis rostellata
Juncus balticus

Rare spring and early summer plants
Water horsetail
Lemna minor
marsh marigold

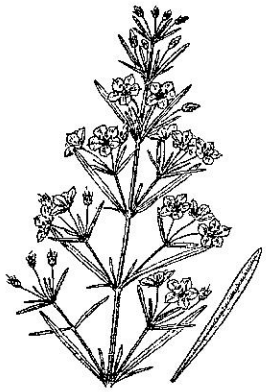
LYTHRUM alatum

Wing-angled Loosestrife

Rare late summer and autumn plants

Polygonum amphibium	floating water-pennywort
Grass-of-Parnassus	water-parsnip
Narrow-leaved willow-herb	four-flowered loosestrife
Swamp lousewort	water loosestrife
Wing-angled loosestrife	hooded skullcap
Stachys tenuifolia var. hispida	marsh bellflower
Mottled Joe-Pye weed	

Rare shrub
Glaucous willow



LYSIMACHIA quadriflora

Four-flowered Loosestrife

WINTER BOTANY

Many botanists feel the first killing frost is the last of botanical exploration for the year. On November the 18th, Emily and I picked up county records of European black alder and Creeping wintergreen for Preston County. On Sunday, November 23rd, I went in search of Dryopteris X neowherryi that I had found many years ago in Monongalia County. It was still there and several green fronds were suitable for a herbarium collection. Numerous evergreen plants can still be identified and collected, pressed and put in various herbaria. Below are a few plants and the WV counties where Donna Ford-Werntz still needs a specimen to fill in blanks in the "soon to be printed" Atlas.

Garlic mustard (Alliaria petiolata) collect over-wintering basal leaves
Wirt, Gilmer, Calhoun, Roane, Jackson, Putnam, Lincoln, Wayne, Logan, Boone McDowell Monroe, Upshur, Taylor
Pawpaw (Asimina triloba) collect twig and buds
Tucker, Webster, Monroe
Ebony Spleenwort (Asplenium platyneuron)
Clay
Cutleaf grapefern (Botrychium dissectum)
Berkeley, Morgan, Grant, Tucker, Tyler, Doddridge, Lewis, Clay, Boone, Logan, Raleigh
Redbud (Cercis canadensis) collect twig and fruit
Pocahontas, Hancock
Spotted wintergreen (Chimaphila maculata)

Hancock, Brooke, Ohio, Marshall, Tyler, Pleasants, Clay, Mason, Mingo, Logan Boone,

Hazelnut (Corylus americana) collect twig and fruits
Wood, Jefferson, Morgan, Tucker, Putnam, Kanawha, Boone, Logan

Intermediate Wood Fern (Dryopteris intermedia)
Marshall, Morgan, Berkeley, Jefferson, Tyler, Lewis, Roane, Mason, Putnam, Cabell Lincoln, Boone, Logan, Mingo

Marginal Shield Fern (Dryopoteris marginalis)
Berkeley, Brooke, Clay, Jackson, Kanawha, Lewis, Logan, Mason, Mingo, Wood

Teaberry (Gaultheria procumbens)Clay, Jefferson, Lewis, Lincoln, Marshall, Ohio, Pleasants, Putnam, Roane

Ground-Ivy – (Glechoma hederacea) Mingo, Wyoming

Cudweed (Gnaphalium obtusifolium) Doddridge, Gilmer, Jefferson, Marshall, Ohio, Pleasants, Taylor, Tyler, Wood

Downy Rattlesnake Plantain (Goodyera pubescens) Jefferson

Witch-hazel (Hamamelis virginiana) Boone, Jefferson, Lincoln, Logan, Mason, Putnam, Roane

Eastern Red Cedar (Juniperus virginiana) Barbour, Brooke, Calhoun, Clay, Jefferson, Lewis, Lincoln, Logan, Marion, Marshall, Mingo, Monroe, Nicholas, Ohio, Taylor, Tyler, Webster, Wetzel

Mountain Laurel (Kalmia latifolia) Boone, Brooke, Gilmer, Jackson, Jefferson, Lewis, Lincoln, Mason, Ohio, Pleasants, Putnam, Wood

Tulip Poplar (Liriodendron tulipifera) Gilmer, Hardy, Jefferson, Lincoln, Mason, Morgan, Pleasants, Roane

Japanese Honeysuckle (Lonicera japonica) Barbour, Doddridge,Pendleton, Preston, Randolph, Tucker

Partridge-berry (Mitchella repens) Berkeley, Doddridge, Gilmer, Jefferson, Lewis, Lincoln, Logan, Marion, Marshall, Mason, Monroe, Ohio, Pleasants, Putnam, Tyler, Wood

Virginia Pine (Pinus virginiana) Boone, Brooke, Hancock, Jefferson, Lincoln, Logan, Marshall, Mason, Ohio, Wetzel

Common Polypody (Polypodium virginianum) Berkeley, Brooke, Clay, Doddridge, Kanawha, Lewis, Mason, Mingo, Monroe, Putnam, Roane, Wood

Christmas Fern (Polystichum acrostichoides) Berkeley

Great Laurel (Rhododendron maximum) Berkeley, Boone, Brooke, Cabell, Doddridge, Gilmer, Jackson, Jefferson, Lewis, Logan, Lincoln, Marion, Marshall, Mason, Mingo, Pleasants, Putnam, Ritchie, Roane, Tyler, Wetzel, Wirt, Wood

Hispid greenbrier (Smilax tamnoides) Boone, Clay, Doddridge, Jefferson, Lewis, Lincoln, Logan, McDowell, Marshall, Mingo, Morgan, Nicholas, Pendleton, Pleasants, Putnam, Tyler, Wyoming

Periwinkle (Vinca minor) Boone, Hardy, Lewis, Lincoln, Logan, McDowell, Marshall, Mason, Monroe, Pendleton, Pleasants, Putnam, Raleigh, Wayne, Wirt

Hemlock (Tsuga canadensis) Cabell, Hancock, Harrison, Jefferson, Lewis, Lincoln, Logan, Mason, Mineral, Mingo, Morgan, Ohio, Pendleton, Putnam, Roane, Wayne, Wood

Believe it or not: No one has collected a specimen of mistletoe in the past 30 years in WV. Tis' the season!!!!!!

Note: If we collect these plants in the above counties, these plants will be proven to grow in all 55 counties of West Virginia!!!! Can we do it??????

TRI-STATE CHAPTER FIELD TRIPS

On July 26, 2003, six members visited the Yatesville Wildlife Management Area in Kentucky. Those in attendance were Romie hughart, Dick Thompson, Dan Stevenson, Judy Dumke, Helen and Neil Gibbins, and Don Tillack (new chapter member).

Wildflowers observed:

Drummond St. John's-wort
Pinesap
Common St. John's-wort
Small-flowered St. John's-wort
St. Andrew's Cross
Round-leaved Boneset
Wild sensitive plant
Rose pink
Wing stem
Hairy Ruellia (Ruellia caroliniensis)
Sensitive brier (Mimosa quadrivalvis)
Purple sneezeweed
Milkwort (Polygala incarnata)
Green wood orchid (Habenaria clavellata)
Downy rattlesnake plantain

It was a good day weatherwise and also wildflower wise!!! **By: Romie Hughart**

On August 16, 2003, had what was probably, the best outing of the year. There were lots of plants and good weather as the group found 36 species in bloom at Mill Creek Wetland Mitigation Area near Fort Gay, in Wayne County, WV. Members on the trip were Romie Hughart, Dick Thompson, Michael Marks, Dan Stevenson, Pat and Mary Anderson, and Rose Ritter.

Wildflowers observed:

Asiatic dayflower
Leatherflower
Common burdock
Tall ironweed
Elephant's foot
White Avens
Late goldenrod
Woodland sunflower
Common Joe Pye weed
Mistflower
Round-leaved Boneset
Hedge bindweed
American germander
Downy rattlesnake plantain
Seedbox
Hairy Ruellia
Tall agrimony
Common Evening-primrose
Virgin's bower
Wing stem
Spotted touch-me-not
Pale touch-me-mot
Bushy Aster
White wood Aster
Cardinal flower
White snakeroot
Indian tobacco
Dittany
Larger Buttonweed
Pale Indian plantain
Pimpernel
Nodding Ladies' tresses
Ragged fringed orchid
Wild sensitive plant
Rose pink

By: Romie Hughart

RUELLIA caroliniensis

Hairy Ruellia

CUNILA origanoides

Dittany

East Lynn Study Update

During our bi-weekly taxonomic study at East Lynn this year, Dick Thompson and I recorded 123 species in bloom.

We found a couple of species this year that we had not encountered previously. Of course, the big find this year was Butterweed (Senecio glabellus). This was a new West Virginia record. We found 2 plants of ragged fringed orchid (Habenaria lacera). One produced a flower bud but it was killed before it bloomed. We found a whorled pogonia (Isotria verticillata) while searching for spreading pogonia (Cleistes divaricata) on a blueberry knoll overlooking the lake. We found a nice stand of Goat's rue (Tephrosia virginiana). Another flower we found, which I've not observed in the northern part of West Virginia was striped gentian (Gentiana villosa) that has such a unique leaf structure. We found 7 or 8 green wood orchids (Habenaria clavellata) in a small group. Another find was 13 late coral root (Corallorhiza odontorhiza) in the same area as the green wood orchids.

Note on Butterweed: A plant was found that could not be identified at East Lynn WMA. Later, I found a picture of the flower in the book "Wildflowers of Mammoth Cave National Park". A pressed leaf, flower, and photo was submitted to Donna Ford-Werntz for the WVU Herbarium. It was confirmed to be Butterweed (Senecio glabellus), known as a noxoious weed in 35 states. USDA- NRCS considers the plant to be a wetland indicator usually found in moist, open or shady places. We found it on a bare road passing through a deciduous forest close to the top of a gently sloped hill. It has been found in Kentucky, Ohio, and Maryland.

It was an interesting year at East Lynn Lake. A disappointment was not finding pink lady slipper. We survey a couple of habitats suitable for pink lady slippers every 2 weeks, but did not have success. We have also looked for Cardinal-flower without success. There is always next year!!!

By: Romie Hughart
PO Box 635
Lavalette, WV 25535

The Blue Ridge Mountains and Potomac Valley in Maryland, Virginia and WV

This conference dealing with native plants and the geology of the Blue Ridge Province held on October 3-5, 2003 in Shepherdstown, WV was attended by more than 100 participants. There was a great deal of excellent information exchanged during the sessions and during breaks and evenings. The conference was sponsored by the West Virginia, Virginia, and Maryland Native Plant Societies and the National Park Service. Lynn Wagner, President of WVNPS was a member of the Executive Committee that deserves a lot of credit for the success of the conference.

There were numerous field trips that were well attended despite rainy weather on Saturday. Larry Stritch, President of the Eastern Panhandle Chapter led a field trips on the National Conservation Training Center property and to Shannondale WMA, as well as, teaching a popular fern workshop. Bill Grafton, WVNPS newsletter editor, was one of the guest speakers talking on, "The Changing Dynamics of Appalachian Forests".

Grafton's talk emphasized the changes caused by Native Americans, early European colonists, the farmers, miners, and timber industrialist of the 1800s through today. Emphasis was also on high deer population impacts and the massive influx of exotic pests being introduced by international trade.

Gary Fleming, Vegetation Ecologist in Virginia, talked about the several dozen plant communities known to occur in the Northern Virginia Blue Ridge. He emphasized that trees are dominant and are used to name most of the plant communities. Examples were: Mountain Oak, oak-hickory, eastern hemlock, cove, basic and acidic mesic forests, shale barrens. Most of these communities can be identified by 3-5 indicator wildflowers, ferns, grasses or shrubs. Gary had really nice photos of the communities and indicator species.

Cris Fleming, Regional Ecologist for Maryland, presented a slide program on rare plants of the Harpers Ferry area. It was excellent!!

Some of the rare plants listed by Cris Fleming for the Harpers Ferry area are:

Virginia Nailwort	Woolly lipfern	Torrey's mountain-mint
Awned Cyperus	Swamp loosestrife	Halberd-leaved mallow
Arrow arum	Shumard oak	Starry false Solomon's seal
Rock skullcap	Blue false indigo	Short's rockcress
Lobed spleenwort	Crested iris	Spring forget-me-not
Ellisia	Spring avens	Downy alumroot
Short's aster	White trout lily	Sweet-scented Indian-plantain
Winged loosestrife	Carey's sedge	Silky dogwood
Harginger-of-spring	Large-fruited sanicle	

Some of the plants Larry Stritch showed his group at Shannondale are listed below:

Gaura	Great Blue Lobelia	Late-flowering thoroughwort
Paper mulberry	bladdernut	Cutleaf grapefern
Ninebark	Brachyelytrum grass	Elm-leaved goldenrod
Bulblet fern	Maidenhair fern	Spinulose wood fern
Dittany	Wild liveforever	Chinquapin Oak
Lopseed	Southern lady fern	Bluestem or wreath goldenrod
Canada moonseed	Small white aster	Spotted wintergreen

<u>Field trips at WVNPS Annual Meeting : led by P.J. Harmon & Brian McDonald</u>

Partial lists of plants identified are listed below.

Valley Bend Wetland

Purple-stem aster	Grass-leaved goldenrod	Cardinal flower
Whorled milkwort	Three square	Bladderwort
Cow lily	Panicled aster	Interrupted fern
Coontail	Large burreed	small white aster

Kerens Bike Path (Elkins to Parsons Rail Trail

Fall phlox	crooked stem aster	white campion
Meadowsweet	Great Solomon's seal	Three-lobed coneflower

Bladder campion	rose-of –Sharon	Feather geranium
Field chickweed	Smooth hawksbeard	Spotted spurge
Peppermint	Reed Canary grass	Rice cutgrass
Calico aster	Cutleaf coneflower	Bottle gentian (Gentiana andrewsii)
Thimbleweed	Bigleaf aster	New York ironweed

Field Notes from Kevin Walker

From Pam Mick

- Interrupted fern (Osmunda claytoniana), Spider Ridge, Wood County, May 2003
- Large twayblade (Liparis lilifolia) , Spider Ridge, Wood County, May 2003

From Kevin Campbell

- Swamp white oak (Quercus bicolor), New Martinsville, Wetzel County, 1/18/02
- Yellow Bartonia (Bartonia virginica), Dolly Sods, Tucker County, 8/5/02
- Buckbean (Menyanthes trifoliata) Grants Branch, Randolph County, 6/24/03
- Bristly Black currant (Ribes lacustre) near entrance to Schoolhouse Cave, Osceola, Randolph County, 6/26/03
- Lesser Rattlesnake Plantain (Goodyera repens) near Cranberry Glades, Pocahontas County, 6/28/03
- Ostrich fern (Matteuccia pensylvanica), 3 miles north of St. Marys, 7/23/03

From Cindy Slater

- Kidney-leaved Twayblade (Listera smallii), near Cranberry Glades, Pocahontas County, 6/28/03

From Chris Gatens

- Fly honeysuckle (Lonicera canadensis),Canada yew (Taxus canadensis), and Bartram's serviceberry (Amelanchier bartramiana), Sinks of Gandy exit, Randolph County, 6/26/03

Field note from Dot Montgillion

Bee keepers are growing a new shrub that is excellent for honey production. She acquired some seed and found them easy to grow. It is call B B plant. She gave me (Bill Grafton) a small potted specimen to try to identify. Later she called and had learned the plant is in the genus Euodia (sometimes spelled Evodia). We now know the plant is Euodia daniellii. The plants were introduced into the US in the early 1900s as ornamentals with sweetly scented flowers, yellow autumn foliage, and red fruits.

We also know Euodia is an invasive exotic. Hopefully, this note will alert beekeepers to not plant Euodia.

Note: The Missouri NPS publication dated 2002 – Volume 23 and titled "Missouriensis" contained a 4-page article and photo of Evodia daniellii that was a new state record that is naturalizing in Missouri.

From Bill Grafton

Never a dull moment, when you go looking for orchids with the Orcdnuts (Scott Shriver and Clete Smith and are joined by Bernard Cyrus. The first day was spent in Kumbrabow

State Forest on October 18th. We had some success as Autumn coral root, round-leaved orchid, and nodding ladies' tresses were found in fair numbers. We spent the night in the home of Jim & Beth Bullard for the night. They were out of town, or we would have had a nice visit with two very exceptional botanists and birders. Thanks, Jim and Beth. On October 19th, we headed up to Cheat Mountain where the highlight was seeing no deer all day, and finding 3 excellent patches of Ladies'tresses along FS Road 92. One patch seemed to be pure Spiranthes cernua, the next was pure Spiranthes ochroleuca., and the third was a mixture of hybrids of the two species.

Great website
Try this one: www.natureserve.org

Blister Swamp restoration a success

Several of our members were involved with inventory and fence building to try to restore Blister Swamp to its former unique natural qualities. John Dalen, owner of Blister Swamp, had the vision in the late 1990s of "sitting on the front porch in the morning and see the sun rising through the balsam fir". He contacted The Mountain Institute and The Nature Conservancy for advice and technical help to realize his dream.
The swamp had been radically changed by logging, farming/grazing, the introduced balsam woolly adelgid, and invasive exotic plants. An inventory located 16 rare plants (two are globally rare) including the balsam fir that was almost eradicated by deer, cattle and heavy growth of grass and weeds.
After a thorough inventory, a decision was made to build a fence to keep cattle out and decrease the number of deer. Funding came from the National Fish and Wildlife Foundation, labor and machinery from the US Fish & Wildlife Service and many volunteers. Others involved were EPA, Highlands Conservancy, WV-DNR, Itasca Corp., US-NRCS and US Forest Service.
Over 7000 feet of fencing was installed around 40 acres. Twenty acres were fenced to 8-feet height and electrified to keep deer out. Thousand of balsam fir seedlings were planted from seed collected previously at Blister Swamp.
Blister Swamp now had a 25 % increase in rare plants after the first year of protection.
All individuals and groups should congratulate themselves and also dream of the sun rising through the balsam firs in Blister Swamp once more.
Note: This article is a summary of a case study by Alton Byers of The Mountain Institute.

Changing Dynamics of Appalachian Forests
By: Bill Grafton

The forests of the mid-Atlantic region of the Appalachian Mountains have always been is some state of successional change. Over the millions of geological years, there is evidence that some plants disappeared and others were introduced into the region by wind, water, birds, and animals. Native American Indians also changed the forest through the use of fire to clear the underbrush for hunting and safety in traveling. They also burned to clear areas for villages and fields to grow crops.

Colonial Europeans changed the landscape on a much larger scale. They first cleared valleys and ridgetops where soils were highly productive. The eastern side of the Appalachians saw these changes from the late 1700s through the mid-1800s. West of the Appalachians, settlements and land clearing roughly corresponds to the 1850-1900 period. This change in the forests was greatly accelerated by the completion of the railroads into the Ohio River Valley. Forests were cut on any land that would grow crops of wheat, oats, corn or hay for a few years. As more people moved west, the farms slowly moved up the slopes where erosion became a major problem. Many farms were little more than slash-and-burn operations that permitted crops or grazing for a few years until the soil eroded away or became too poor to grow a crop. Most of these so called "new ground" farms were soon overtaken by pioneer species, such as, Virginia pine, white pine, yellow-poplar, red maple, aspens, black locust, elms, and "red brush" (sumacs, dogwood, and sourwood) once they were abandoned.

Timbering soon cleared any remaining trees that could be sawed into lumber east and west of the higher mountains. Timbering on a national scale had first begun along the New England coastal areas, then moved inland and into Pennsylvania and New York, until most of these areas were cleared by the 1850s. Timbering then began to concentrate on the Lake States until this large area was mostly cutover by the late 1800s. The tree of choice during this 100-year period was white pine.

Timber barons now turned their attention to the Southern forests and the Appalachians. The invention of the Shay engine made it possible for small steam locomotives to travel up steep valleys and haul logs to sawmills located in the valleys. By the 1920s, almost all virgin timber in the mid-Atlantic had been cut and sawed into lumber.

In the late 1800s, Americans began major foreign trade with other countries. The Roaring 90s brought many foreign goods to our shores. Horticulture and floriculture brought numerous landscape ornamental grasses, flowers, shrubs and trees. These were added to the plants that immigrants had brought with them for food, medicine and "reminders of home". Rhamnus cathartica was brought in as a medicinal. Paulownia (princess tree) and tree-of-heaven seeds came as packing to keep valuable goods from cracking. Perhaps the most devastating introduction was the chestnut blight fungus that came in on the Chinese chestnut, but completely killed the native American chestnut, as a tree. Other goods were shipped in wooden crates, often with bark on the boards that contained boring beetles, worms, and eggs. World trade was the rage then, and once again is in high gear in this present day and age. There will be more on this later.

Timbering in the late 1800s and early 1900s, so completely devastated the landscape that many areas were labeled the "land that nobody wanted". These "moonscapes of burned stumps and logs were deemed to have no value and many landowners refused to pay taxes so the governments took them over or paid very low prices to buy the land and attempt restoration that would reduce flooding in big cities downstream on the Potomac, Allegheny, Monongahela, Ohio, Susquehanna, and Kanawha Rivers. Restoration that involved planting trees often involved exotic and non-native trees such as Norway spruce, European and Japanese larches, and Scotch pine. All of these species have naturalized from seeds and have changed the dynamics of our Appalachian forests.

Another big change in the Appalachian forests was caused by free-ranging cattle, horses, sheep and hogs from pioneer days until the automobile became common. Domesticated stock was "fenced out" of gardens and cultivated crops during the 1800s. They freely

ranged through nearby forests grazing, browsing, and eating fruits and seeds (especially acorns). This philosophy changed as conflicts with automobiles increased in the 1930s and 1940s. Domesticated livestock now had to be "fenced in" to keep them from being hit by the increasing vehicles that were traveling at faster speeds. Domesticated stock had major impacts on the forests. They over-ate preferred foods and under-ate foods (plants and seeds) that they did not like. This benign action slowly changed the composition of the forests. White-tailed deer that are over-abundant in most of the mid-Atlantic forests today are also slowly changing the forest composition. This change includes all plants and animals.

As previously mentioned, world trade is once again rampant in the United States. We can literally buy the best of any goods that are produced anywhere in the world. Despite the early warnings in the late 1800s when world trade brought us chestnut blight, Dutch elm disease, gypsy moth, and invasive exotics such as Paulownia, tree-of-heaven, and kudzu, we have not instigated proper and strict measures to protect biological integrity and diversity of the Appalachian forests, waters, and human developed areas.

Our landscape and ecosystem is being overrun by invasives (native and nonnative) that cause our control and eradication efforts to be woefully feeble. The forests are infected with balsam woolly adelgid, hemlock woolly adelgid, beech bark disease, tree-of-heaven, multiflora rose, shrubby honeysuckles, mile-a-minute, and Japanese stilt grass to name a few of the worst invaders. We do not have answers on a landscape scale. We even struggle to manage forests that have the highest productivity rates for timber. We hope we can preserve our endangered species of forest plants and our rarest habitats.

On the horizon, and already on the North American continent, are the threats of Asian longhorn beetle, emerald ash borer, sudden-oak-death disease, and chronic wasting disease. These agents could kill plant and animal species just as surely as did the chestnut blight.

Free trade could bankrupt the biological world.

A forest is composed of the trees that dominate but also includes all living plants and animals. Tree-of-heaven threatens to out compete all native trees. Shrubs such as, honeysuckles (Morrow's, Tartarian, Amur, and their hybrids), autumn olive, multiflora rose, Japanese barberry, as well as, vines of Japanese honeysuckle, oriental bittersweet, and mile-a-minute threaten animal life, tree regeneration, and all herbaceous plants. Garlic mustard, Japanese stilt grass, Japanese knotweed, sachaline, and numerous other invasive exotics threaten endangered species, wildflowers, forbs, ferns and birds, mammals and other animals.

Even the plants that are traditionally used for reclamation of timber roads and clearings are a threat. Invasive plants such as Kentucky 31 fescue (tall fescue), sericea lespedeza, and crown vetch are known problems but continue to be used because they are cheap and very efficient at controlling erosion.

Within a forest, but very much a definite component of the forest, are many niches and habitats. Wetlands can be bogs, swamps, seeps, ponds, lakes, oxbows, and beaver dams. These special habitats are under threat from invasives such as, purple loosestrife, glossy buckthorn, reed Canary grass, phragmites (common reed) and other plants. Dry openings and open-forested habitats can include shale barrens, limestone barrens, and rock outcrops that are threatened by spotted knapweed, birdsfoot trefoil, crown vetch, tall yellow and white clovers, and teasels. Other niches and unique natural habitats in a

forest includes riverbanks, waterfalls, cliffs, water gaps, mountaintops, prairies, semi-prairies to name a few. These niches and special habitats are very vulnerable to invasive plants. The plants that grow on such sites have adapted to the extreme and sometimes harsh conditions where competition is frequently light.

I have seen shale barrens that are completely overrun with Japanese honeysuckle, common ragweed, and great mullein. I recall several springs and seeps that are covered up with multiflora rose. Spotted knapweed follows limestone based walking trails through normally acidic sandstone mountaintops plant communities. Musk thistle and orange hawkweed are spreading throughout our grass balds. Many of our unique riverbank habitats are completely dominated by "nonnative weed" communities.

It almost seems hopeless, but farmers, foresters, wildlife biologists, and outdoor recreation managers are realizing the economic costs of doing nothing. They have much more political clout than native plant societies. We have lots of information, so I suggest we start working jointly on control and eradication projects.

Invasive plants and white-tailed deer are probably having the biggest impacts on the Appalachian forests. Timbering is also having major impacts. Many forests are managed to purposely change the composition of the trees. Historically, virgin forests were first managed to selectively remove the more valuable trees. In some parts of the mid-Atlantic where logs were transported by floating, black walnut was left behind because it was too heavy to float. As markets became available for pulpwood to make paper, forests were clearcut. Most of the second-growth forests have been managed under a diameter limit where larger diameters of the more valuable trees were removed to be sawed into lumber. Red oak, white oak, sugar maple, yellow-poplar, and black cherry were cut while hickories, beech, black gum and red maple was frequently left in the forest. The forests were changed immediately by the harvesting and long-term by the seeds of trees left behind.

In colonial times the American chestnut was estimated to comprise 20-25 percent of the trees. Oaks replaced the chestnut that was killed by the chestnut blight. In 2000, red maple and yellow-poplar are the most dominant trees in the Appalachian forest. Red maple dominates because fires are no longer shaping the forest composition. Yellow-poplar is so common because it out competes other trees when old field are abandoned or in clearcut areas of moist forests.

As we move into third-growth forests the trend is back to clearcutting. It is now profitable to saw boards with defects such as bark, knots and rotten spots. These defects are then sawed out and the solid pieces are glued back together into a board with no defects. Trees with numerous defects and with crooked or hollow stems are simply chipped and the chips are glued into 4 X 8-feet sheets of chipboard or oriented strand board. Clearcutting in hardwoods usually results in tree composition that is very similar to the forest that was just cut, because stump sprouts will dominate the reproduction. Some seeds will also land in suitable spots to successfully grow into a tree. Herbs, shrubs, salamanders, and other organisms that have adapted to shade habitats will usually loose out and drop in populations. They often return to their former population levels if other factors stay the same and the shade returns. Selection harvesting will result in trees, shrubs and herbs that have adapted to tolerate shade.

The Appalachian forests were and are shaped be the methods used to remove trees and logs. Many of the original logs were removed by horses and oxen. Bulldozers were

common in cutting the second-growth forests. Now loggers use large rubber-tired skidders and other equipment that can disturb up to 20 percent of the land surface. This creates ideal conditions for invasive native and nonnative plants to become established but also drives the use of invasives to reclaim disturbed areas before erosion fills streams with sediment.

However, each time humans enter the forest for timbering, mineral extraction, hunting, herb gathering, or home building, the forest is less pure and stable than before.

Thus, we add fragmentation, wildfires, air pollution, quarries, roads and trails as factors that further bankrupt biological diversity.

Natural disturbances have always been and continue to cause dynamic changes in the Appalachian forests. Fires set by native American Indians to clear areas, remove underbrush, and create circular fires to concentrate animals during hunts, changed the dynamics prior to the 1700s. Blowdowns from windstorms were and still are common. Ice and snow damage continues to create forest openings and increase light reaching the forest floor. Native insects of pine bark beetles and loopers still cause massive defoliations. Diseases such as stem cankers, anthracnose, wilts, etc. usually attack a single species or genus and change the forest composition dramatically.

In summary, it is probably true that the Appalachian forests are more diverse than ever because of the introduction of exotics and the migrating characteristics of our native plants. This increased diversity is a situation we will almost certainly regret. Exotic plants already make up 1/4 to 1/3 of our total flora. I will argue that our forest are less stable and less valuable commercially because managers do not manage holistically.

Kanawha Valley NPS Chapter news

The Kanawha Valley NPS Chapter voted to donate $100 to the WVU Herbarium, $100 to the Marshall University Herbarium, and $100 to the Kanawha State Forest Foundation.
Officers elected for 2004 are:
Steve Mace – President Lois Kuhl – Secretary Carolyn Welcker – Treasurer

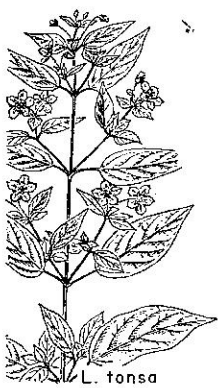
Did you know: Canada goldenrod is considered to be the worst invasive exotic plant in China.

That: Grecian foxglove (Digitalis lanata) is known to be escaping on road banks in White Sulphur Springs, WV and is also a major invasive of prairies in Kansas.

Articles, field notes, projects you are working on

Send these for the next Native Notes newsletter:

Bill Grafton: Native Notes Editor
West Virginia University
PO Box 6125
Morgantown, WV 26506-6125
Email : wgrafton@wvu.edu
Emily Grafton : Associate Editor
Daniel Grafton : Associate Editor/Computer Consultant



Southern Loosestrife

MEMBERSHIP REGISTRATION: Please sign me up as a member of the WVNPS!
Name(s)_____
Address_____
_____
Phone (H)_____**(W)**_____
Email_____

Membership dues: Calendar year (Jan. 1 – Dec. 31)
_____**Regular membership $12 (includes all members of a household)**
_____**Student membership $ 8 (any student college age or below)**
_____**Life membership $200**
Chapter membership is optional
_____**$ 10 Eastern Panhandle** _____**$ 6 Kanawha Valley**
_____**$ 6 Tri-State (Huntington)**
**** You must be a member of the state WV-NPS organization in order to join a chapter.**

This is a gift membership. Please include a card with my name as donor.
Donor name_____

WV NATIVE PLANT SOCIETY
PO BOX 808
NEW HAVEN, WV 25265-0808

JUDI M & DANIEL W WHITE
22 WELLESLEY DRIVE
WASHINGTON WV 26181-9665