

# NATIVE NEWS

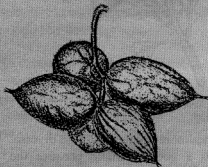
Newsletter of the Maryland Native Plant Society

VOL. 7, NO. 1

WINTER 1999

## THIS ISSUE:

TREES OF THE PIEDMONT,  
SANCTUARY GARDENS,  
SHELL-MARL RavINE  
FOREST FLORA



## The Maryland Native Plant Society

(MNPS) is a nonprofit organization that uses education, research, and community service to increase the awareness and appreciation of native plants and their habitats, leading to their conservation and restoration. Membership is open to all who are interested in Maryland's native plants and their habitats, preserving Maryland's natural heritage, increasing their knowledge about native plants, and helping to further the Society's mission.

MNPS sponsors monthly meetings, workshops, field trips, and a fall conference.

Roderick Simmons-President

Louis Aronica-Vice President

Karyn Molines-Vice President

Samuel Jones-Secretary

Joseph Metzger, Jr.-Treasurer

## LETTER FROM THE PRESIDENT

Dear Members,

On behalf of MNPS, I would like to welcome and encourage the newly formed Delaware Native Plant Society. It has been suggested that the native plant societies of the mid-Atlantic states meet this year to discuss native plant conservation issues that affect the greater region. It will be valuable to include the participation of DNPS at this meeting.

Our fall conference in southern Maryland was very successful and well attended, thanks to the many excellent speakers and field trip leaders. Special thanks to Karyn Molines, Conference Chair, and all the volunteers who organized the conference. We are considering the Maryland Piedmont or Catoctin Mountains as the location for this year's conference.

The "Designing with Nature" native plant seminar and plant sale held in Harford County by the Northeast Chapter of MNPS and the Harford County Master Gardeners was also a fine success, thanks to all the volunteers, excellent speakers, and native plant nurseries who participated. We expect this to be an annual event.

This past year, we expanded the number of field trips and visited a wide variety of interesting sites, thanks to Amy Doll and Tina Schneider, Field Trip Committee Co-Chairs, and our many excellent field trip leaders. We plan to offer even more trips this year. Expect the spring schedule soon.

Marc Imlay, Invasive Exotic Plant Committee Chair, has been leading groups of volunteers this past summer and fall to remove English Ivy, Periwinkle, Ailanthus, Stilt Grass, Bittersweet, and Perilla from Ruth Swann Park, a 250 acre park overlooking the Potomac River and Pomonkey Creek in Charles County. So far, they have removed several acres of invasives and have set a goal to eradicate all of these species from the park this year.

MNPS members have been busy assisting in flora surveys and research for the past year at several significant but unprotected sites throughout the state. This work led us to the rediscovery of the historic Hollywood Swamp along Indian Creek in Greenbelt, a large, diverse wetland area with vast stands of Sweet Pepperbush and Swamp Chestnut Oak. We also discovered several remnants of the historic Powder Mill Bog near Beltsville and surveyed several other "Magnolia Bogs" or gravel seeps along the fall line. Also, John Parrish has conducted extensive surveys of the Travilah Serpentine Barrens, a globally rare ecosystem, in western Montgomery County. All of these areas are currently threatened with development. We hope that the information we provide will lead to a better understanding and respect for these sites, and to their preservation.

As always, MNPS needs additional volunteers to keep up with the increasing number of projects each year. If you would like to help, please consider joining one of the committees on page 8.

Sincerely,  
Rod Simmons

# TREES OF THE ROLLING HILLS

## Howard County, Maryland

By Louisa Thompson

As a child on a school field trip, I learned to recognize the mitten-shaped leaves of Sassafras trees, and the equally distinctive, though harder to describe, shapes of Oak, Maple, and Tulip Poplar leaves. When we moved to Maryland, I recognized them with pleasure. In the Master Gardener (MG) training class, we learned to watch out for Black Walnut, notorious for suppressing the growth of plants beneath it. I soon found it in my yard. Most of my other trees remained nameless until they flowered. Then I was able to identify Dogwood, Black Cherry, and Black Locust, though later in the season they tended to blur into the background again. Several trees remained anonymous all year.

Last fall, I took MG Rich Pais' fascinating course on Forest Ecology in the Continuing Studies program at Johns Hopkins. The composition of a forest is surprisingly predictable. In any given region, just a few variables determine what trees are present. In most of Maryland, Oak is the dominant genus, followed by Hickory. (Chestnut outranked Hickory until devastated by Chestnut Blight.)

Soil moisture plays a major role in determining which species will grow. Moisture, in turn, depends on the steepness of the slope; the soil type, texture, and depth to bedrock; and exposure to sun and wind. Finally, the history of the site matters: when and how it has been cleared or otherwise disturbed.

I wanted to restore part of my yard to what it once was, so I was thrilled to realize that one can know with some certainty what must have grown here. The first step was to learn to recognize all the common native trees. In the months since then, I have come to know most of them. I've written about the restricted plant community found where the soil is dry, on ridgetops and the steep, rocky slopes of our river gorges, and about the rich bottomland community along the Little Patuxent and Patapsco Rivers and their tributary streams. This month, I'd like to introduce you to the trees of our most typical Piedmont landscape: the gentle slopes of the foothills themselves.



*Swamp White Oak*

The forest of the Piedmont uplands is quite diverse. My own yard offers a good example because the builder left a strip of native trees along one edge of the property. About 300 feet long and 10 feet wide, it contains eight species of canopy trees, one midstory species, four understory, and one shrub species.

Our property line begins just a few feet above a small stream, and the first tree you come to is a lowland tree, White Ash. It does occasionally grow above the floodplain in fairly moist soil. On this lowest portion of the property there are also several Red Maples. Most common in bottomlands, where it originated in pre-Colonial times, Red Maple now also grows uphill on cleared land.

While Red Maple has only recently assumed the role of pioneer tree, Black Locust has always been one. Common on roadsides and abandoned fields, leguminous Black Locust evolved to reclaim land parched by the sun following natural disturbances such as fire. My oldest Black Locust is near the corner, where the road allowed plenty of sunlight in even before the rest of our property was cleared.

Trees of the Rolling Hills Continued on page 9

# SAVING THE EASTERN DECIDUOUS FOREST

By Hellen Falone, English translation by Alex Winter

Interest in the environment and the desire to preserve nature led a group of students in the town of Uberaba, Brazil to gain notice in the United States. The students of the sixth grade class of the Escola Criativa earned notice in the September 27 edition of the American newspaper, *The Washington Post*.

Their letter to the editor, published in the most prestigious newspaper in the United States, was based on the actions of a class of the Escola Criativa of Uberaba, Minas Gerais, Brazil who took the initiative of writing a letter to Maryland Governor Parris Glendening asking for his intervention in keeping Chapman Forest (a temperate forest) from being devastated by development.

The letter, written by twelve students, reached the attention of the American press when a non-governmental organization (NGO) called FOMA – “Friends of Mount Aventine” – mobilized for the cause of Chapman Forest, gained access to the document. Marcia Nascimento Fortes, science teacher of the class, says that the students learned about the cause through the internet.

The students who participated in the Environment Week activities organized by the school in May used the internet to visit the homepages of various NGOs, including organizations dedicated to the preservation of nature in Brazil and outside of it. Through these studies the children of the sixth grade class learned of the efforts of FOMA to protect Chapman Forest from devastation.

Through contacts resulting from these “visits” to FOMA’s homepage, the staff of FOMA invited the students from Uberaba to participate in the project and to help them convince the American government to preserve the forest.

Engaged in this struggle, the twelve students together wrote a letter to the Governor of the State of Maryland, saying that just as outside of Brazil there were advocates for the preservation of our forests, they were similarly concerned about America’s natural places.

In their letter, translated into English, the students said that the planet Earth is so small that it was appropriate to try to save nature in all countries. Although they have not yet received an answer from Governor Glendening, the students of Escola Criativa received from FOMA some banners, buttons, and stickers from the campaign for preserving the forest. They are keeping their letter published in the *Washington Post* as a memento.

In an interview in the *Jornal de Uberaba*, they said that although their action was small, it still had to be done. “We have the awareness that we are fighting for the preservation of a forest, just as other countries care about ours.”



*Chinquapin Oak - Chapman Forest*

*“It is always in one’s power to cut a tree down, but time only can place them where one would have them, after the ground is stripped.”*

*-George Washington, 1795*

# Sanctuary Gardens

By Alan Kettler

My organization is working to develop a feasibility study and schematic master plan for the creation of Sanctuary Gardens, a nature preserve devoted to the restoration of native plant and animal communities in the Washington Metro area. Its cultural mission would be to provide a landscape where people from all over the country could come to observe American plants, birds, insects, mammals, etc., in living ecological communities, rather than separate entities of the environment. Through hands-on workshops and educationally friendly presentations of these biological resources, visitors would be able to observe, appreciate, and work in their own communities to replicate these living systems. Plant and animal diversity would be restored to our biologically impoverished country by the thousands of people who would be inspired to create animal friendly gardens at home, school, work, etc. Dependence on pesticides, fertilizers, and water to artificially support large areas of turf and non-native species would be reduced or eliminated. People would be empowered to understand and develop their own mini-ecosystems.

The current system of parks and botanical gardens is woefully inadequate to meet this need. In a recent call to eight botanical gardens in the Washington, D.C. area, including the Audubon Society, I discovered that there is not one bird garden, and there are only two native gardens which represent some of the 1,700 species of American plants considered to be ornamental. A gardener's recent remark at one highly esteemed garden sums up the problem well. When I asked her if she had any native plants, she replied "Well, we grow ornamental plants here." Likewise, native plants are often considered weeds by the mainstream commercial nursery trade.

Meanwhile, 30% of the native plant species in the United States are threatened with extinction, according to a recently released Smithsonian study. There are plenty of parks in this area, but many plant communities that appear to be healthy are actually highly impoverished biologically. Many plants disappeared after large scale clearing for agriculture and have never returned. How can we expect to save what we do not even know? Also, it must be added



*Pin Oak*

that botanical gardens, as their generic label implies, have a mission to work with plants, to the exclusion of animals. Sanctuary Gardens would be a holistic ecological setting for the restoration, display, and study of nature and ecology in all its intricate interconnectedness.

The Washington Metro area would be geographically ideal to locate Sanctuary Gardens for a variety of reasons. For one, it is accessible to major population areas, and is also a major tourist destination. Also, this area is rich in biodiversity because it lies at the convergence of the Coastal Plain, the Piedmont, and the Appalachian Mountains; and the North and the South.

Sanctuary Gardens would include a native plant retail outlet, so departing visitors, full of fresh knowledge and enthusiasm, could actually obtain plants easily to take home. The only hope for an environmentally friendly and functional public is to make environmental information easily accessible, which Sanctuary Gardens would do.

The intended audience for Sanctuary Gardens could be huge. Consider the following statistics: Gardening

Sanctuary Gardens Continued on page 10

## The Real Cost of Sprawl

It's not easy to keep score on recent urban forest loss in Northern Virginia to sprawl growth. In the 1980s, the United States Forest Service reported that 30 percent of Fairfax County's trees were clearcut. In the 1990s, despite what appears to onlookers to be accelerating devastation, some still question even whether there has been any net tree loss.

On September 18, 1998, journalist Dee Cohn, *Washington Post Sunday Magazine*, page 16, reported: "Percentage of forest converted to homes and businesses in Fairfax County between 1980 and 1995: 69 percent." That is more than two-thirds of the landscape. By contrast, only 24 percent of Montgomery County, just across the Potomac River, was lost in this same period. Cohn says she based her statement on available aerial photos and acreage counting from NCRI, Arlington, Virginia.

Cohn also reported:

- Percentage of the Chesapeake Bay watershed's 41 million acres that was forested: in 1600, 95%; in 1900, 33.5%, in 1990, 58.5%;
- Number of farm and forest acres developed in greater Washington between 1980 and 1995: 251,000; number of total acres in Fairfax County: 260,000.
- Percentage increase in acreage of developed land in Loudoun County between 1980 and 1995: 127 %.
- Percentage of available land in greater Washington now developed: 33.5%; percentage to be developed by 2020: 43.7%.

Fairfax County's Tree Preservation Task Force (Chairman Stuart Mendelsohn, (703) 356-0551) is reportedly working to develop new measures designed to save what's left of the County's landscape. Whatever the exact tree loss percentage, the Task Force has its work cut out for it and deserves the community's active encouragement.

## Deadly Fungus Threatens Butternuts

By Volker Inschwiler

[Reprinted from the November 1998 *Bulletin of the Virginia Native Plant Society*]

The Butternut Tree (*Juglans cinerea*), native throughout Virginia and other states, is in danger of being wiped out from its entire natural range and booked into the lists of endangered species. An introduced fungus with the beautiful name *Siroccus clavignenti-juglandacearum* infects the bark through scars, wounds, or dead twigs, then grows in cankers until it finally girdles and kills the tree.

People motivated to save this valuable member of the Walnut Family may help by searching in mixed hardwood forests for trees which show some resistance to the fungus, and which eventually might become parents of a future blight-immune generation.

In addition, interested individuals may plant Butternut seedlings in appropriate locations, thus learning firsthand about the tree's biology. If blight occurs on these planted trees, it would create special experiences to convert "good ideas" into suitable methods and programs that help the trees to overcome this deadly disease.

**Ed. Note:** One of Maryland's largest and healthiest Butternut populations is situated in Montgomery County in the path of the Inter County Connector (ICC), a proposed highway that would be environmentally disastrous for Montgomery and Prince Georges Counties. The ICC is part of the Chamber of Commerce's desired plan for an outer beltway encompassing the greater Washington Metro region.

# Associated Flora of the Chapman Shell-Marl Ravine Forest

By Roderick Simmons

The Chapman Shell-Marl Ravine Forest is a rare natural community of several hundred acres adjacent to the Potomac River in northwestern Charles County, Maryland. This woodland is remarkable because its combination of rich, calcareous soils, steep topography, and close proximity to the Potomac River (an ancient migration corridor) have given rise to a diverse flora that is uncharacteristic of the Coastal Plain. In addition, many indicators of old-growth status are present, including annual growth rings on stumps of several typical canopy species. The Maryland Native Plant Society discovered this site in 1996 and since then has spent many hours documenting the flora and plant communities.

Deep ravines formed over millenia have cut into ancient shell-marl deposits of the Brightseat and Aquia Formations (Paleocene Epoch) buried well below the surface. The shells provide a calcareous soil and together with glauconite (a nutrient-rich, marine sediment deposited with the shells) create a highly fertile, circumneutral soil (pH 6.5). Nutrients from the terraces above also leach downward and collect in the alluvial soil below, adding to the richness of the soil. The ravines are deepest near the southern end of the property and gradually become gentler towards the north of the property. Here, ancient deposits of marine sand produce a deep, sandy loam.

Many of the species found in this Ravine Forest community, such as Basswood, Chinquapin Oak, Foamflower, Harbinger of Spring, Wild Stonecrop, Toadshade Trillium, White Bear Sedge, Pubescent Sedge, James' Sedge, Hitchcock's Sedge, Glade Fern, American Bellflower, and Maryland Sanicle, are calciphilic and usually occur in the inner Piedmont and Mountain regions of the state and are rarely found on the Coastal Plain. Several of these disjunct or isolated species, like Glade Fern, Hitchcock's Sedge, and Morse's Barreled Wood Snail (*Vertigo ventricosa*), are also highly rare in Maryland or globally rare. It is also noteworthy that the state-endangered Glade Fern and Small-flowered Baby-blue eyes populations are the largest known in Maryland.



*Chinquapin Oak*

*"Here are old trees, tall oaks, and gnarled pines,  
That stream with gray - green mosses;  
Here the ground was never trenched by spade, and  
flowers spring up  
Unsovn, and die ungathered."*

*-Bryant*

A diversity of magnificent trees, many near champion size, compose the canopy. Tulip Tree, Red Oak, White Ash, Bitternut Hickory, and Beech are the dominant species. Chinquapin Oak is well distributed throughout the forest. Occurring in smaller numbers, but widespread are White Oak, Basswood, Hackberry, Slippery Elm, Sycamore, Sweetgum, Black Walnut, Persimmon, and American Holly. Sassafras reaches a very large size and is abundant on sandy loam in gentle ravines in the northern part of the forest. Black Oak is common only in alluvial valleys near the Potomac and on dry, remnant gravel terraces above the river. Ancient Chestnut Oaks inhabit north-facing slopes near the Potomac at the southwestern end of the property, where remnant gravel terraces descend into calcareous ravines. Basswood, Hophornbeam, Red Oak, and Red Cedar are the dominant trees on the rugged, fossiliferous cliffs along the Potomac shoreline.

The dominant understory species throughout are Paw Paw and Spicebush. Dogwood is well

Associated Flora Continued on page 11

# ANNOUNCEMENTS

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## RESULTS OF MNPS 1998 ELECTIONS

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Vice President	Karyn Molines
Secretary	Sam Jones
Treasurer	Joe Metzger

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## LAHR SYMPOSIUM ON NATIVE PLANTS

Saturday, March 27, 8:00am -5:00pm

Join this annual day long event featuring concurrent sessions with in-depth presentations and discussions on the history, identification, and landscape use of native plants. Some of the area's best native plant nurseries will also be on hand selling plants.

Fee: \$60.00. Advance registration is required. For more information call (202) 544-8733.

## INVASIVE EXOTIC PLANT BROCHURE

Louisa Thompson, Master Gardener and MNPS member, has compiled an excellent handout on invasive exotic plants in Maryland. It will be distributed to all MNPS members and will also be posted on our website.

## PITCHER PLANT AND SUNDEW WEBSITE

Visit the web site of the Meadowview Biological Research Station at [www.pitcherplant.org](http://www.pitcherplant.org).

## MID-ATLANTIC PLANT IDENTIFICATION GUIDE

Visit Charlie Davis' Mid-Atlantic plant ID web site at <http://www.bcpl.net/~cadavis/cmapiig/initialpage.html>

## MNPS MONTHLY GENERAL MEETINGS

### BUTTERFLY-PLANT ASSOCIATIONS

November 24, 1998, 7:30 pm

White Oak Library

Richard Smith, field entomologist and MNPS member, will give a slide presentation on a variety of butterflies found in Maryland and their association with native plants. The regular feature of plant identification will be held between 7:00 and 7:30 pm by Joe Metzger. Refreshments and door prizes. Pot luck refreshments welcomed.

DIRECTIONS TO THE WHITE OAK LIBRARY: From 495, take Rt. 650 (New Hampshire Avenue) North. The library will be on your right just beyond the intersection of Rts. 29 & 650. Park behind the library and enter through the lower level doors.


**HOLIDAY SOCIAL**  
**December 29, 1998, 7:30 pm**

White Oak Library

The December meeting is intended for members to show slides or photos pertaining to native plants. Plan on using no more than 10 minutes to allow time for everyone. Several short presentations have already been lined up and will include highlights of MNPS plant surveys this year: Jim Long on Mattawoman Creek, Joe Metzger on Adkins Arboretum, John Parrish on Konterra Bog, Lou Aronica on Oxford Magnolia Bog, and Marc Imlay on invasive exotic plant removal at Ruth Swann Park. The regular plant identification feature will be held between 7:00 and 7:30 pm by Joe Metzger. Refreshments and door prizes. Pot luck refreshments welcomed.

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**WINTER FRUITS AND SEEDS**  
**January 26, 1999, 7:30 pm**

White Oak Library

John Parrish will give a presentation on a wide variety of winter seeds and fruits of Maryland's native plants, including identification techniques. The regular plant identification feature by Joe Metzger will be held between 7:00 and 7:30 pm. Refreshments and door prizes. Pot luck refreshments welcomed.

**MARYLAND'S FOREST DIVERSITY**  
**February 23, 1999, 7:30 pm**

White Oak Library

Rod Simmons will give a slide presentation on Maryland's forest types and typical canopy trees. Some emphasis will be placed on identification and use in the landscape. The regular plant identification feature by Joe Metzger will be held between 7:00 and 7:30 pm. Refreshments and door prizes. Pot luck refreshments welcomed.

<b>MNPS COMMITTEE CHAIRS</b>	
Conservation .....	Lou Aronica (202)722-1081
Field Trips & Programs..	Amy Doll & Tina Schneider adoll@haglerbailly.com Schneider@mncppc.state.md.us
Flora of Maryland .....	Joe Metzger (410)775-7737
Invasive Exotic Plants .....	Marc Imlay (301)283-0808
Newsletter .....	Rod & Teresa Simmons rod77@juno.com
Nominations .....	Gordon Brown (301)589-5086
Annual Conference.....	Karyn Molines (410)286-2928
MNPS Library .....	Nancy Adamson (301)277-5905
Membership.....	Joe Metzger (410)775-7737
MNPS Web Site .....	Carol Allen (301)258-0313



Though adorned with beautiful flowers in May, its thorns and habit of sending up root suckers make it a difficult tree in the landscape.

Moving uphill, Tulip Poplar comes next. Here and further up, the Tulip Poplars that have reached canopy height are about 16 inches in diameter. They need sun to germinate, so my guess is that these took root when my neighbors' houses were built, at least 50 years ago. Once Tulip Poplar has reached the canopy, it can live for another century, its girth becoming impressively large. Its lower branches die and drop off as they become shaded. The winged seeds drift widely, finding sunny sites easily in suburban Maryland. It does need fairly moist soil, so it is somewhat less widespread as you go uphill.

Black Cherry is a midstory tree at maturity, about 60 feet tall. Spread by birds, it too pioneers on cleared land, but it also grows at the woodland edge and in the forest interior. Its ivory blossoms appear in late spring, far less showy than those of ornamental cherries.

I have two Oak trees, one each of the most common species in the Piedmont: Northern Red Oak and White Oak. Red Oaks have pointed lobes; White Oaks, rounded lobes. White Oaks produce sweet acorns much beloved by wildlife. Acorns from Red Oaks have more tannin and are usually cached for use after they have mellowed for awhile. Squirrels, Chipmunks, Blue Jays, and Wild Turkeys all rely on acorns as a staple food. (So did the extinct Passenger Pigeon and Carolina Parakeet.) These Oaks are the tallest, broadest trees on my property and may well be several hundred years old.

Uphill from my yard, as the soil becomes drier, Red Oak is joined by the closely related Black and Scarlet Oaks. These three are difficult to tell apart by their leaves, but Scarlet Oak has the brightest red fall foliage and the most deeply lobed leaves.

Three Hickories are common in the Piedmont: Pignut, in dry woods and open pastures; Bitternut, in moist woods and bottomland; and Mockernut, in both dry and moist woodland. This latter is the one I have, identified by its large terminal leaflet, aromatic leaves, and spherical nut. Shagbark Hickory, favored



*Pignut Hickory*

by the nursery trade for its ornamental bark, is rare in the wild in Maryland.

I had a lot of trouble recognizing Hickories until I realized that they have compound leaves. Each leaflet is a pointed oval (actually obovate, i.e., wider toward the tip end). Depending on the species, there will be 5-9 leaflets in pairs with a single one at the tip. Walnut trees have 11 or more leaflets. (Distinguishing Hickories from Ashes is trickier.) My final canopy tree is, of course, Black Walnut.

In the understory I found Sassafras, the original source of file' powder (used in gumbo) and root beer. Scratch its bark to release the root beer smell. Sassafras has brilliant orange to red fall foliage. Sun-loving Red Mulberry has occasional mitten-shaped leaves, similar to Sassafras, but crinkly and rough. Its tasty fruits are reputed to lure birds away from garden berries. (White Mulberry, imported from China to feed silkworms -- also imported -- has naturalized here. It can be identified by its shiny leaves.)

Black Haw (*Viburnum prunifolium*) grows as a small tree or multi-stemmed shrub in deep shade. Its leaves are almost round, many different sizes, and grow in pairs. I found it very difficult to identify until I noticed that its bark is even more scaly than Dogwood's, giving it an ancient look even when young. Dogwood also grows in fairly deep woods, but flowers best at the woodland edge.

Spicebush, by far the most common shrub in our Piedmont woodlands, was missing from my garden until birds replanted it. Clouds of tiny yellow flowers adorn it at the end of March, followed by red berries in fall. Smell a crushed leaf to see why it is called Spicebush.

My yard lacks Beech except for seedlings, which I pull. Beech trees have shallow, greedy roots and are almost as effective as Norway Maple in preventing anything from growing beneath them. Beech needs rich, moist soil, and tends to appear first at the bottom of a slope, gradually spreading uphill. When a tree falls in an Oak-Hickory forest, if young Beeches are present in the understorey they will grow rapidly

to canopy height. More Beeches, mostly from root sprouts, fill any gaps until a pure stand forms.

Two other trees missing from my yard are Persimmon and Black or Sour Gum, also called Tupelo. Both are medium to tall trees, the latter with brilliant red autumn color. There is a grove of several very tall Persimmons in David Force Park. Both species have checkered bark, more regular on Persimmon, and both are important wildlife food sources.

With a list of these trees in hand, you should be able to identify most of the trees growing wild near your home. Autumn is a great time to do it, because fall foliage color is another identifying feature. *Fall Color and Woodland Harvests*, by C. Ritchie Bell and Anne H. Lindsay, is a paperback full of helpful color plates. It contains every species I've mentioned. I hope you will find, as I have, that getting acquainted with your tree neighbors strengthens your own roots.

Louisa Thompson is a Master Gardener who writes a monthly column on native plants for the Howard County MG web site - [www.agr.wmd.edu/users/mg/natcont.htm](http://www.agr.wmd.edu/users/mg/natcont.htm)

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#### Sanctuary Gardens Continued from page 4

is the number one leisure activity in America; there are 38 million gardeners in America; 63 million people feed wild birds at home; 25 million birders take at least one trip a year; in 1996, Americans spent \$104 billion on wildlife-related recreation - by comparison, they spent \$81 billion on new cars. Sanctuary Gardens would have the potential to educate people from all demographic and social sectors of society about birds, plants, insects, amphibians, ecosystems, etc.

Proposed partners would include the American Bird Conservancy, The Nature Conservancy, native plant societies, state government, county government, the USDA, The American Birding Association, The Native Plant Conservation Initiative, The Organization for Bat Conservation, Partners in Flight, etc.

It is ironic that while we Americans struggle to save the rainforests, we overlook the slow,

undramatic loss of plant and animal biodiversity of our own American landscape. Where are the orioles, the flickers, the wood turtles, and the maidenhair ferns? Is this environmental racism or merely ignorance of the gradually disappearing natural heritage of the land? For whatever reasons, the window of opportunity to "Save the Environment" is rapidly shrinking. Thirty million more Americans in the next 25 years, scientific illiteracy in the next generation, and intense pressure on natural resources will take their toll on nature.

Thus the urgent need for Sanctuary Gardens - a place to develop a new ethic of environmentalism in America, a place to restore living systems and provide a showcase that empowers ordinary people with the ability to appreciate and nurture their own living landscapes, with their own hands, at work, school, or home.

Alan Kettler is an ecologist, gardener, and environmental designer. He welcomes any suggestions, comments, leads, etc., about creating Sanctuary Gardens at (703)548-8040.



Northern Red Oak - Chapman Forest

#### Associated Flora Continued from page 6

distributed, especially in alluvial valleys. Redbud is generally concentrated in the northern sector and reaches a very large size on upland slopes. Bladdernut also reaches great size in several upland colonies. Hornbeam is scattered in damp ground along streams, but is not particularly common.

Human disturbance of the site has been minimal, thus allowing the forest to mature and sensitive species to flourish. Steep, inaccessible ravines have prevented agriculture on the property. However, some sections were selectively logged in the past and light grazing probably occurred in upland areas. Despite this, the forest remains essentially unspoiled and free of pollution and invasive exotic plants (except along some logging roads and the Potomac shore).

In the 1930s and 40s, M. L. Fernald and other botanists explored a variety of areas on the Coastal Plain in southeastern Virginia and published their findings in issues of *Rhodora*. Of particular interest are Fernald's descriptions of the Shell-Marl Ravine Forests that thrived in this area. The

similarities between the descriptions of these woodlands and the Chapman site are remarkable: "...with the hope of finding on the Coastal Plain other stations for plants of the interior, we started for the rich slopes and gullies along the James near Claremont. On the way we were attracted by the lush vegetation on the bottomland of Powell's Creek, near Garysville. The inland *Sedum ternatum* here made extensive mats...Our best area, on this trip, however, was near Claremont. Here the fossiliferous sands and clays are near the surface and the banks of streams and the wooded gullies conspicuously display them. Calcareous springs and rills abound and freely available "marl" and the friable soil support rich forests of *Ulmus rubra*, *Asimina triloba*, *Juglans cinerea*, *Fraxinus americana*, *Tilia* sp., and many other trees and shrubs hardly characteristic of the Coastal Plain. On the wooded slopes *Hydrangea arborescens* abounds and *Menispermum canadense* twines with *Vitis vulpina*. The herbaceous flora is as rich as one could ask, with *Orchis spectabilis*, *Aplectrum hyemale*, *Cimicifuga racemosa*, *Dentaria laciniata*, *Heuchera americana*...and *Nemophila microcalyx*...We had all we could handle in the neighborhood of Claremont, where the highly fossiliferous sands and clays support as rich and luxuriant a vegetation as any on the Coastal Plain. The flora is, however, definitely not a typically Coastal Plain one; it is of the Blue Ridge and the Appalachian Upland..."

Today, Shell-Marl Ravine Forests are not common anywhere in the mid-Atlantic region. Many of the ones explored by Fernald unfortunately have since been heavily logged. In assessing natural communities in need of protection, the Virginia Department of Conservation and Recreation listed the state's few remaining Shell-Marl Ravine Forests as conservation priorities. The Chapman site is perhaps Maryland's best remaining example of this rare forest community.

The following terms are adapted from Allard, H.A. and Leonard, E.C. (*Castanea* 1962) and denote the distribution of species on site:

Abundant: Occurring usually in large numbers.

Common: Plentiful throughout the site.

Frequent: Evenly distributed over the site but not plentiful.

Infrequent: Occurring only occasionally.

Rare: Not often found owing to its scarcity throughout the site.

Local: Restricted to a particular area.

## Associated Flora

### Pteridophyta

#### Ophioglossaceae

*Botrychium virginianum* (L.) Sw. Rattlesnake Fern Rich, moist soil of ravines. Infrequent.

#### Polypodiaceae

*Adiantum pedatum* L. Maidenhair Fern Two small colonies in rich, moist soil along a streambank. Local.  
*Athyrium pycnocarpon* (Spreng.) Tidestr. Glade Fern Two large, extensive colonies in rich, moist soil of two ravines. Local.  
*Athyrium thelypteroides* (Michx.) Desv. Silvery Spleenwort Large colonies in rich, alluvial soil of stream valleys. Infrequent.  
*Phegopteris hexagonopteris* Fee Broad Beech Fern Scattered in rich soil on ravine slopes. Infrequent.  
*Polystichum acrostichoides* (Michx.) Schott Christmas Fern Scattered in rich soil on ravine slopes. Infrequent.

### Spermatophyta

#### Gramineae

*Hystrix patula* Moench Bottlebrush Grass On fossil cliffs and terrace above Potomac. Infrequent.  
*Poa sylvestris* Gray Woodland Bluegrass Rich, moist woodland. Rare.  
*Melica mutica* Walt. Narrow Melic Grass Scattered in rich soil of ravine slopes. Infrequent.

#### Cyperaceae

*Carex amphibola* Steud. Narrow-leaved Sedge Rich, moist soil. Infrequent.  
*Carex blanda* Dew. Charming Sedge Rich, moist soil. Infrequent.  
*Carex communis* Bailey Fibrous-rooted Sedge Fossil cliffs along Potomac. Local.  
*Carex gracillima* Schwein. Graceful Sedge Rich, moist soil. Rare.  
*Carex hirtifolia* Mackenz. Pubescent Sedge One large colony in sandy-loam on ravine slope. Local.  
*Carex hitchcockiana* Dew. Hitchcock's Sedge One colony of 24 plants in rich, moist soil on ravine slope. Local.  
*Carex jamesii* Schwein. James' Sedge Rich, moist soil of ravine slopes. Infrequent.  
*Carex laxiculmis* Schwein. Spreading Sedge Rich, moist soil. Infrequent.  
*Carex platyphylla* Carey Broad-leaved Sedge Scattered on fossil cliffs and ravine slopes. Infrequent.  
*Carex prasina* Wahlenb. Drooping Sedge Along stream edges. Rare.  
*Carex rosea* Schkuhr Rich, moist soil near streams. Infrequent.

#### Araceae

*Arisaema draconitum* L. Schott Green Dragon Small colonies in rich, moist soil. Rare.  
*Arisaema triphyllum* L. Schott Jack-in-the-Pulpit Rich, moist soil of stream valleys, slopes, and uplands. Abundant.

#### Liliaceae

*Erythronium americanum* Ker Trout Lily Rich, moist soil. Local.  
*Lilium canadense* L. Canada Lily Rich, moist soil. Local.  
*Trillium sessile* L. Toadshade Trillium Rich, moist soil of ravine slopes and uplands. Infrequent.

#### Orchidaceae

*Aplectrum hyemale* (Muhl.) Torr. Putty Root Orchid Rich, moist soil. Rare.  
*Orchis spectabilis* L. Showy Orchis Rich, moist soil of ravine slopes. Frequent.

#### Juglandaceae

*Carya cordiformis* (Wang.) K. Koch Bitternut Hickory Rich, moist soil of ravine slopes and uplands. Frequent.  
*Carya glabra* (Mill.) Pignut Hickory Rich soil of uplands. Rare.  
*Carya ovalis* (Wang.) Sarg. False Shagbark Hickory Rich soil of uplands. Rare.  
*Carya tomentosa* Nutt. Mockernut Hickory Rich soil of uplands. Rare.  
*Juglans nigra* L. Black Walnut Rich, moist soil. Infrequent.

### Corylaceae

- Carpinus caroliniana* Wait. Ironwood In alluvial soil of stream valleys. Infrequent.  
*Ostrya virginiana* (Mill.) K. Koch Hop Hornbeam On fossil cliffs and terrace above Potomac. Local.

### Fagaceae

- Fagus grandifolia* Ehrh. American Beech Rich, moist soil of ravine slopes and uplands. Frequent.  
*Quercus alba* L. White Oak Rich, moist soil of ravine slopes and uplands. Infrequent.  
*Quercus x Deami* Trel. Hybrid between *Q. alba* and *Q. muehlenbergii*. Rich, moist soil. Rare.  
*Quercus falcata* Michx. Spanish Oak Rich, moist soil of ravine slopes and uplands. Rare.  
*Quercus falcata* var. *pagodaefolia* Ell. Cherrybark Oak Rich, alluvial soil. Rare.  
*Quercus muehlenbergii* Engelm. Chinquapin Oak Rich, moist soil of ravine slopes and uplands. Frequent.  
*Quercus rubra* L. Red Oak Rich, moist soil of ravine slopes and uplands. Also on fossil cliffs. Frequent.

### Ulmaceae

- Celtis occidentalis* L. Hackberry Rich, moist soil of ravine slopes and uplands. Infrequent.  
*Ulmus rubra* Muhl. Slippery Elm Rich, moist soil of ravine slopes and uplands. Infrequent.

### Moraceae

- Morus rubra* L. Red Mulberry Rich, moist soil. Rare.

### Aristolochiaceae

- Aristolochia serpentaria* L. Virginia Snakeroot Rich, moist soil on a steep bank. Local.  
*Asarum canadense* L. Wild Ginger In alluvial soil of stream valleys. Infrequent.

### Polygonaceae

- Tovara virginiana* (L.) Raf. Virginia Knotweed In alluvial soil of stream valleys. Infrequent.

### Caryophyllaceae

- Stellaria pubera* Michx. Star Chickweed Rich, moist soil of ravine slopes. Rare.

### Ranunculaceae

- Anemone thalictroides* (L.) Spach Rue Anemone Rich, moist soil. Rare.  
*Aquilegia canadensis* L. Wild Columbine Fossil cliffs. Local.  
*Cimicifuga racemosa* L. Black Snakeroot Rich, moist soil of ravine slopes. Infrequent.  
*Ranunculus micranthus* Nutt. Rock Crowfoot Rich, moist soil of ravine slopes and uplands. Infrequent.  
*Ranunculus recurvatus* Poir. Hooked Crowfoot In and along small streams. Frequent.

### Berberidaceae

- Podophyllum peltatum* L. Mayapple Rich, moist soil of ravine slopes and uplands. Abundant.

### Menispermaceae

- Menispermum canadense* L. Canada Moonseed Rich, moist soil. Frequent

### Magnoliaceae

- Liriodendron tulipifera* L. Tulip Tree Rich, moist soil of ravine slopes and uplands. Frequent.

### Annonaceae

- Asimina triloba* (L.) Dunal Paw Paw Rich, moist soil of stream valleys, ravine slopes, and uplands. Abundant.

#### Lauraceae

*Lindera benzoin* L. Spicebush Rich, moist soil of stream valleys, ravine slopes, and uplands. Abundant.  
*Sassafras albidum* (Nutt.) Nees Sassafras In deep, sandy-loam of ravine bottoms and uplands. Infrequent.

#### Papaveraceae

*Dicentra cucullaria* L. Dutchman's Breeches Rich, moist soil of ravine slopes and uplands. Common.  
*Sanguinaria canadensis* L. Bloodroot Rich, moist soil of ravine slopes. Rare.

#### Cruciferae

*Arabis laevigata* (Muhl.) Poir. Smooth Rockcress On fossil cliffs and terrace above Potomac. Infrequent.  
*Cardamine pensylvanica* Muhl. Pennsylvania Bitter Cress Alluvial soil of a stream valley. Rare.  
*Dentaria heterophylla* Nutt. Rich, moist soil of a ravine slope. Local.  
*Dentaria laciniata* Muhl. Cut-leaved Toothwort Rich, moist soil of ravine slopes and uplands. Abundant.

#### Crassulaceae

*Sedum ternatum* Michx. Wild Stonecrop On fossil cliffs and along stream bank of ravine near Potomac. Local.

#### Saxifragaceae

*Heuchera americana* L. Alumroot On fossil cliffs along Potomac. Local.  
*Hydrangea arborescens* L. Wild Hydrangea On steep slopes above small streams. Rare.  
*Tiarella cordifolia* L. Foamflower On steep slopes above small streams. Rare.

#### Hamamelidaceae

*Liquidambar styraciflua* L. Sweetgum In alluvial soil and on ravine slopes. Infrequent.

#### Platanaceae

*Platanus occidentalis* L. Sycamore In alluvial soil of stream valleys. Infrequent.

#### Leguminosae

*Cercis canadensis* L. Redbud Rich, moist soil and sandy-loam of ravine slopes and uplands. Infrequent.

#### Oxalidaceae

*Oxalis violacea* L. Violet Wood Sorrel Rich soil of uplands. Local.

#### Aquifoliaceae

*Ilex opaca* Ait. American Holly Rich, moist soil of ravine slopes and uplands. Infrequent.

#### Staphyleaceae

*Staphylea trifolia* L. Bladdernut In colonies on ravine slopes and uplands. Local.

#### Vitaceae

*Vitis vulpina* L. Winter Grape Rich, moist soil of ravines and uplands. Infrequent.

#### Tiliaceae

*Tilia americana* L. Basswood On fossil cliffs, Potomac shoreline, and in rich, moist soil of ravines. Infrequent.

#### Violaceae

*Viola pensylvanica* Michx. Smooth Yellow Violet Rich, moist soil of ravine slopes. Infrequent.  
*Viola striata* Ait. Cream Violet Steep slopes above a small stream. Local.

Araliaceae

- Panax quinquefolius* L. Ginseng Rich, moist soil of ravines. Infrequent.  
*Panax trifolius* L. Dwarf Ginseng In alluvial soil of a stream valley. Local.

Umbelliferae

- Erigenia bulbosa* (Michx.) Nutt. Harbinger of Spring Rich, moist soil of ravines. Infrequent.  
*Osmorhiza claytoni* (Michx.) C.B. Clarke Sweet Cicely Rich, moist soil. Rare.  
*Sanicula gregaria* Bickn. Sanicle Rich, alluvial soil. Infrequent.  
*Sanicula marilandica* L. Maryland Sanicle Rich, moist soil of ravines. Rare.

Cornaceae

- Cornus florida* L. Flowering Dogwood Rich, moist soil and sandy-loam of ravines. Infrequent.

Ebenaceae

- Diospyros virginiana* L. Persimmon Rich, moist soil of ravines and uplands. Rare.

Oleaceae

- Fraxinus americana* L. White Ash Rich, moist soil of ravine slopes and uplands. Frequent.

Asclepiadaceae

- Matelea* sp. (Probably *M. carolinensis* (Jacq.) Schultes or *M. decipiens* (E.J. Alex.) Perry. Flowers not produced on old vines in years of field surveys.) Anglepod Rich, moist soil. Local.

Hydrophyllaceae

- Hydrophyllum virginianum* L. Virginia Waterleaf Rich, moist soil along a stream. Local.  
*Nemophila microcalyx* (Nutt.) Fisch. & Mey. Small-flowered Baby-blue eyes Rich, moist soil of ravines and sandy-loam of uplands. Locally abundant.

Boraginaceae

- Cynoglossum virginianum* L. Wild Comfrey Rich, moist soil of ravines. Rare.  
*Mertensia virginica* (L.) Pers. Virginia Bluebells Locally abundant in rich, moist soil. Infrequent.  
*Myosotis macrosperma* Engelm. Large-seeded Forget-me-not On slopes in rich, moist soil above a large stream valley. Rare.

Labiatae

- Collinsonia canadensis* L. Richweed Rich, moist soil of ravines. Infrequent.  
*Scutellaria nervosa* Pursh Veined Skullcap One small colony along a stream edge. Local.

Scrophulariaceae

- Scrophularia marilandica* L. Carpenter's Square Rich, moist soil. Rare.

Orobanchaceae

- Conopholis americana* (L.) Walfr. Cancer Root Rich, moist soil. Infrequent.

Rubiaceae

- Galium circaeans* Michx. Wild Licorice Rich, moist soil. Frequent.

Campanulaceae

- Campanula americana* L. Tall Bellflower Rich, moist soil. Local.

Compositae

- Aster laevis* L. Smooth Aster On fossil cliffs along Potomac. Local.