Claytonia

Newsletter of the John Clayton Chapter of the Virginia Native Plant Society

Volume 26, Number 1 *January–February 2010*

Environmental impact of coal-fired power plants is the topic at our Jan. 21 meeting

At our next meeting, Patti Gray will present information about plans for the proposed coal-fired power plant in nearby Surry County, its potential health effects, alternatives to use of coal, and what citizens can do to register their opinions.

Chris Moore, Science Advocate for the Chesapeake Bay Foundation's office in Hampton Roads, will discuss the effects of coal pollution on the health of the Bay. Chris also serves as Virginia's finfish fisheries scientist, and his work is currently focused on fisheries issues, oyster restoration efforts, grassroots development and coordination and water quality issues. He is also a U.S. Coast Licensed Captain and runs educational and restoration trips for volunteers, media and decision makers.

Location: **Yorktown Public Library on Rt. 17 and Battle Rd. in Yorktown**
Time: **7–9 pm**

From the President

At the last board meeting in November, the chapter budget for the next fiscal year was adopted. Our interim treasurer, Yorke Nelson, generated the figures based upon expenditures and income for the last fiscal year. Yorke had been keeping our books since May 2009, after Pat Gibbs was incapacitated. He finished at the end of October, and because of his other involvements, felt he could not continue as our elected Treasurer.

The books were audited by a well-qualified retired accountant who found no significant errors or omissions in our records, and so noted in a letter to me. I was unable to persuade her to take on the position of Treasurer, so, after some instruction, our finances are now in my hands until a Treasurer can be located.

Looking at the budget, projected income is larger than projected disbursements. Income is always uncertain, dependent upon dues and plant sales. While we paid three Nature Camp scholarships last year, we are budgeting for only two this year. The income for the Nature Camp scholarships represents a $200 donation for each scholarship by the Holly Society. In this economic climate a cautious budget is preferable than one that would overreach our financial structure.

Half of the 200 copies of the US Fish and Wildlife Service booklet *Native Plants for Wildlife Habitat and Conservation Landscaping* have been sold at $5.00 each. Our cost of $1.83 each has been recovered, and as the remainder are sold, income will be generated. Visitors at our table wherever the booklets are displayed are eager to purchase a copy.

The budget does not reflect two CDs which we are holding at Chesapeake Bank, totaling $10,087. It is always prudent to keep a reserve, which is represented by these funds.

Our Board of Directors is charged with the responsibility of disbursing funds generated by sales of plants, t-shirts and booklets, and deliberates carefully before authorizing expenses both within and without the line item budget. Our overall mission to encourage the use of native plants within habitats small and large guides our decisions. We are always mindful of the trust placed in this body by our members, and strive to perform our duties as carefully as possible.

Members are always welcome to join us at our board meetings; the next one is scheduled for January 7 at 7 pm at the York County Library on Rt. 17, where we will also meet on the first Thursday in March and May. The last three meetings in July, September and November will be at the Williamsburg Library on Scotland Street. Feel free to call me at 564-4494 for any further information.

John Clayton Chapter VNPS Budget

Fiscal year Nov. 2009–Oct. 2010 (Corrected 10/30/09)

Printing, Postage and Supplies	$1,100
Plant Sale Expenses	1,600
Education and Outreach	800
Student Sponsorships (Nature Camp, etc.)	1,400
Meeting Expenses	800
Audit	100
Donations & Miscellaneous	100
Total	$5,900

Income for 2008-2009 (rounded to dollars)

Plant Sale	$4,274
Dues	1,074
USFWS Booklets	479
Nature Camp Scholarships	400
Donations	324
Raffle Tickets	274
Miscellaneous	119
Checking Account Interest	5
CD Interest	318
Total	$7,267

Helen Hamilton

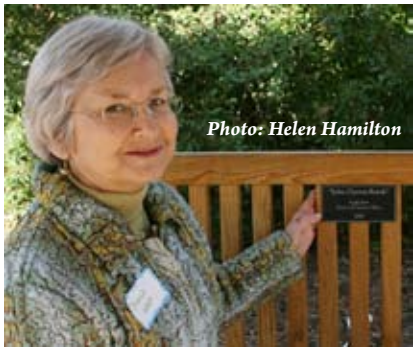
Nine new members!

We welcome new members Susan Barrick of Cobbs Creek, Nancy Carnegie of Williamsburg, Courtney Langley of Spring Grove, Christine Llewellyn of Williamsburg, Lisa, Keith and Collins Reagan of Toano, Betsy Shepard of Surry and Brenda Sullivan of Hampton.

New benches for the Botanical Garden

Donna and Stewart Ware recently donated 3 benches to the new pavilion at the Williamsburg Botanical Garden. Donna's mother, Mary I. Eggers, donated funds for the construction of the pavilion, while Cooke's Gardens installed a green roof and Al Brenick's landscaping company laid a paved floor. Our chapter is responsible for signage of the plants located throughout the Ellipse Garden in Freedom Park.

Helen Hamilton

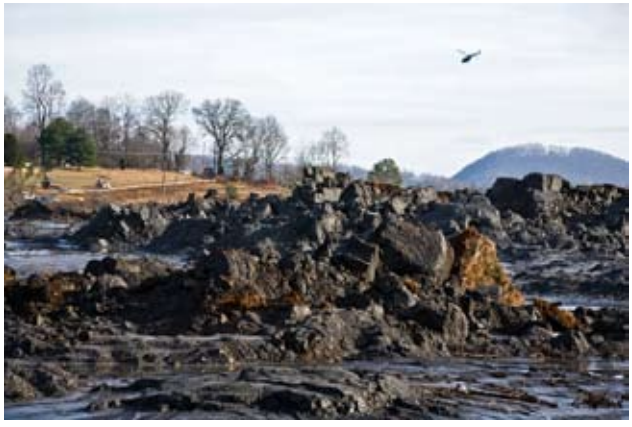


Donna Ware points to the plaque on a John Clayton Bench at the Botanical Garden Pavillion.

VNPS States Opposition to Coal Fired Power Plant

At the October Board Meeting of the Virginia Native Plant Society, the board voted unanimously in favor of passing a resolution entitled "A Resolution of Opposition to the proposed Construction of a Coal-Fired Power Plant in Dendron, Surry County, Virginia." The resolution stated many reasons for the opposition, such as the carbon dioxide emissions which are the leading cause of global climate change, emissions of sulfur dioxide, nitrogen oxide and mercury, and the need to substitute energy efficiency for new coal plant development.

However, it is the issue of "mountaintop removal" that has the most immediate and continuing effects on native plants, and on that issue the resolution clearly states: "Whereas, the proposed coal-fired plant would exacerbate mountaintop removal coal mining in Southwest Virginia, a practice that permanently destroys mountains, forests, and headwater streams—treasured and irreplaceable parts of Virginia's natural heritage that provide clean water to communities, harbor a diversity of plants and animals unequaled in other regions of the United States, and enrich the lives of residents and visitors alike." Mountaintop removal is the practice of clearing the mountaintop of hardwood forests, dynamiting as much as 600 feet of mountaintop to reach the coal seams, and then dumping the waste into nearby valleys and streams.



20-foot tall boulders of coal sludge, Tennessee. The small hillside used to be a a shoreline in this quiet cove. Photo by Jerry Greer (*jerrygreerphotography.com*)

A similar resolution was presented to our John Clayton Chapter by the Williamsburg Climate Action Network, and it was passed by our chapter in May 2009.

Coal power plant pollution is a leading contributor of carbon dioxide to the atmosphere, and a leading cause of climate change. While I am not aware of any scientific studies so far that specifically study the effects of power plant pollution on native plants, there are recent studies which document that climate change or global warming is affecting plants.

"Extinction Risk from Climate Change" is the title of an article published in the January 8, 2004 issue of *Nature*. That article reported that "global warming, projected to the year 2050, could sharply increase extinction probabilities for a sample of 1,103 species representing terrestrial regions from Mexico to Australia. If temperatures follow middle-of-the-road projections, the study suggests, about one-quarter of these species may disappear—a loss that would exceed that expected from habitat destruction."

In May 2009, NASA released a report on ozone and crops stating, "Climate change scenarios present numerous global problems for agriculture in this century, with the probability of more severe and extended droughts. But there's also the strong likelihood that as cars, factories and power plants both here and abroad continue to change the fundamental chemistry of the air, the altered atmosphere will negatively impact the biological processes of important crops."

If climate change accelerates as projected in the next decades, there will be an urgent need for studies of its effects on biodiversity in specific areas. **Patti Gray**

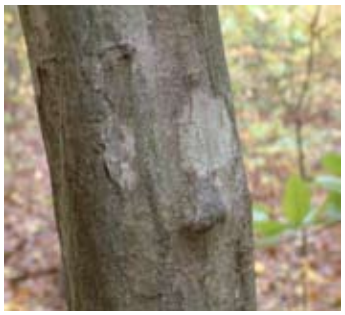
In praise of Ironwood

This article by Deanna High appeared in the Prince William Wildflower Society's November–December 2009 **Wild News**, *and is reprinted with permission.*

Thousands of leaves came down in last night's warm rain, as I discovered when walking the dog this morning. The last third of our long, winding driveway was thickly littered with dark golden hickory leaves.

The soft murmur of the rain all night long was punctuated every so often by the sharp crack! pop! of acorns ricocheting off the roof and skylights—noise enough to rouse one for a groggy second or two. Just a few weeks ago, though, I pretty much jumped every time an acorn rattled down. Late acorns—those coming down now—are fewer, but sound heavier—more serious projectiles. In any case, it is good to see acorns again after last year's dearth of them. The squirrels seem happier too, as they have not raided the ornamental corn hanging on the door as they did last year.

Dogwoods have turned intensely red and are holding on to leaves for now despite the rain; Ironwood *(Carpinus caroliniana)* leaves have turned lemony yellow in one delicate instance, and another specimen in deeper shade has leaves of a muted orangish-red. In terms of fall color (and perhaps in every way), *C. caroliniana* to my mind is superior to its closely related cousin, Hop hornbeam *(Ostrya virginiana)*, the latter not having much in the way of fall color, turning instead dull green and spotty—definitely not its best season, anyway. *C. caroliniana* is among our most beautiful understory trees: its smooth, muscular, fluted bark alone is worth the effort of getting one if you don't have one already growing naturally. Along with its bluish grey trunk and sinewy limbs white-splotched like a fawn's back, Ironwood's graceful habit all year round is reason #2 to cultivate and embrace this tree. Fountain shaped, its airy and delicate leaf in the summer creates a sun dappled shade umbrella ("A shade cool, but not dark," according to Donald Culross Peattie). In fall, the gentle chimes of its pale golden yellow or soft reddish-orange leaves strike a lovely chord in the landscape, especially when backdropped by dark hollies or evergreens.


A closeup look at Ironwood's bark


Ironwood in fall—it's the tree in the foreground in this photo.

A member of the Birch family, *Betulaceae*, Ironwood seldom grows beyond 30–50 feet (a height of 15–20 feet is more common) and is quite tolerant of shade, as its understory status suggests. I find it very effective as an "edge" tree, and easily can imagine it intermingled with taller trees in a mixed allee, drooping gracefully over the edge of a structure, patio, or, as in my case, embracing the driveway and simultaneously drawing the eye into the landscape. The beauty of the tree extends to other seasons as well: Rick Darke claims that Ironwood "is among the best small trees with four-season interest in the woodland landscape… [as its] horizontal layering in the branch tracery continues as a delight through winter snows." In spring, the leaves emerge a fresh chartreuse; summer foliage is dark green, accompanied by pendent fruit clusters.

Some common names for *Carpinus caroliniana* are more or less self-explanatory: **Ironwood**, because of the incredible density and strength of the wood (49 pounds per cubic foot, dry weight, it was used for machine gears or tool handles in the Colonial era, as well as for dishes and bowls, as it did not crack); **Blue beech** or **Water beech** from its leaves' similarity to American beech leaves, the color of its trunk, and its habitat; **Musclewood**, from the sinewy multiple trunks; **American hornbeam**, from a combining of "horn = toughness" and "beam = tree" (from the German *baum*).

Habitat Native to most of eastern U.S., Ironwood ranges from Nova Scotia to Minnesota and south to Florida and Texas, occurring typically in moist woods and on floodplains or as understory in bottomland mixed hardwood forests. Hardy to Zone 3, it is most likely flood tolerant. It has been found in mountains high as 900 feet (Great Smoky Mountains), but more frequently is found at altitudes of 490 ft or lower. Present in a variety of hardwood forest types, including White Oak-Black Oak-Northern Red Oak, it is associated throughout much of its range with flowering dogwood *(Cornus florida)*, eastern hophornbeam *(Ostrya virginiana)*, witch hazel *(Hamamelis virginiana)*, the serviceberries *(Amelanchier spp.)*, and speckled alder *(Alnus rugosa)*. Shrub species associated with Ironwood throughout its range include spicebush *(Lindera bezoin)*, arrowwood *(Viburnum dentatum)*, mapleleaf viburnum *(Viburnum acerifolium)*, and winterberry *(Ilex verticillata)*, among others. Ironwood is an important food of gray squirrels in southern bottom-land hardwoods, and its seeds, buds or catkins are eaten by a number of songbirds, ruffled grouse, ring-necked pheasants, bobwhite, turkey and others. Beaver use it heavily because of its availability in their habitat.

Culture: slow growing and said to be difficult to transplant, but incredibly hardy and not limited to understory status. Dirr points to its successful use as a decorative tree in a Georgia shopping mall and its ability to withstand pruning to serve as a hedge or screen—a more formal element—as used in the William Paca Gardens in Annapolis, probably in lieu of European hornbeam, which is often used for formal hedges and screens (Dumbarton Oaks). I have been to the Paca Gardens but do not remember the use of Ironwood; may be worth a trip to look again. University of Connecticut horticulture Web site (www.hort.uconn.edu) shows it in use as a landscape tree in an enclosed, raised bed next to a college building.

Propagation: seed, moist stratification; not easily propagated by cuttings. Species is monoecious, with male and female catkins borne separately on the same tree and appearing in the spring with the leaves. Fruit is an ovoid, ribbed, long nutlet, which matures in one season, changing from green to light greenish brown or brown on maturity.

Cultivars and Availability Dirr lists two cultivars, "Palisade" and "Pyramidalis", but neither seems to have much, if any, advantage over the species for Fall color and general beauty of form. Since it is not easy to propagate, it may be a challenge to locate a native tree nursery that sells *C. caroliniana*; a good place to start is the VNPS native nursery list, at www.vnps.org/growing.html. A quick Google search also revealed some tree nurseries in Pennsylvania listing Ironwood for sale.

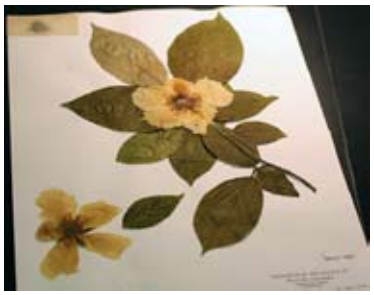
Deanna LaValle High

A peek at W&M's new Herbarium Nov. 21

Our host, Beth Chambers

Members and friends of John Clayton Chapter were treated to a "behind-the-scenes" look at the new location of the Herbarium at the College of William and Mary, led by Beth Chambers, Curator of the Herbarium. In attendance were Dr. Gus Hall, the first Director of the Herbarium, and Dr. Donna Ware, the first Curator of the Herbarium. Both Donna and Gus shared some of their experiences in setting up the collection. Most significant was the decision to arrange plant families alphabetically for ease in filing, especially when done by student assistants. Gus pointed out that a phylogenetic arrangement is a tree, and to construct linear patterns was very misleading. Older herbariums use this system, but most of the new facilities have arranged their collections alphabetically.

This was the first time Beth had met Gus Hall, W&M's first Herbarium Director.



An example of *Stewartia ovata* (mountain camellia) is preserved on a "sheet" in the Herbarium.

We saw a short video at the start of the tour, then went into the herbarium. The new location has the ability to expand to twice its size. Gus and Donna started with collections from the University of North Carolina, and were gratified to see

Alice Kopinitz examines a plant specimen under a stereomicroscope.

that the collection has expanded to over 75,000 sheets, about half of which are now in an electronic data base. Long-time Chapter member Pat Baldwin has added sheets to the collection, and volunteers spend many hours filing and entering data into the computer. Beth and student assistant Rachel Anderson had displays of herbaria sheets, with some microscopic specimens on view.

Participants also walked through Biology's greenhouse atop Millington Hall.

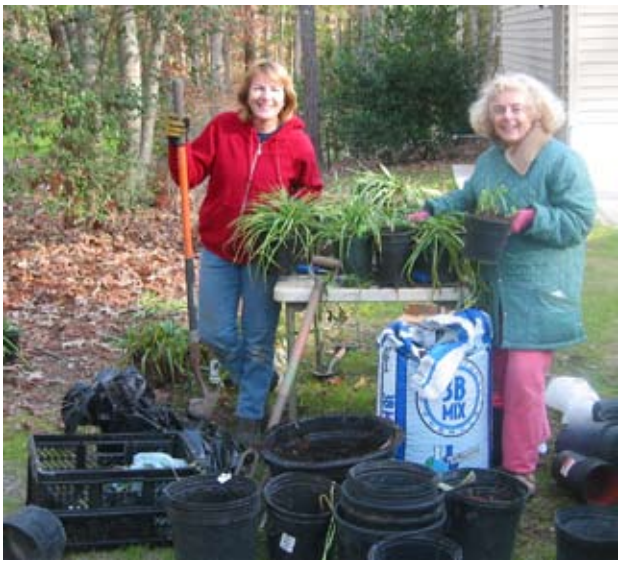
Thanks to Phillip Merritt for arranging this tour, and Beth and Rachel for their time and expertise! **Helen Hamilton**

Photos: Phillip Merritt. Go to www.howitgrows.com, where you will find *William & Mary Herbarium* listed under ***Resources***, to read his account of this visit and see lots more pictures.

Donation Jumpstarts 2010 Plant Sale

Early in December Barbara Abraham, Associate Professor of Biology at Hampton University, contacted me about the possibility of moving her native plant garden to another site on campus, as the university has other plans for the location. After some weeks of trying to find help to move the garden (this was December, after all!), the plan was cancelled. She contacted us, and offered the plants to anyone who would come for them, for it was a sad event for nature lovers at Hampton University, and she wanted the native plants to continue living and help butterflies grow somewhere.

Our vigorous plant sale co-chairs, Lucile Kossodo and Joan Etchberger, leaped into the situation, drove to Hampton and came back after a full morning of work with both cars stuffed to the ceiling with native plants, which they then potted until after dark by the light of the garage.



Joan and Lucile pause from their efforts for a photo.

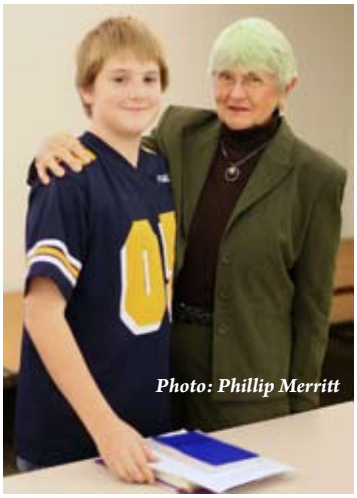
Lucile made another Friday morning trip in 32 degree weather, with a truck this time; thanks to big help from Barbara Abraham and Bill Morris, they were able to dig and fill the truck. She, Charlotte Boudreau, Patti Gray and Al Davidoff completed that potting job in one and a half days.

John Clayton Chapter now owns many, many pots of well-established native perennials, which should be ready for our plant sale in April. Imagine—the first potting party has already taken place!

Many, many thanks to Lucile and Joan for their enterprise, and to the assistant potters who worked on cold, windy and wet days. **Helen Hamilton**

Nature Camp

One of our scholarship recipients last year gave a short talk at the November meeting. Gavin Baker is a camper we can be proud of, as his presentation was very well done and enjoyed by everyone.



Helen Hamilton congratulates Gavin after his presentation.

About Ground Pine or Princess Pine

(From a article submitted to the Gloucester-Mathews *Gazette Journal* in December)

Ground Pine *(Dendrolycopodium obscurum)*, in a photo by Helen Hamilton

Often used in holiday decorations, Ground Pine somewhat resembles a tiny, thickly branched pine tree with oversized cones. A perennial which stays green all winter, the erect stems grow to 12 inches tall; the plant propagates from extensively rooting, deep-creeping rhizomes. The linear leaves are dense and sharp-pointed. Ground Pine is distinguished from other tree-like clubmosses by round branches and pine-like rather than the flattened and cedar-like branches of running cedar and other species.

Ground Pine reproduces by spores which are clustered in single, stalkless cones at the stem tips. The underground sexual phase which produces the sex cells alternates in the life cycle with the spore-producing plant, the above-ground form.

Found in moist sites in woods, thickets and clearings in nearly every county in Virginia and cool, northern forests in North America and Asia, Ground Pine prefers acid soil and cool temperatures. The plant tolerates low nutrients and can withstand a wide range of light conditions. In general, if temperatures become warmer and the forest becomes drier, this species would be expected to decrease.

The species of *Lycopodium*, often split into several genera, are seedless plants representing a division of the plant kingdom called club-mosses. In the Paleozoic era (about 300 million years ago), the ancestors of modern club-mosses reached gigantic proportions. These huge plants, some up to over 100 feet tall, formed a major part of the plant material that developed into coal beds.

The ground pine gets its name from its resemblance to a miniature coniferous tree. The genus name *Lycopodium* is from the Greek *lycos*, 'wolf', and *podus*, 'foot', after a fancied resemblance of club-moss plants to a wolf's paw.

Club-mosses have been boiled in water to make a medicinal tea that was cooled and used as an eye wash. At one time, fresh plants were put on the head to cure headaches and worn on clothing to ward off illness. **Helen Hamilton**

Is there a Treasurer in the house?

Our board members: Mary Turnbull, Secretary; Helen Hamilton, President and *Acting Treasurer*; Charlotte Boudreau and Bharati Lakshmi, Vice Presidents

This photo of our John Clayton Chapter elected officers has a large vacancy, that of Treasurer. Currently, your president is struggling with numbers, wishing someone would surface quickly to take over this job.

Our finances were reviewed by a retired CPA, and certified as "in good shape." With written ledger sheets, files of receipts and invoices for disbursements, the job is not difficult. Surely there is someone out there with a better head for numbers than I! **Please call me!**

Helen Hamilton 564-4494

Our conservation policies, Part 2

At Mary Hyde Berg's suggestion, we began in the July–August 2009 issue to lay out the conservation policies of the VNPS which were included in the September/October 2003 **Claytonia**. *These complete the list…*

- To promote a land ethic that encourages landowners to preserve as much habitat as possible on their land, especially natural areas and protective corridors and waysides that provide for the migration and dispersal of plants and animals.
- To offer activities and programs that educate the public about the importance of preserving Virginia's native habitats and flora and instill the values espoused by the VNPS.
- To urge and support voluntary action, legislation, and regulation aimed at the preservation of rare, threatened, and endangered species or habitats, the curbing of invasive species, and the protection and natural recovery of landscape diversity, through the agency of governments, corporations, organizations, and private citizens.
- To make officials and the public aware of specific strongholds of rare and interesting native plants, as through the VNPS Registry of outstanding plant sites, and to foster and aid efforts to preserve such strongholds by the use of all appropriate means.
- To cooperate whenever possible with appropriate officials and agencies at all levels of government, and with local, regional, and national organizations that share our concerns to fashion a unified conservation effort.

Membership Form for John Clayton Chapter, VNPS

(Place checks in the boxes below next to your selections.)

I am a ☐ **new member** of the John Clayton Chapter ☐ **renewing member** of the John Clayton Chapter

Name		
Address		
City	State	Zip
email	Phone	

Membership dues

☐ Individual ($30) ☐ Family ($40) ☐ Patron ($50) ☐ Sustaining ($100) ☐ Life ($500)

☐ Student ($15) ☐ Associate ($40) —for groups who designate one person as delegate

I wish to make an additional contribution in the amount of $ ☐ to John Clayton Chapter ☐ to VNPS

☐ This is a gift membership; please include a card with my name as donor.

I have ☐ time ☐ a little time ☐ no time to help with activities.

☐ I do not wish to be listed in a chapter directory.

Please Note: John Clayton Chapter does not distribute any of our membership information to other organizations. It is used only by the officers and chairpersons of our chapter.

Make your check payable to **VNPS** and mail to: VNPS Membership Chair
400 Blandy Farm Lane, Unit 2
Boyce, VA 22610

Happy New Year!

Calendar

Thursday, Jan 7	**7 pm: John Clayton Chapter Board Meeting.** (Members are encouraged to join us—see Page 1.) *Yorktown Public Library at Route 17 and Battle Road, Yorktown.*
Thursday, Jan 21	**7–9 pm: John Clayton Chapter's January meeting.** Speakers Chris Moore of the Chesapeake Bay Foundation and our own Patti Gray will talk about the environmental impact of mining and burning coal for electricity generation. *Yorktown Public Library at Route 17 and Battle Road, Yorktown.*
Saturday, Jan 23	**10 am: Longhill Swamp Skunk Brunch.** Join Phillip Merritt as he looks for the winter blooms of the skunk cabbage, the 2009 VNPS perennial of the year. Hot drinks and refreshments provided! The date may change depending on the progress of blooms, so *call 757/604-1026 or email claytonsnatives@yahoo.com to register and for updates.*

More photos from the Herbarium tour

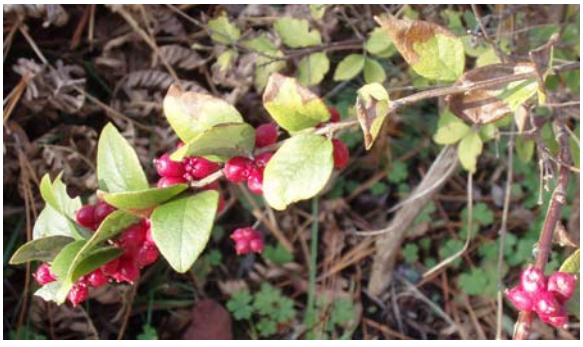
We were given a look into the cabinets where specimens are stored.

There were many specimen sheets laid out for our examination.

Rachael mounts a plant onto a sheet.

...and some Helen took in the Ellipse Garden in late November

Buckeye butterfly on *Dianthus*



Coralberry *(Symphoricarpos orbiculatus)* in fruit

Interesting square seed capsules of seedbox *(Ludwigia alternifolia)*, scattered throughout the Garden