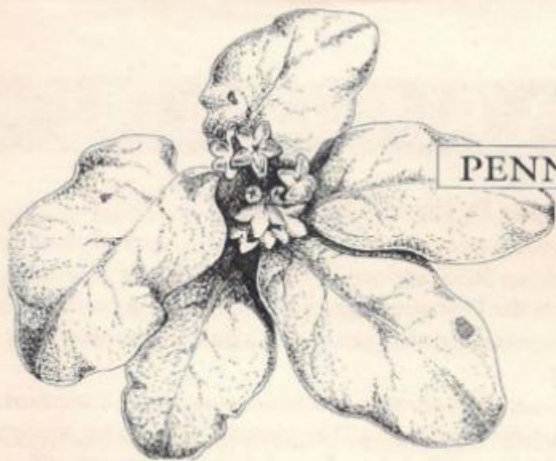




1. Flowering Dogwood, *Cornus florida*, is arguably the best known of our native dogwoods, thanks to its showy flowers. *Cornus florida* is a small tree which grows at a slow to moderate pace and typically reaches a maximum height of 15 to 30 feet; its somewhat horizontal branches often spread just as wide. Those showy flowers that it's named for are actually a cluster of four white (sometimes pinkish) bracts that surround the yellowish flower as seen in this close-up picture. A tree filled with these lovely flowers in the spring is quite a wonderful sight.

Cornus florida can grow in full sunlight, but typically occurs 'in the wild' as an understory or edge tree. It prefers moist though well-drained soil and generally will not do well in dry soil that lacks any shade. The flower display and, later, the amount of fruit, decreases with less and less sunlight.

The elliptical-shaped fruit forms in clusters and ripens toward the end of summer, turning a bright red. Stephen Kress of National Audubon states that 36 bird species eat the fruit, including Pileated Woodpeckers, Flickers, and thrushes. Squirrels and other mammals take their share as well. Autumn color is another attraction (for us

humans). Beautiful red to purple-red leaves combined with the spring flower show make this tree an excellent choice for a front yard.

Anthracoze is a fungal disease that affects Flowering Dogwood and certain other trees. The disease causes dark blotches on leaves and can also spread to twigs and branches and even kill Flowering Dogwood. As

you might expect, the fungus is more of a problem in wet years. Trees that receive little sunlight and/or don't benefit from much air circulation are at greatest risk of infection and serious damage.

I have observed many healthy-looking Flowering Dogwoods growing in towns in central Pennsylvania. If you invest in one, be sure to water it well during its early growing seasons and do your research on anthracnose.

The Lady Bird Johnson Wildflower Center provides a variety of pictures.

Dogwoods: A Bird's Eye View

Several species of Dogwoods are native to Pennsylvania. Most are trees or shrubs and all are assigned the Genus '*Cornus*'. Here are four native species whose fruit is attractive to birds.

— Jim Green

2. Gray Dogwood, *Cornus racemosa*, is a large native shrub that will do just fine in almost any garden. Unlike most of its *Cornus* 'cousins' which require moist soil, Gray Dogwood thrives on dry hill-sides as well as in swampy bottomlands. It is often found in fields abandoned to the wonders of nature.

continued on page 5



Flowering Dogwood



Gray Dogwood



Dear Members and Supporters,

At the start of this year PNPS announced that we were challenging ourselves to take the first steps toward building a stronger statewide organization. As part of that effort we held our 2014 annual meeting at Bowman's Hill Wildflower Preserve in Bucks County, this past September.

On behalf of the PNPS Board I would like to thank the staff and volunteers of Bowman's Hill Wildflower Preserve as well as the local members who supported this effort, especially Sharee Solow and Leslie Morris Smith who organized a box lunch for the attendees. Bowman's Hill Wildflower Preserve is wonderful resource in Eastern Pennsylvania and we were very pleased with the speakers, James Lendemer and Katie Ombalski, (highlights of their talks on page 4).

Unfortunately, our attendance was lower than hoped. It was a learning experience and the lessons we have learned will be applied as we move forward with our goal to have a greater statewide presence.

Our 2015 Annual Meeting has been scheduled for September 26th. It is being organized and hosted by the Penn State Master Gardeners of Adams County. They are already busy developing the program, which will include a bog garden workshop presented by Aquascapes Unlimited (aquascapesunlimited.com).

As we work with groups to form a more active statewide network for PNPS we want to maintain the strong core of our organization here in Central Pennsylvania. We will be holding a special member meeting this coming January to discuss the potential of forming a local chapter here in the central region where PNPS has been most active. This chapter would serve as a model for other groups around the state interested in forming chapters. For more information visit: panativeplantsociety.org.

In closing, I will call on you, our members, to continue to support the PNPS Board as we negotiate these explorations into chapter development. With your support we will succeed in advancing our mission and building a stronger statewide organization, able to think regionally and act locally.

Sincerely,

Jean Najjar

Jean Najjar, President

OFFICERS AND DIRECTORS — 2015

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NATIVE PLANT

2014 Upper Delaware BioBlast

PNPS was proud to support the 2014 Upper Delaware BioBlitz held on Saturday, June 28th and Sunday, June 29th at the confluence of the Delaware River and Ten Mile River on the Boy Scouts of America, Greater New York Councils, Ten Mile River Scout Camp.

Over 60 renowned scientists and amateur naturalists comprised the 9 teams surveying the site. They identified 884 unique species including 123 "first occurrences," species never before identified with the data publicly accessible, in Sullivan County. The site encompassed a 500-acre plus stretch of the camp from the Delaware River to and including Maul's Pond and Grassy Swamp Pond. The center of activities was at the head of Rock Lake on Cochetcon Turnpike.

PNPS member, Sarah Chamberlain led the Botany team for a second year in a row identifying 247 plants in the 24-hour period. Below are the 2014 results of species identified by team. To learn more about this project visit: upperdelawarebioblitz.com.

Team	Species
Aquatic Macroinvertebrates (Aquatic Insects, Mussels, Snails)	82
Birds	85
Botany (Plants)	247
Bryology (Mosses and Lichens and Worts)	154
Fish	25
Fungi (Mushrooms and Molds)	103
Herps (Reptiles and Amphibians)	24
Invertebrates (Terrestrial Insects, Worms, Snails)	145
Mammals	19
TOTAL: 884	

"Wings in the Park"

Saturday, July 19th marked the 7th annual Wings in Park outreach event at the Snetsinger Butterfly Garden in State College. Wings in the Park, a celebration of bees, butterflies and blossoms, is a free family friendly opportunity to educate nature enthusiasts of all ages about the importance of pollinators in our ecosystems and everyday lives.

Penn State Extension Master Gardeners of Centre County host the annual event, working in partnership with the Pennsylvania Native Plant Society to develop creative activities that highlight the diverse native plantings that enrich this three-acre, habitat. This



SOCIETY • 2014 YEAR IN REVIEW

year's events drew over 650 attendees, many of them young people participating in the Great Scavenger Hunt and the habitat exploration game. The "Wheel of Natives" game at the PNPS table, a stop on the hunt, is always a big hit with park visitors.

Join us next summer, on July 18th, for Wings in the Park 2015!

Central PA Native Plant Festival and Sale

Our 2014 Plant Festival and Sale was a great success! Over 500 people attended and lots of native plants found good homes. Highlights included our guest speakers:

"Barking up the Right Trees," with State College mayor Elizabeth Goreham who provided insight on some of her favorite natives—white oak; *Quercus alba*, American holly *Ilex opaca*; and black cherry, *Prunus serotina* — with bare-roots give-aways of *P. serotina*.

"Making a Difference with your Back Yard," with Katie Ombalski from ClearWater Conservancy who presented practical, easy-to-implement ideas on reducing lawn size and creating more habitat for birds, animals, and pollinators.

"Native Plant Gardens Walk," a Plant Festival favorite, lead by Dr. Eric Burkhart, Plant Science program director at Shaver's Creek Environmental Center, site of our Native Plant Festival and Sale.

Thanks to these individuals and all the other volunteers who helped to make the event run smoothly. We received many positive comments. We are well on our way with planning for next year's Festival at Shaver's Creek Environmental Center so mark your calendars for May 2, 2015.



PNPS President Jean Najjar awards a \$250 check to the Friends of Canoe Creek State Park to use in purchasing plants for their pollinator garden. Pictured (from left to right): Jean Najjar, Sarah Chamberlain, Secretary, Friends of Canoe Creek State Park, and Heidi Mullendore, Environmental Education Specialist, Canoe Creek State Park.

Pennsylvania Native Plant Society Demonstration Garden

Located within the larger Snetsinger Butterfly Garden (SBG) habitat is the **Pennsylvania Native Plant Society Demonstration Garden**, where members are taking action to protect pollinators by planting pollinator friendly Pennsylvania native perennials, trees and shrubs. Through their efforts, they are demonstrating to the commu-



Betsy Whitman working at the NPS Demonstration Garden

nity that they too can create pollinator friendly native plantings in their own back yard.

This past year, the PNPS Demonstration Garden was expanded to include a large stand of Short-toothed Mountain Mint (*Pycnanthemum muticum*).

Short-toothed mountain mint, growing to about three feet attracts a spectacular assortment of butterflies, moths, bees, and many beneficial insects. The profusion of tiny blossoms offered by these plants provides plenty of food throughout the summer months for a diverse array of pollinators. Soft velvety pale blue-green leaves frame the clustered white blossoms, which bloom progressively over many weeks.

Millbrook Marsh Nature Center Earth Day Birthday

PNPS had an information table and seedball throwing event at Millbrook Marsh's annual Earth Day celebration which draws approximately 500 visitors. Children (and some adults) made native plant seedballs to throw into a section of Millbrook's newly created pollinator garden. We're not sure how many seedballs actually got into the designated area but a fun time was had by all!



Children throwing native plant seedballs

Join PNPS on Facebook:

[facebook.com/groups/panativeplantsociety](https://www.facebook.com/groups/panativeplantsociety)

We are a closed group in order to minimize spam, but we welcome everyone who is interested in sharing and learning about native plants.

A Glimpse of the Presentations at our 2014 Annual Meeting

Pennsylvania's Lichens: The Forgotten Natives

James Lendemer
Post-Doctoral Researcher
New York Botanical Garden

In an era of cell phones, the internet, and next-day delivery it is easy to forget things when you're caught up in the rush of daily life. Usually these lapses are easily remedied with a spare set of keys or a second trip to the produce section. But what of once ubiquitous things that slowly disappear over time? They slowly recede from our collective memory and fade to distant nostalgia. That happened to the once mighty old-growth forests that blanketed the eastern United States and awed American naturalists like William Bartram and Henry Muhlenberg. Now it is happening to our lichens.

Our native lichens, more than 550 species in Pennsylvania with still more being discov-

ered, are going the way of the silent movie. Lichens are unique collaborations between fungi and algae. They form elegant colorful mosaics on trees, rocks, soil and really any substrate they can get a hold on. Rather than parasites or pests, these fungi are vital to keeping our ecosystems going, and they are strong indicators of forest health. Unfortunately what we see in much of Pennsylvania indicates things aren't going well. In our cities and suburbs we see plenty of old trees, but almost no lichens. In most of our forests, logged long ago, the trees and wildflowers have returned but the lichens have not. In fact, more than one fourth of Pennsylvania's lichens have been seen only once in modern times. More than half have been seen less than ten times.

So that means most species are rare but was this always the case? No, thanks to museum collections made in the early days of settlement we know with certainty that many

species were more widespread and abundant than they are now. For instance the lungwort lichen (*Lobaria pulmonaria*), an indicator of mature forests, was once found growing along the Schuylkill River outside of Philadelphia. It is not there now.

Rather than focusing on what has been lost though, this article should serve as a call to remember a forgotten treasure of Pennsylvania's native flora. We have lost many species, and many are rarer than they were before. But we should recognize and celebrate what remains, taking efforts to preserve it for future generations. If you have taken the time to read this article I ask only one thing: the next time you walk in your yard or drive to the grocery store pause and appreciate the lichens.

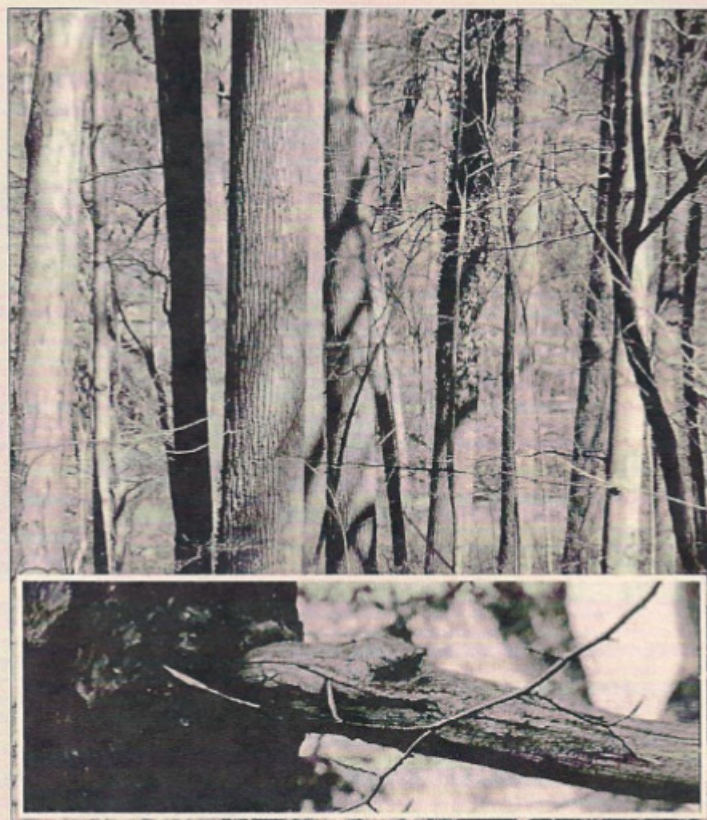
Go Native, Get Wild

Katie Ombalski
Conservation Biologist
Clearwater Conservancy

Conservation Biologist Katie Ombalski of Boalsburg, Pennsylvania gave a presentation titled "Go Native, Get Wild" and discussed

continued next page

Fairmount Park, Philadelphia



Great Craggy Mountains of North Carolina



Comparison of mature forest with healthy lichen cover and diversity on trees and branches in the Great Craggy Mountains of North Carolina (right) and that with low cover and diversity on trees and branches in Fairmount Park, Philadelphia (left).

how to enhance backyard wildlife habitat. Landscape-level habitat loss makes it more important than ever to provide habitat in your backyard. Many native species are often viewed as weeds when in fact they are important food sources for a wide diversity of native insects and other wildlife. Homeowners can use native plants in manicured or naturalized settings and, no matter how small your property, you can find room for native plants that will offer food or cover for many wildlife species. The speaker encouraged attendees to create habitat for "target wildlife species." For instance, a homeowner could plant milkweed to attract monarch butterflies. A larger-scale example would be to plant a variety of native perennials, shrubs and trees to create more complex habitat structure for targeted species of songbirds like robins, house wrens or cardinals, just to name a few.

Flowering Dogwood *continued from page 1*

Like many shrubs, *Cornus racemosa* almost always has multiple trunks and easily forms thickets that can be as wide as they are high. Maximum height is ten to sixteen feet tall. Great seasonal coloring is one reason to add this shrub to your property. In late spring, creamy white flower clusters (the Latin word 'racemosa' refers to clusters) signal the bountiful harvest yet to come. As summer grows old, groups of whitish berries ripen on brilliant red stems, and the green leaves turn an attractive purple-red. Those round berries are savored by woodpeckers, Catbirds, Robins, Bluebirds, and other species per Stephen Kress. In my yard, its berries ripen later than my other fruit-producers, extending the 'attraction period' to fruit-eating birds.

Gray Dogwood needs at least partial sunshine to succeed and can tolerate full sunlight. It exhibits moderate to fast growth. Although you can grow this wonderful shrub from seed, you may want to purchase plants that are a couple of years old to transplant onto your property.



Alternanthera leaf Dogwood

3. Alternanthera leaf Dogwood, *Cornus alternifolia*, is an attractive understory tree. Its leaves are *not* opposite each other on a branch as is true for the other dogwoods. Instead, the position of its leaves alternates from left to right along a branch. Yellow-white flower clusters in late spring adorn the rather horizontal branches, which give rise to its nickname of "Pagoda" Dogwood. Dark blue berries ripen on reddish stalks in July and August, and are favorites of dozens of bird species, including Eastern Bluebirds and Cedar Waxwings.

According to Donald Leopold, author of *Native Plants of the Northeast* (2005, Timber Press, Inc.), Alternanthera leaf Dogwood tolerates very cold weather better than Flowering Dogwood and is immune to anthracnose. However, in recent years, another disease that is not yet well-understood is impacting *Cornus alternifolia*. It needs moist soil to thrive, grows best in partial shade, and will usually attain a top height of 20 to 25 feet. Due to its pagoda-like branching style, it can grow as wide as it does tall if given plenty of room. If you add it to your garden, be sure to give it a thorough soaking at least once a week during its first couple of years, unless the soil is saturated.

4. Silky Dogwood, *Cornus amomum*, is a large shrub that is easy to grow and is one of our fastest growing native shrubs. Its whitish flowers in May or June are modest compared to those of Flowering Dogwood. Much more appealing, from an avian point of view, are the prolific metallic blue berries that ripen in August and September. Catbirds, Mockingbirds, Cardinals, and many other species munch on these delicacies.

Due to its rapid growth, I recommend buying Silky Dogwood as seedlings no more than 1 or 2 feet tall. It can also be propagated by soft-wood cuttings. It will do well in either full or partial sunlight and though it prefers moist soil, it has prospered in the moderately dry soil of my backyard. This is a shrub that will grow as much horizontally as it will vertically — up to 15 feet, so allow plenty of room for it to expand. For a hedge, place plants every 3 or 4 feet apart.

If you have the room and at least some moist soil in your yard, consider 3 or all 4 of these *Cornus* species to help attract birds to your property. Happy gardening!



Silky Dogwood

Get to Know: Native Ferns

Debra Grim

Deparia acrostichoides
(*Asplenium acrostichoides*, *Athyrium*
thelypteroides)

Silvery Spleenwort, Silvery Glade Fern



Family: Wood Fern Family
(Dryopteridaceae)

Fronds: Pinnate (once divided)-pinnatifid (not entirely divided). Blade broadest in middle, tapering at base and tip. Leaflets are squarish at the base and arranged somewhat alternately. Leaflet stalks have white hairs on the underside. Fronds bearing sori appear very similar to non-fertile fronds. Green hairy leaf stalk, dark at base. Veins pinnate, lateral veins simple or 1-forked.

Sori: Elongate, straight, in two rows, herringbone pattern. Nearly white at first, giving a silvery appearance.

Height: 3' / **Spread:** 1'

Form: Asymmetric clumps, loose tufts of ascending to widely spreading leaves. Forms dense clonal colonies.

Habitat: Damp woods, often on slopes.

Range: Across the northeastern U.S. and eastern Canada, west to Minnesota and Arkansas and south into northern Alabama.

Status: Uncommon. Often overlooked because of similarity to other ferns. Exploitably vulnerable in NY.

Other comments: Common name is based on the general silvery appearance of the undersurface of the blade when sori are plentiful.

Appears similar to *Athyrium filix-femina* (Lady Fern) but differs in having multi-cellular hairs on the leaves, straighter sori, and grooves on the upper surface of each leaflet's midrib that do not join the grooves on the main stalk of the compound leaves.

Host for caterpillars of moth *Stathmopoda aenea*.

Diplazium pycnocarpon
(*Athyrium pycnocarpon*)

Narrow-leaved Glade Fern, Narrow-leaved Spleenwort



Family: Wood Fern Family
(Dryopteridaceae)

Fronds: (leaves) Once divided. Arching sterile fronds (to 2.5' long) have 20–40 pairs of alternately arranged pinnae. More erect fertile fronds are taller and narrower with thinner pinnae than the sterile fronds. Sterile fronds appear in spring, but the fertile fronds develop as the summer progresses. Individual leaflets are longest (up to 4½" long) toward the middle of each leaf, becoming smaller toward the bottom and the top. Each leaflet has a central vein and numerous lateral veins that are forked or doubly forked. Petioles up to 1' long, purple at base. Central stalks are flattened and grooved along upper sides.

Sori: Separate fertile fronds. Sori arranged in a chevron-shaped pattern.

Height: 2–3' / **Spread:** 2–3'

Form: Circular clump of 5–6 fronds per rootstock.

Habitat: Moist woodlands in sheltered areas such as ravines and stream valleys.

Range: Quebec to Minnesota south to Louisiana and Georgia.

Status: Not common, but not rare. Considered endangered in NJ, CT and NH; threatened in MD and MN; exploitably vulnerable in NY.

Other comments: It is easy to distinguish from other ferns by its relatively large size, the simple-pinnate structure of its leaves, and its long slender leaflets with smooth margins.

The closest living relative is *D. flavoviride* in the tropical area between SE Asia and Australia.

Dryopteris goldieana or
Dryopteris goldiana

Goldie's Shield Fern, Goldie's Woodfern, Giant Wood Fern



Family: Wood Fern Family
(Dryopteridaceae)

Fronds: Pinnate (once divided)-pinnatifid (not entirely divided) to bi-pinnate (twice divided). Distinguished by its large size and backward-arching, oblong-triangular, dark green (sometimes golden-green) fronds which taper abruptly near the tip. Lower leaflets are usually obviously narrowed at the base. Petiole is about one-third of the length of the compound leaf; thick, straw-colored, and conspicuously scaly.

Sori: Each lobe or subleaflet typically has 6–8 pairs of circular sori along its midvein.

Height: 3–4' / **Spread:** 4–6'

Form: Asymmetric clump, upright habit

Habitat: Rich cool deciduous woods, seepage slopes.

Range: Across the northeastern U.S. and eastern Canada, south to Alabama and west to Missouri and Minnesota.

Status: Rare in CT and IL.

Other comments: Named for discoverer John Goldie (1793–1886).

Dryopteris species host caterpillars of *Herpetogramma theseusalis* (Translucent Cat), and caterpillars of *Stathmopoda elyella* (Iridescent Gold Moth).

Distinguished from similar species in its genus by the large size of its compound leaves, which tend to taper abruptly at their tips, rather than gradually.

Photo credit:

Diplazium pycnocarpon by Dorothy Long. Copyright © 2014 New England Wild Flower Society

The Broun Fernery at Hawk Mountain

Ryan Beltz

Autumn at Hawk Mountain is a time when visitors head to the lookouts and turn their eyes skyward to view the spectacle of the southward migration of northern raptors. On any given weekend in September, October, or November, one can witness the masses craning their necks from rocky perches to witness this time-honored tradition as more than 20,000 migrants stream past the North Lookout. Maurice Broun, Hawk Mountain's first Curator, was the first to catalogue this event in 1934 with binoculars and pen rather than with gun and lead. However, what many people don't realize as they scan the horizon is that Broun had another interest — one with more earthly roots.

Broun had a great love of botany and was particularly fond of ferns. So much so, that in 1938 Broun published the *Index to North American Ferns*. This 217-page text is a comprehensive guide to the fern and fern allies of the United States and beyond. More interestingly, in 1948, Broun published his seminal work *Hawks Aloft*, yet it is his *Index to North American Ferns* that gained him notoriety in the scientific community. In fact, historically, Broun has been referenced more in scientific literature concerning his knowledge on ferns than his knowledge of the migration.

Beyond his index, Broun left behind another legacy concerning his interest in ferns. Broun, himself, maintained a private fern garden near his Schaumbach's Tavern residence. It is with this sentiment in mind

that Hawk Mountain has rededicated itself to this special mission of Maurice Broun. In 2014, the Hawk Mountain Native Plant Garden received its first addition since its inception in 1987. The addition materialized in the form of a tribute garden to Maurice Broun. As anyone can guess, the theme behind this new garden is ferns.

To date, the Broun Fernery has received the care and attention of over 30 volunteers including local Boy Scouts, university botanists, and of course the in-house volunteer garden crew. The fernery boasts a new walkway, reflection area, and the company of many newly planted fern species. The eventual goal is for the Broun Fernery to house a representative of every fern species that calls Hawk Mountain its home. A few recent addi-



Above: Maurice Broun

Left: Ryan Beltz and Boy Scouts working on the fern garden



tions include Goldie's Fern, Silvery Splenwort, and the Narrow-leaved Glade Fern. So the next time you venture to the mountain, certainly scan the skies, but don't forget the fiddleheads at your feet.

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- ☐ New Membership
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Please make checks payable to:
PA Native Plant Society

Mail to:
PO Box 807, Boalsburg PA 16827

As a 501c-3 non-profit educational organization, PNPS welcomes your contributions in addition to, or instead of, regular membership. Ongoing memberships in PNPS coincide with the calendar year. Please make sure that you inform us of your current email address. Newsletters and event notices are sent electronically. Send email address and change of addresses to Correspondence@PaNativePlantSociety.org. Thank you!



Pennsylvania
PENNSYLVANIA NATIVE PLANT SOCIETY

PO Box 807 • Boalsburg PA 16827

2015 Calendar of Events

May 2

Central PA Native Plant Festival and Sale
Shavers Creek Environmental Center
<http://shaverscreek.org/public-programs-and-events/native-plant-fest>

May 16

Tour of Hawk Mountain's Native Plant Garden, and Plant Sale

June 3-6

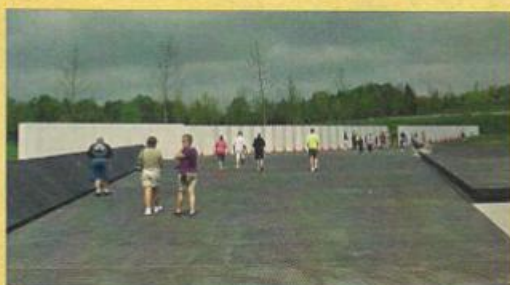
Native Plants In the Landscape
Conference at Millersville
Details at www.millersvillennativeplants.org

July 18

Wings in the Park
Tudek Park, State College
snetsingerbutterflygarden.org

Sept 26

PNPS Annual Meeting
Adams County



Flight 93 Memorial Visit

Next year we are planning a trip to Shenville — the Flight 93 memorial. Did you know the architect for the memorial stipulated that native plants be used in the landscaping? This includes a meadow and a reforestation project. The trip will highlight not only the amazing memorial, but also the landscaping. Stay tuned for details.

Photo: James Steakley

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PNPS Membership From



Marcy Gazda Cunkelman took this photo in her yard in Clarksburg, PA Conemaugh Twp, Indiana County. She says about *Cephalanthus occidentalis* (Common buttonbush):
"...this is the best attractor for EVERYTHING, including me, smelling it every time I walk by..."

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We are a closed group in order to minimize spam, but we welcome everyone who is interested in sharing and learning about native plants.