The purpose of the Delaware Native Plant Society (DNPS) is to participate in and encourage the preservation, conservation, restoration, and propagation of Delaware’s native plants and plant communities. The Society provides information to government officials, business people, educators, and the general public on the protection, management, and restoration of native plant ecosystems. The DNPS encourages the use of native plants in the landscape by homeowners, businesses, and local and state governments through an ongoing distribution of information and knowledge by various means that includes periodic publications, symposia, conferences, workshops, field trips, and a growing statewide membership organized by the DNPS.

The DNPS Vision

How Can I Get Involved?

The Delaware Native Plant Society is open to everyone ranging from the novice gardener to the professional botanist. One of the primary goals of the society is to involve as many individuals as possible.

The DNPS is working on some significant projects at this time. We have completed four reforestation projects in the Prime Hook area, at Blackbird Creek in New Castle County and Cedar Creek in Sussex County where we have installed tree tubes around newly sprouted seedlings, and are performing annual management of the sites. Help is also needed at our native plant nursery at the St. Jones Reserve with the monitoring and watering of plants along with many other nursery activities.

For more information, visit our website at www.delawarenativeplants.org. Our website was just recently upgraded, and has all the contact information for the Society, along with a section on native plants, volunteering, and links to other environmental and plant related organizations.

Natural Quotes

“There is something infinitely healing in the repeated refrains of nature—the assurance that dawn comes after night, and spring after the winter.”

Rachel Carson

A Burst Of New Growth
Welcome To Our Newest Members

January through March
Suzanne Anderson
NURSERY UPDATE

The nursery is now open for the 2008 growing season. But some big changes are coming soon...big, as in a new greenhouse big. A 10.5 foot by 16.5 foot big greenhouse to be exact. At our last bi-monthly meeting in March, we brought up the topic of how to utilize the Texaco settlement money that we received, and since much of that money was earmarked for nursery improvements, the first thought to all of us was upgrading our greenhouse. The next day, we began researching and decided to go with the same company that we got our first greenhouse from, Aaron Creek Farms (ACF, www.littlegreenhouses.com). They are an American company out of Virginia, and they design and build all their greenhouse in their factory in Virginia. We were so happy with our first structure from them, that it was a natural choice to seek them out once again. Our current greenhouse is their 8.5 x 14.0 “Little Greenhouse.” Our new one is the “Cross Country Standard.” Some of the best upgrades for us are the all aluminum frame (as opposed to PVC pipe), and the polycarbonate wall panels (as opposed to plastic film). We even hired a local contractor who specializes in sunroom installations to assemble it for us, which is a good thing because as we perused the 39-page installation manual, we quickly realized we would have been in over our head anyhow!

WEBSITE UPDATE

Our new website is up and running and it is really nice! We are very pleased with the work that Delaware.net did for us. The site is intended to be a source of current events and information for everyone and we have been making a concerted effort to keep things up-to-date. We’ve gotten a lot of good feedback so far, and we have gotten all the bugs worked out, so not only does it look great, but it’s working great from the technology side also. The adventure of keeping our domain name (www.delawarenativeplants.org) was at times a real hassle, but in the end was worth all the effort because we were able to keep 10 years worth of search engine optimization, which was a very important goal. From now on, all announcements for meetings, field trips, etc. will come initially in the form of an email as we have always done, but this email will be brief and you can go to the website for the important details. We are also looking for people to contribute articles to the blog. Anyone can write an article. It’s sort of our version of an open forum/discussion board for chat on native plant topics. Please contact Eric (from the Contact page of the site) if you would like to submit something.

NATIVES AND TRANSPLANTS

This column highlights Society members (both DE natives and DE transplants from other states) in an interview questionnaire style. We kicked off this new column in the Autumn 2007 issue. In this issue we are highlighting Nancy Davis who is the DNPS Secretary.

When I was asked to participate in the member profile column of the newsletter, I asked, “Why me? There certainly must be other members who have much more experience with native plants than I.” But, here I am.

Native plants have interested me since my childhood on a farm in Wisconsin. My mother had planted some natives in the yard while I was growing up, and I can remember my father teasing her by calling them weeds. It’s all in the eye of the beholder. Everything I have learned about native plants has been from books, lectures, trial and error, and listening to those who are much more knowledgeable on the subject. I enjoy attending classes and lectures to learn as much as possible.

After moving East, I lived in Newark, DE in the state’s piedmont area. Working several jobs and raising a daughter, I really didn’t do much gardening beyond a “blah” (you know, the usual plants the developers throw around a house) yard landscape, a few tomato plants, and a small herb garden. Upon retiring from the University of Delaware, I moved myself and my massage therapy business to Sussex County, Milton, to be specific.

After that move, I was living in a new home with nothing planted. That first spring was a mass of mud, and I decided to adopt a four-footed best friend, Shadow. We would drive to a grassy area so she could “go outside.” My yard was a blank canvas and I knew that the soil type and the weather were different from Newark. I started researching plants that would do well. I especially wanted plants that were native to Delaware. I have to admit there were times when I nearly gave up. Nurseries didn’t want to hear my requests for certain species, they wanted to sell what they had in stock. During this time I finally heard about the DNPS plant sale at the St. Jones Reserve, went to the plant sale, joined the Society, and as the saying goes, “the rest is history.”

I sat down with graph paper and plotted the entire lot, showing where the house and drive were located. Then I started planning which plants I wanted in my landscape. One of the best sources of information on native Delaware plants is published by DNPS, “Delaware Native Plants for Landscaping and..."
Rainwater harvesting systems can be as simple as directing gutters to a lidded garbage can or as complex as a concrete cistern, roof washer and filtration system. But whatever your application, rest assured that you'll be getting some of the purest – and cheapest – water around.

Why Rainwater?

Rainwater can be used for potable water (drinking, cooking, bathing) or nonpotable uses such as landscape irrigation, livestock watering and washing. Collecting and using rainwater has numerous benefits, ranging from improved water quality to reduced stress on underground aquifers.

"All water is rainwater," rainwater systems enthusiast and author Richard Heinichen is fond of saying. And indeed, he's right: All our water, whether sucked from an aquifer, river or well, or harvested from a rooftop, once was cloud-born.

But after it falls from the sky, rainwater percolates through the earth and rocks, where it picks up minerals and salts. As Heinichen points out, in many cases, this water also collects other contaminants such as industrial chemicals, pesticides and fecal coliform bacteria found in the soil. Captured before it hits the ground, rainwater is free of many pollutants that plague surface and underground water supplies and, according to the Texas Water Development Board, "almost always exceeds [the quality] of ground or surface water."

Rainwater typically has very low hardness levels, which reduces the use of soaps and detergents, and eliminates the need for a water softener. Fewer minerals also saves wear and tear on your plumbing fixtures.

Stored rainwater also is a good standby in times of emergencies such as power outages or during periods of extreme drought when wells dry up. In some areas where water supplies may not be available or dependable (or may be prohibitively expensive), collected rainwater is sometimes the least expensive option and can easily be less expensive than bottled water.

Capture the cloud juice

Rain barrels, the simplest rainwater collection devices, can save thousands of gallons of tap water each year, and save money and energy, too. (Lawn and garden watering typically consume 40 percent of total household water use in the summer.) Your plants also will love the warm, soft, chlorine-free rainwater. Ready-made rain barrels, most commonly made from UV-protected plastic and fitted with lids and screens, are available in capacities ranging from 50 to 65 gallons. With a spigot and carefully fit top and screen, wooden wine barrels and recycled food-grade plastic barrels also can be made into water catchment devices. Maryland's Green Building Program Web site provides step-by-step plans on making your own rain barrel with a recycled barrel, a vinyl hose, PVC couplings and a screen grate.

The best barrels are made of an opaque material (metal, wood or colored plastic) to prevent light transmission and inhibit algae and bacterial growth. To stop barrels from becoming mosquito breeding grounds, fasten a tight-fitting top to them, and screen the ends of downspouts leading into the barrels. As an added measure of protection, add mosquito dunks (which release Bacillus thuringiensis var. israelensis, a biological agent toxic to mosquito larvae) to your barrels (but make sure to label barrels "Not Potable Water"). Tahoma, Washington, resident Dan Borba, who has been harvesting rainwater since 1999, adds a tablespoon of vegetable oil to his barrels' stored rainwater. The oil, he says, coats the water's surface and kills larvae by depriving them of oxygen.

Home systems

For rainwater harvesting systems to be practical as the sole household water source, average annual rainfall of at least 24 inches is recommended, says Gail Vittori of the Center for Maximum Potential Building Systems in Austin, Texas. The entire eastern half of the United States, from the southern tip of Texas to northwestern Minnesota, meets this requirement, as does much of California, western Oregon and Washington, significant pockets throughout the Rocky Mountains and even areas in Arizona.

If you just want a system to offset your water use, a small system usually can be designed for a few thousand dollars. Ole and Maitri Ersson of Portland, Oregon, installed their 1,500-gallon rainwater system, which includes a plastic cistern, well pump, roof washer and UV sterilizer, for less than $1,500. A state-of-the-art rainwater harvesting system (adequately sized for a typical family and with sophisticated filtering and purification components) can cost $15,000 to $20,000.

The cost of your system depends on whether you have an appropriate roof surface or have to replace your roof, how big and what kind of cistern you choose, and what level of filtration and purity you require.

Conserve first

The average American uses about 100 gallons of water per day for showers, toilet flushing, clothes washing, cooking and lawn watering. By simply switching to low flush, 1.6-gallon toilets, low-flow showerheads and faucets, horizontal-axis washers and other water-saving appliances, you may be able to reduce your water use by half or more. Conserving

Continued on page 5
**Gardening With Native Plants**

**SHADBUSH (AMELANCHIER ARBOREA)**

**NATURAL HISTORY**

It’s spring and as winter tries to hold its icy grip there are subtle hints that the forest is again coming alive. Long before the bright green leaves of most woodland shrubs and trees signal the beginning of another growing season, the showy flowers of the shadbush unfold at the edge and in the understory of Delaware’s forests. The shadbush inhabits moist soils of hardwood forest east from the Mississippi River basin and south from southern Canada to northwest Florida. The flowers of the shadbush are pure white, fragrant, and borne in 2-4” long pendulous racemes in mid to late April. These extremely showy 1 inch flowers last only 4 to 7 days, but are an important source of nectar for the earliest small bees of spring, which serve as the primary pollinator. But the true wonder of this woodland native is in its fruit. Often overlooked, the reddish-purple fruit is a 1/4” - 1/3” edible pome that emerges in June. Edible berries resemble blueberries in size and color and are often used in jams, jellies and pies, but don’t delay in harvesting this woodland delight for at least 22-bird species relish the sweet nourishing fruit. Prominent feeders include veeries, hermit thrushes, gray catbirds, cedar waxwings and northern orioles, and if that’s not enough there are 11 or more mammal species that feed on the fruit bark and twigs of this natural pantry. The shadbush is a small tree often 15 to 25 feet tall with a trunk 4 to 6 inches in diameter, but may reach heights of 40 feet. It’s brilliant fall colors of orange to yellow to red are but one of many reasons to make space in your landscape for this wondrous shrub or small tree.

**WHERE TO GROW**

In general, the flowers and fall color of the shadbush show best against dark backgrounds or in dark corners. This species is ideal for naturalization, on building corners, or in small groves when space is plentiful. Shadbush appears to do best in sunny and dry sites, but will persist as the forest grows in around them. They are also found in smaller numbers in a wide variety of habitats, including wetter sites. Shadbush is easily grown in average, medium wet, well-drained soil in full sun to part shade and is tolerant of a somewhat wide range of soils. Shadbush may be pruned to maintain a single trunk for a specimen tree or allowed to bush out for a lower growing shrub. Root suckers are common, and if not removed, will result in a shrubby growth habit, which may be suitable for naturalizing along edges.

**PROPAGATION AND CARE**

Propagation of shadbush may be accomplished either by seed or rooted cuttings although difficulty in rooting cuttings has been noted. To propagate from seed, the seeds should be harvested as soon as the fruit is ripe in mid-summer. A cold stratification of 4 months at 40 degrees Fahrenheit is required for germination. Once seeds sprout in the spring, they should be kept evenly moist and protected from full sun by either a shade cloth or growing in a lightly shaded area. Once 4 leaves have developed, seedlings should be transplanted into individual pots and grown on for another year before planting in the landscape. Care should be taken to keep the seedlings well watered during the growing season until well established. They will continue to benefit from occasional watering during periods of drought.

**LORE**

Few plants have the variety of common names as *Amelanchier arborea* has. The name shadbush, or shadblow, was given because the blossoms appear about the time when the first shad begin their spawning runs up the rivers of the east coast. The name serviceberry stems from a time when the ground was so frozen that corpses were held unburied until the ground thawed sufficiently for digging. That was about the time when the shadbush blossoms appeared, and then the service could be held – hence the name serviceberry. Finally the name Juneberry denotes the time of year the berries appear on the plant. Regardless of the name *Amelanchier arborea*, is a great choice for your landscape!

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**Bob Edelen, DNPS Member**

**Natives And Transplants**

*Continued from page 2*

and Restoration.” It puts all the facts in one place so that I didn’t have to continually have multiple sources open on my desk. I think that my first purchase from DNPS was a fringe tree which has been growing and flowering ever since. Plants native to Delaware are my primary interest and I plant those that are beneficial to birds and bees. One of my frustrations is the fact that I do not have shade in my landscape and must concentrate on plants that can tolerate full sun.

In 2005 I completed the Cooperative Extension’s Master Gardener class and now volunteer by answering the helpline, working in the demonstration garden, helping tour children through the Woodland classroom in the spring, speaking to groups about the Native American Medicine Wheel,

*Continued on page 5*
Resources & Reviews


Authored by Henry Warren Art. A new arrangement of the 32 most easily grown species native to northeastern North America organized by habitat (woodland, wetland, or meadow) and flowering season will aid garden planning. Includes color photographs and more advice on using wildflowers in a garden.

Natives And Transplants
Continued from page 4

teaching about various ways to feed birds, and how to build a birdhouse, and even organized an herbal tea party. Last year, I was asked to chair a section of the garden that will be devoted to native plants. It is a work in progress. And, this year I was elected president of the Sussex County Master Gardeners.

My concern for our environment encompasses: global warming (why do people start their cars in the winter and leave them running for more than 5 minutes before getting in and going where they are going?); water pollution and waste of water; the number of people who do not recycle items such as paper, cardboard, glass, plastic, batteries, etc.; and the complete disregard for the land, trees, plants, and animals when developments are started. The habitats for our wildlife are being destroyed daily, and I don’t believe that the zoo is the answer so that humans can gaze at the animals.

The DNPS is slowly becoming known, but we do need all of our members to step up and volunteer. Each of us has some talent that could be utilized by the Society. Members need to talk about the Society to encourage people to “go native.” I am convinced that invasive plants are purchased and planted by uninformed gardeners who don’t realize the consequence of their actions.

I have been fortunate in visiting most of the states in the United States. It is so enjoyable meeting and talking with people from various parts of our country. I’ve enjoyed traveling and seeing plants that live in such diverse conditions. One of my goals is to “see the USA in my Chevrolet” (something like the guys did in the television series Route 66). I’d like to devote a couple of years to that goal. I also dream about section hiking the Appalachian Trail. By participating in the AVA scheduled walks within a three-hour drive of my home, I’ve covered hundreds of miles on foot, so what’s another two thousand. And I’ve recently started kayaking. Since I’m a retired “boater,” I enjoy being on the water, and kayak gets me closer to the wonders of the rivers and bays.

Finally, I enjoy researching my family history. I’ve met some extremely interesting people who have helped my find my ancestors. I have participated in Delaware’s Read Aloud program, read on tape for the Delaware Association of the Blind, am a member of a couple of service organizations, and regularly visit the Blood Bank to give platelets to be used by cancer patients. Basically, I keep myself pretty busy and my days filled with activities that I enjoy doing. But I’m usually willing to try something different.

Feature Article
Continued from page 3

water means that you will need less storage capacity, making it possible to buy a smaller (and more inexpensive) cistern. Similarly, if you live in an area that receives a steady supply of rainfall throughout the year, you may only need to size your cistern for a few weeks' worth of water.

But if you're in an area that experiences frequent drought conditions, or in an area with sporadic rainfall and a decidedly dry season, plan accordingly. Experts recommend planning for half your region's expected rainfall, while projecting twice as much water use.

Sizing your system

First, calculate your water usage. For residential systems, this includes toilet flushing, bathing, clothes washing, dishwashing and outdoor watering. With water-conserving plumbing fixtures and little or no outside watering, per-person usage can range from 55 to 75 gallons per day. If you're already connected to municipal water, study your monthly water bills to get your average household usage.

Next, determine rainwater availability in your area. A quick estimate of rainwater collection can be made based on your region's annual rainfall, but more thorough calculations will examine average, minimum and maximum rainfall on a per-month basis.

Actual collection calculations are made based on the available roof area (the projected horizontal area of the roof surface used for collection) and an "efficiency coefficient," which accounts for the fact that not all the rainwater falling on the roof gets into the cistern.

Catchment, if you can

The most common rain catchment system is a roof.

The best roofing material for rainwater catchment is uncoated stainless steel or factory-enamelled galvanized steel with a baked-enamel, certified lead-free finish.

Wood shakes, concrete or clay tiles, and asphalt shingles are more likely than other materials to support the growth of mold, algae, bacteria and moss, which can potentially contaminate water supplies. Asphalt roofing has a "collection efficiency" of about 85 percent while enamelled steel has a collection efficiency of more than 95 percent.

To be most effective, the roof should be fully exposed and away from overhanging tree branches. This reduces the risk of contamination from rotting leaves or droppings from birds and insects in the trees.

Continued on page 6
**Feature Article**

Continued from page 6

**Cistern**

The cistern is the single largest investment for most rainwater harvesting systems. A cistern can range from a recycled whiskey barrel under the eaves of a house (suitable for watering plants) to a large aboveground or buried tank that will hold 30,000 gallons or more.

**Route your rainwater**

Rainwater falling on the roof can be captured and conveyed to the cistern via gutters and downspouts constructed of roll-formed aluminum, galvanized steel, PVC (vinyl) or copper with 1/4-inch mesh screening and basket strainers.

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**Out Of The Wild & Into The Kitchen**

With the advent of spring we can look forward to a bumper crop of *Taraxacum officinale*, the common dandelion. Bill Pike, the source of the first two recipes, ran a full service tree care company for 20 years and is now the arborist for the City of Milford. In this job he devotes considerable energy to controlling the porcelain-berry (*Ampelopsis brevipedunculata*) infestation in and around Milford and is a very vocal advocate for a concerted effort to address porcelain-berry on a state-wide level. Bill is a native of Harrington and grew up on a farm in the area, hunting, trapping, fishing and eating wild plants—skills he gained from his parents who grew up during the Depression. Bill has provided the following recipes, for those of us who like fast food.

**Dandelion Greens**

Pick the greens in spring when tender, before the flowers appear or in the Autumn after the frost when the bitterness disappears. Wash the greens and steam or sauté plain or with chopped cooked bacon. Add salt, pepper and butter or sprinkle with vinegar or use all of these flavorings. Also delicious sautéed in olive oil with sliced onions and garlic.

**Dandelion Flower Fritters**

The yellow part of the flowers can also be sautéed, or steamed with other vegetables, or dipped in batter and fried into fritters.

**Dandelion Wine**

There were a number of talented winemakers in my family, and an equally exalted use of dandelion flowers is wine. But this is not for the fast food crowd as the process is somewhat labor intensive at the beginning and patience is a must. This recipe (with modification) is the one my grandfather used, making his wine in a stone crock under the kitchen sink, without benefit of any sophisticated equipment or much thought to quantities of ingredients. For approximately 1 1/2 gallons use:

- 10 cups dandelion petals (harvested on a warm sunny day)
- 1 lemon, un-peeled, seeded and thinly sliced (choose a lemon with relatively thin skin)
- 1 orange, unpeeled, seeded, thinly sliced (a thin skin is good, I have used a half grapefruit as well for an interesting citrus undertone)
- 1 gallon of boiling water
- 2-3 pounds of sugar (see Note below)
- 1 pound light or dark raisins (dark raisins make a darker wine)
- 1 1/4 ounce package of dry yeast (or 1 package of wine yeast if you prefer)

Wash flowers making certain that petals are insect-free. Measure the flowers (exact measurement not required) and place in a clean crock or glass or plastic container. Add the citrus fruits and the boiling water, stir the mixture, cover with a clean towel or a large piece of inexpensive muslin that has been washed a few times. This mixture should stand, undisturbed for 10 days. On day ten (or eleven if you are busy) strain the mixture through clean cheesecloth into a large clean container, removing all solids. Clean the original container and return the liquid to the original container. Add sugar and raisins and mix well. Then add the yeast and mix well again. Cover the container and leave for three or four days. Strain this mixture into very clean gallon jugs (glass is preferable but plastic works). Cork the containers loosely - or cover with multiple layers of cheese cloth. Leave the wine to ferment for at least or four months. You may check on the progress every few weeks, noting sedimentation build-up. At this point I begin to taste the wine every couple of weeks, being careful not to disturb the sediment. (Use a plastic tube to siphon off a bit for tasting.) When fermentation is complete (depend on your taste buds) and wine is clear, siphon into clean glass bottles. This wine should age for a minimum of six months after bottling. One year is better and each additional year adds to the glow, so make a double recipe.

Note: Three pounds of sugar provides a very sweet dessert wine. Plastic tubing can be obtained at wine suppliers or at aquarium supply stores. Keep all equipment very clean.
17-19 APRIL 2008—The Mt. Cuba Center trillium symposium. The purpose of this two-day conference (and optional third-day field trip) is to bring together academic and industry professionals, as well as expert gardeners, to address the science, conservation, and horticulture of trilliums of Eastern North America. Online, or mail/fax registration is required at http://trilliumsymposium2008.org/registration.html, or at http://www.mtcubacenter.org.

TUESDAY, 22 APRIL 2008—Gubernatorial Candidates’ Forum on Environmental Issues. Starts at 6 PM at Ashland Nature Center. This forum will give us the chance to hear environmental perspectives of the gubernatorial candidates. Call 302.239.2334 for more information, or on the web at http://www.delawarenatureorganization.org.

SATURDAY, 3 MAY 2008—Center For The Inland Bays native plant sale. From 9 AM to 1 PM at the James Farm Ecological Preserve. For more information call 302.226.8105 or on the web at http://www.inlandbays.org.

FRIDAY, 9 MAY 2008—Bowman’s Hill Wildflower Preserve spring native plant sale. For more information call 215.862.2924, or on the web at http://www.bhwp.org.

FRIDAY, 16 MAY 2008—Adkins Arboretum 2008 Spring Symposium - “Earth’s Green Mantle-How It Works”. From 8 AM to 4:30 PM. This symposium will provide an introduction to fundamental scientific principles that will help you understand our pressing conservation concerns. Keynote speakers are Dr. Doug Tallamy and Rick Darke. Call 410.634.2847 ext. 0 for more information, or on the web at http://www.adkinsarboretum.org.

SPRING AND SUMMER 2008—Continuing education at Mt. Cuba Center. This non-profit organization has a fantastic education department. They offer dozens of classes and symposia throughout the year. For more information call 302.239.4244, or on the web at http://www.mtcubacenter.org.

SPRING 2008—The U.S. National Arboretum, symposium on Prevention Strategies for Invasive Species. As invasive species continue to disrupt our native ecosystem, land managers must create and implement sound prevention strategies as a first line of defense. This symposium will outline current and potential tactics to prevent invasive species. Drawing from research and practical in-the-field experience, speakers will detail effective practices that private citizens and institutional land managers can use. All Day Event [Rescheduled from January 15th; new date to be announced soon]. On the web at http://www.usna.usda.gov/Education/events.html.

DNPS BI-MONTHLY MEETINGS FOR 2008—are currently scheduled for 15 January, 8 March, 20 May, 15 July, 16 September, 1 November (not a meeting, but the annual plant sale) and 18 November. All meetings are on the third Tuesday of every other month at 7 PM, unless otherwise noted. The meeting will be held in 3 locations around the state. The Kent County location is at the St. Jones Reserve, the New Castle County location is at the New Castle County Conservation District office at 2430 Old County Rd., Newark, DE, 19702, and the Sussex County location is at the Redden State Forest Education Center at 18074 Redden Forest Dr., Georgetown, DE, 19947. See our website for maps and directions to each meeting location.
Membership Application

DELAWARE native Plant Society

Member Information

Name:

Business Name or Organization:

Address:

City and Zip Code:

Telephone (home/work):

E-mail address:

Full-time Student $10.00
Individual $15.00
Family or Household $18.00
Contributing $50.00
Business $100.00
Lifetime $500.00
Donations are also welcome $________

Membership benefits include:
* The DNPS quarterly newsletter, The Turk’s Cap
* Native plant gardening and landscaping information
* Speakers, field trips, native plant nursery and sales

Total Amount Enclosed: $  

Make check payable to:
DE Native Plant Society
P.O. Box 369, Dover, DE  19903

COMPLIMENTARY COPY
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A Cooling Ocean Breeze

Welcome To Our Newest Members

April through June

Richard France
Mary Hall
Linda Lennon
Sheila & Abe Mensch
Vahan & Virginia Moushegian
Theresa Simonson
Annalisa Vapaa
**Thoughts From The Edge Of The Garden**

**NURSERY UPDATE**

The nursery is doing just fine so far this year. We’re a little behind schedule because of the construction of our greenhouse, but slowly catching up. We have some great plants growing and the misting/sprinkler system that was installed in the new greenhouse is doing it’s job perfectly. We have two paid “interns” right now are doing the bulk of the watering and repotting and, the nursery manager (Eric) is currently renovating our seed stratification bench to make it stronger and more durable. One of the things that we are really proud of is the wise, environmentally responsible use of materials from our old greenhouse and the packing material from the new greenhouse. Between dismantling the old greenhouse and the all the wooden packing crates that the new greenhouse came in, we had a huge pile of wood and PVC pipe to deal with. But the reduce, reuse, and recycle motto was put into action and between additional infrastructure made for the new greenhouse, constructing the new misting system, the current renovations of the seed stratification bench, and a few personal home projects, we used approximately 75% of that huge pile of material, and much of the remainder will be kept for future projects or recycled the best we can.

**WEBSITE UPDATE**

Our new website is up and running and it is really nice! We are very pleased with the work that Delaware.net did for us. The site is intended to be a source of current events and information for everyone and we have been making a concerted effort to keep things up-to-date. We’ve gotten a lot of good feedback so far, and we have gotten all the bugs worked out, so not only does it look great, but it’s working great from the technology side also. The adventure of keeping our domain name (www.delawarenativeplants.org) was at times a real hassle, but in the end was worth all the effort because we were able to keep 10 years worth of search engine optimization, which was a very important goal. From now on, all announcements for meetings, field trips, etc. will come initially in the form of an email as we have always done, but this email will be brief and you can go to the website for the important details. We are also looking for people to contribute articles to the blog. Anyone can write an article. It’s sort of our version of an open forum/discussion board for chat on native plant topics. Please contact Eric (from the Contact page of the site) if you would like to submit something.

**Natives And Transplants**

This column highlights Society members (both DE natives and DE transplants from other states) in an interview questionnaire style. We kicked off this new column in the Autumn 2007 issue. In this issue we are highlighting Eric Zuelke who is the DNPS Treasurer.

I originally was not involved with the DE Native Plant Society at all. I didn’t even go to the organizational meeting back in March of 1998! At the time I was deeply entrenched in the world of Zoology and I just didn’t even think about the significance of the flora of Delaware at the time. But then one day in March 1999, our current President, Bill McAvoy, came into work (I was working at the DE Natural Heritage Program at the time with our past and current presidents, Keith Clancy and Bill) and Bill asked me if I wanted to be the Editor of the native plant society newsletter. I said, “Sure, why not. Could be fun, and I know I’ll learn a thing or two.” And then it just snowballed from there to my present day roles as Editor, Treasurer, Nursery Manager, Membership Database Administrator, P.O. Box checker, Webmaster, and Chief Technology Officer. That’s how I got involved with the DNPS!

My involvement and interest with native plants was a concurrent learning experience along with my growing responsibilities in the Society. I began to realize that native plants were a lot more important than I ever really thought about. I am by no means a botanist, and I really depend on our President, Bill (who just happens to be the state Botanist for the DE Division of Fish and Wildlife for those of you who may not know) to ID plants for me, but I am learning a lot every year and know more now than I ever have about native plants and about how to grow them from seed.

I’ve taken a lot of what I learned about native Continued on page 5

**Resources & Reviews**

**Spring Wildflowers of New England**

Authored by Marilyn J. Dwelley. With hundreds of entries and nearly 500 illustrations, Spring Wildflowers of New England is a unique and indispensable guide. Each listing includes thorough text descriptions of the leaf and flower, as well as information on range, habitat, and growth habits. Latin names, common names, and family are also included. Best of all, each entry is complemented by Marilyn Dwelley's elegantly detailed watercolors.
**Feature Article**

**How do you define native?**

In the world of biology there is quite a bit of confusion and debate about the difference between what a native plant is. Just what are the definitions of three terms that biologist regularly use: native, indigenous, and endemic. In researching this, the variations of definitions are vast and very few people agree on exactly what certain terms mean. Below is a synopsis of definitions that were found to help you in your understanding of these terms. These definitions are confined to plants and animals.

**Endemic**

Endemic, in a broad sense, can mean "belonging" or "native to", "characteristic of", or "prevalent in" a particular geography, race, field, area, or environment; native to an area or scope.

Confined to a small geographic area, often an island.

Native to a particular region, restricted in area.

Plants which are of a certain geographic area and generally are confined to that place.

Organisms that are native and can be found ONLY in that location.

Endemic plants are special because they are found in only one location on the planet, and nowhere else.

**Indigenous**

In ecology, an indigenous species is an organism which is native to a given region or ecosystem.

A plant that is original to an area, not introduced; see also native plant.

Native to a particular country or region.

An indigenous species is not necessarily endemic. In biology and ecology, endemic means exclusively native to the biota of a specific place. An indigenous species may occur in more than one locale.

The terms endemic and indigenous do not mean that an organism necessarily originated or evolved where it is found.

Organisms that are native, but can be found elsewhere.

**Native**

Organisms brought to a location without the help of humans, such as by birds, wind, or the ocean currents.

A plant that grows wild in that area; see also indigenous plant and endemic.

Any plant that occurs and grows naturally in a specific region or locality.

This refers to a plant that grows in the same habitat in which they originated. These plants can be native to a continent, state, or region.

A plant that occurs naturally in the place where it evolved.

One definition given for the word “native” in Webster’s Dictionary is “growing, living, or produced originally in a certain place”. Using this definition, a native plant would be a plant that was originally growing in a certain place. Sounds easy enough. However, how do you classify “originally” and what “certain place” are we talking about? In actual practice, the definition of a native plant is somewhat amorphous and often depends largely on the interpretation of the person doing the defining. The most commonly used definition of a native plant is one that is considered to have been present in a specific region of the country, or often simply in the United States, prior to European settlement. The reason for considering immigration or migration of these settlers as the cut off date is that when settlers arrived, they brought their plants along with them. Note that this definition does not take into account the actions of Native Americans who also moved plants about freely. A major complication encountered when using this timeline when attempting to define a native plant is that we really do not have accurate records to tell us which plants were here and which were not before European colonization. However, we do have a good idea of which plants were specifically brought into the United States for various uses (and where they came from), as well as most of the weeds that came here by accident. Therefore, in practical application, a plant is usually considered to be native if we know that it was not brought into this country.

Other terms that may also be used when referring to a native plant are indigenous, aboriginal, or endemic.

The Delaware Native Plant Society subscribes to the definition of native as a plant that was here in Delaware prior to European colonization.

**Sources**

- http://www.wikipedia.com
- http://davesgarden.com/guides/terms/go/597/
- http://www.bestplaceshawaii.com/tips/big_kahuna/endemic_or_indigenous.html
- http://www.wildflower.org/expert/show.php?id=972  (a very good article with a comprehensive scope)
Gardening With Native Plants
Fringetree (Chionanthus virginicus)

NATURAL HISTORY
Back in the old days, when I was forced to work for a living and before my knees, hips and other joints succumbed to the unrelenting attacks of too many Yuengling Lagers, I enjoyed nothing more than stopping off after work to jog along the tow-path of the C&O Canal just north of Washington D.C. It was in the spring that these evening jaunts were most enjoyable with blooming flowers, young ducks and geese, beaver and singing birds, and it was here that I first became acquainted with Chionanthus virginicus or fringe tree. I marveled at what I thought must be the most beautiful tree in the world and believed it to be so exotic that it must certainly have been an alien species imported from Shangri La. Not only was every limb covered with massive blooms of large white feathery flowers but the intoxicating aroma seemed to reach out and beg me to slow from the blinding speed at which I passed (well maybe not blinding). It was only after retiring, moving to Delaware and joining the DNPS that I discovered this remarkable tree was native not only to Delaware but could be found growing in moist wooded areas, swamp borders, rocky bluffs, streams and outcroppings from eastern Texas and southern Missouri eastward to the Atlantic Coast and north to Ohio and Pennsylvania. Chionanthus virginicus gets its name from the Greek words chion and anthos, which means “snow flower” in reference to the white flowers and virginicus meaning “of Virginia”. Common names such as fringe tree, Grancy gray-beard, old man’s beard, grandaddy’s gray-beard, white ash, snow-drop tree or snowflower all relate to the large 5 to 10 inch drooping clusters of wispy white flowers that are an important nectar source for butterflies and moths. But, the exceptional flowers of the fringe tree are not the only feature that make it so desirable, for in the fall the female fringe tree is covered with drupes of ½ to ¾ inch fleshy purple berries that are among the favorite foods of many birds. The fringe tree is a large shrub or small tree that grows to about 20 ft high and 20 feet wide, with single or multiple trunks and a rounded crown. The pale-gray trunk with bands of white and the dark-green glossy foliage that is a larval host for the Rustic Sphinx adds to its striking beauty.

WHERE TO GROW
Fringe tree is certainly one of the most beautiful flowering trees found anywhere. It blooms in late spring shortly after native dogwoods. Tolerant of air pollution and remarkably free from diseases or insect pests it adapts well to urban settings. It is adaptable to a variety of light and soil conditions, and with proper care can be a significant addition to any landscape. The fringe tree prefers a moist, well-drained loamy soil but once established is tolerant of drought conditions and poorer soils.

It enjoys full sun to partial shade and does well in the filtered shade under large trees. To promote maximum fruit production, brighter conditions are more desirable. Frequently cultivated for its ornamental value, fringe tree may be used as a freestanding specimen, but for fruit production both male and female specimens are required. It can be used in groups of three or more and works well in a border with evergreen shrubs. It is spectacular in mass plantings. It is right at home in natural settings, surrounded by meadow or as part of a mixed grove. Fringe tree is very sensitive to allelopathy from some trees in the walnut family and should not be planted near walnut or hickories. The fringe tree seldom needs pruning, but may benefit from some branch thinning if an open habit is desired. Flowers are produced on 2nd year wood, so care must be taken when pruning to allow for the next year’s flowering. In its early years, the fringe tree is relatively slow growing, attaining perhaps 8 to 10 feet of growth in 10 years under good growing conditions. Initial flowering occurs on plants of 5 to 7 years of age so it is best to attain reasonably mature plants if possible.

PROPAGATION AND CARE
The fringe tree is reportedly difficult to propagate from cuttings so given time and patience propagation from seed is the most desirable means of propagation. Collect seeds as soon as ripened (from July to September) and clean seeds from pulp using maceration. Fringe tree seeds require double stratification so perhaps the best method of propagation is to plant the seeds in a cold frame immediately after collection and protect the seeds from rodent damage and disturbance for the following 18 months. Seedlings will sprout during their second spring. Alternatively stored seed can be pre-soaked for 2 - 3 hours in warm water and then given 3 months warm stratification followed by 3 months cold stratification. Germination can then be fairly rapid. Prick out the seedlings into individual pots when they are large enough to handle and grow them on in a greenhouse or cold frame. Plant them out into their permanent positions the following spring or early summer and protect from deer browsing.

LORE
Native Americans and European settlers commonly used the fringe tree to treat inflammations of the eye and mouth ulcers and a tea made from boiled bark was used as a as a topical treatment for skin irritations, cuts and infections. The bark has been used as the source of a tonic said to be a diuretic and a fever reducer and a tincture of the bark was once used internally in the treatment of disorders of the liver, jaundice, bilious headache, gallstones and rheumatism. Though all of this sounds great, we strongly recommend enjoying your fringe tree for its exceptional beauty and value to wildlife!

Bob Edelen, DNPS Member

Resources & Reviews

Appalachian Wildflowers

Authored by Thomas E. Hemmerly. This informative field guide covers the wildflowers of the entire Appalachian region. Using this book, readers will learn to identify this region's wildflowers by shape, color, family, and habitat. Contains 378 color plates.
NATIVES AND TRANSPLANTS
Continued from page 2

plants and my easy access to a whole slew of seedlings and put them to good use in my own backyard. I live in Dover in my own house with about a half acre of property. I originally let the entire back 1/3 of my backyard go wild into whatever it wanted to be, then with dozens of native trees, shrubs, and herbaceous species that I planted, I’ve groomed it into a very nice wildlife habitat. I also mulched over another 1/3 of my lawn to reduce the amount of grass I have to mow and groomed it into a nice spot for outdoor entertainment. I’ve been keeping an ongoing biological inventory in my yard, and so far I have recorded 107 species of animals since May of 1999.

Those of you who know me, have come to understand that I am a purist when it comes to natives. In our nursery, I have been able to maintain a purely native inventory. And on top of that, I try to keep the accession of all our plants to the Delmarva Peninsula. I occasionally accept plants and seeds from outside Delmarva, but mostly because there are some species that are very difficult to get a hold of and I have to take them from outside of our region to even have them in the first place. I think it’s important for organization that say they sell “native” plants to actually sell natives, and even endemics only.

Outside of the DNPS, I have had a couple of different careers. Currently, I own a computer repair business that I do out of my home (www.easyforyoucomputerservicing.com). Before that I was a Paramedic for Sussex Co. EMS. Before that I worked at DNREC in the Office of Information Technology, and before that I was a biologist for Fish and Wildlife/The Nature Conservancy.

People ask why I do so much for the Society… Over time it’s become a passion, and I believe our cause is an important one! Delaware was one of the last states to form a native plant society and we have a lot of catching up to do from that respect, but also the citizens of Delaware need to be educated about the flora of this state and how important it is to reduce the use of non-native plants, and associated chemicals in their backyards. It takes a little more patience and time to grow really nice native plants, and a little more effort to find the plants you want. But if people would just change their attitudes and lifestyles, even a little, we could do a great deal for the natural environment of this state. In the 9 years that I have been planting native plants in my yard, I have seen tremendous change in the animal life that uses my yard. So, it really does work! It just takes time and patience. The motto, “we can make a difference one yard at a time,” is real and it has been one my primary driving forces since I became our nursery manager.

Lonicera Sempervirens. One of my favorite DE native plants. My hummingbirds won’t even come to my feeder because of this plant that I grow on a trellis that’s attached to the back of my garden shed. Photo source: Me.

Resources & Reviews


Authored by Henry Warren Art. A new arrangement of the 32 most easily grown species native to northeastern North America organized by habitat (woodland, wetland, or meadow) and flowering season will aid garden planning. Includes color photographs and more advice on using wildflowers in a garden.
Dawn Webb, a native of Delaware, is the Director of the Delaware Department of Natural Resources and Environmental Control's DuPont Nature Center in Milford. In addition to her work at the Center, she is a licensed Wildlife Rehabilitator. Growing up on a dairy farm west of Dover, Dawn developed an ethic of living in harmony with the natural world from her grandfather. She is well-known in Delaware for her mastery of cooking with wild game and wild plants. Dawn is currently compiling a cookbook devoted to wild game and wild plants and she had generously shared her instructions for making acorn flour and included a quick bread recipe using acorn flour. If you ever visit her at the nature center (directions are on DNREC’s website), she may just have a slice of acorn bread waiting for you.

ACORNS…An authentic American food?

Of course! Generations of Native American Indians would gather pounds of acorns every fall as they ripened. They would bury the acorns in the swamp returning to them the following year. This would remove the tannic acids which makes them bitter. The acorns were dried and ground into flour, then baked into bread.

Processing acorns for food consumption is much easier today. It can be done right in your own kitchen. Boiling shelled acorns is the quickest method to remove the tannin. The water must be changed every time it becomes brown. Continue boiling until you taste no bitterness. There is one drawback to this method; boiling removes beneficial oils and causes a loss of flavor.

Here is the method I use:
- Place shelled acorns in a crock
- Pour boiling water over acorns; enough to completely cover
- Let stand for 24 hours
- Repeat process for a third day

This cold “leaching” method completely removes the tannic acids and produces flavorful flour.

Dry acorns completely; about a week
- Grind using a hand mill, stone grinder, or heavy duty blender.

Acorn flour can be used in bread, muffins, pancakes, and stews. It has a nutty flavor.

This is one of my favorite acorn recipes. I enjoy a slice of this bread toasted, with homemade Blackberry jelly.

Ingredients
- 1 cup acorn flour
- ½ cup whole wheat flour
- ½ cup unbleached flour
- 3 teaspoons baking powder
- 1 teaspoon salt
- 3 Tablespoons honey
- 1 egg
- 1 cup milk
- 3 Tablespoons oil

Directions
Mix ingredients well. Form loaf and place in greased loaf pan. Bake 45 minutes or longer at 300°.

In the wild, acorns provide food for squirrels, chipmunks, wild turkey, pintail ducks and other waterfowl, quail and deer. There are more than 200 species of oak trees. They can live for 200 years. Acorns are not nuts, they are a fruit. The wood of an oak tree is used for furniture and flooring because it is hard and durable.

If you have a recipe you would like to share, please contact Flavia Rutkosky at 302.653.9152, ext. 111.
TUESDAY, 19 AUGUST 2008—The Delaware Chapter of the Sierra Club is sponsoring a gubernatorial candidate’s environmental forum at 6:30 PM. The forum will be held in the auditorium of the Jewish Community Center on Garden of Eden Road in Wilmington. All candidates participating in the primary election for the governor’s race have been invited to participate and will answer a variety of questions relating to Delaware’s environmental future. See http://delaware.sierraclub.org for more information.

SEPTEMBER 2008—Bowman’s Hill Wildflower Preserve fall plant sale. From 10 AM to 4 PM for a week in September. Contact them at 215.862.2924, or on the web at http://www.bhwp.org/seed_catalog/plantsale.htm for more information.

SATURDAY, 6 SEPTEMBER 2008—Adkins Arboretum fall native plant sale. From 9 AM to 1 PM. Contact the arboretum at 410.634.2847, or on the web at http://www.adkinsarboretum.org/sales.html for more information.

4-5 OCTOBER 2008—Harvest Moon Festival at Coverdale Farm. For more information call 302.239.2334, or on the web at http://www.delawarenaturestociety.org.

SUMMER AND AUTUMN 2008—Continuing education at Mt. Cuba Center. This non-profit organization has a fantastic education department. They offer dozens of classes and symposia throughout the year. For more information call 302.239.4244, or on the web at http://www.mtcubacenter.org.

DNPS Bi-monthly meetings for 2008—are currently scheduled for 15 January, 8 March, 20 May, 15 July, 16 September (not a meeting, but the annual plant sale) and 18 November. All meetings are on the third Tuesday of every other month at 7 PM, unless otherwise noted. The meeting will be held in 3 locations around the state. The Kent County location is at the St. Jones Reserve, the New Castle County location is at the New Castle County Conservation District office at 2430 Old County Rd., Newark, DE, 19702, and the Sussex County location is at the Redden State Forest Education Center at 18074 Redden Forest Dr., Georgetown, DE, 19947. See our website for maps and directions to each meeting location. See out website (www.delawarenativeplants.org) for more details, and for details on upcoming field trips.
Membership Application

DELWARE native Plant Society

Member Information

Name:

__________________________________________________________

Business Name or Organization:

__________________________________________________________

Address:

__________________________________________________________

City and Zip Code:

__________________________________________________________

Telephone (home/work):

__________________________________________________________

E-mail address:

__________________________________________________________

Delaware native Plant Society

"Full-time Student  $10.00
Individual $15.00
Family or Household $18.00
Contributing $50.00
Business $100.00
Lifetime $500.00
Donations are also welcome $________

Membership benefits include:
* The DNPS quarterly newsletter, The Turk’s Cap
* Native plant gardening and landscaping information
* Speakers, field trips, native plant nursery and sales

Total Amount Enclosed: $

Make check payable to:
DE Native Plant Society
P.O. Box 369, Dover, DE  19903

DELWARE NATIVE PLANT SOCIETY
P.O. BOX 369
DOVER, DELAWARE 19903

COMPLIMENTARY COPY
The purpose of the Delaware Native Plant Society (DNPS) is to participate in and encourage the preservation, conservation, restoration, and propagation of Delaware’s native plants and plant communities. The Society provides information to government officials, business people, educators, and the general public on the protection, management, and restoration of native plant ecosystems. The DNPS encourages the use of native plants in the landscape by homeowners, businesses, and local and state governments through an on-going distribution of information and knowledge by various means that includes periodic publications, symposia, conferences, workshops, field trips, and a growing statewide membership organized by the DNPS.

How Can I Get Involved?

The Delaware Native Plant Society is open to everyone ranging from the novice gardener to the professional botanist. One of the primary goals of the society is to involve as many individuals as possible.

The DNPS is working on some significant projects at this time. We have completed four reforestation projects in the Prime Hook area, at Blackbird Creek in New Castle County and Cedar Creek in Sussex County where we have installed tree tubes around newly sprouted seedlings, and are performing annual management of the sites. Help is also needed at our native plant nursery at the St. Jones Reserve with the monitoring and watering of plants along with many other nursery activities.

For more information, visit our website at www.delawarenativeplants.org. Our website was just recently upgraded, and has all the contact information for the Society, along with a section on native plants, volunteering, and links to other environmental and plant related organizations.

New Members
July through September
- Evelyn Burnam
- Susan Fisher
- L. K. Geiger
- Daniel Hudson
- Andrea Illig
- Ingrid Jackoway
- Sarah Knight
- Pat McElwee
- Bill & Joyce Monaghan
- Ron & Patti Roman
- Robin Snow
NURSERY UPDATE
The nursery is gearing for our annual plant sale, held on the first Saturday of every November. We’ve caught up with the repotting and general grounds maintenance that we got behind on from the construction of the new greenhouse and things are looking good. We have some great plants growing and the misting/sprinkler system that was installed in the new greenhouse is doing it’s job perfectly. Our repotting for the year is completed and we have some pretty nice plants. We’ll soon be going on a trip to purchase some more plants to bulk up our inventory a little for the sale. Our seed stratification bench got a make over to make it stronger and more durable and this year we are determined to make it absolutely squirrel and mouse proof! We hope everyone can make it out to the plant sale.

WEBSITE UPDATE
Our website is just humming along and being as informative as can be. Eric has gotten some additional training on some of the more details aspects of ftp use from the folks at Delaware.net, so his ability to update the site is even better now. Our original intention for the site was to be a repository for all the information that anyone would want to know about the Society, and it is well on its way to being just that.

OFFICERS UPDATE
Our Annual Meeting on September 16th was well attended, and we had some great food. Our President, Bill McAvoy gave a very interesting presentation on his recent vacation to Florida and showed up some photos of some truly spectacular plants. Lynne Staube, who works with the Landowner Incentive Program (DNREC, Div. of Fish and Wildlife) gave a presentation on the program and all of its benefits to landowners.

We also elected new officers. The only change we had was the position of Vice-President.

President: William McAvoy
Vice-President: John Harrod
Treasurer: Eric Zuelke
Secretary: Nancy Davis

There is a list of current and past officers on our website if you’re interested in the history of these positions. It still isn’t complete yet, but will be finished this winter.

Gardening with Native Plants
Continued from page 4

purposes, thus spreading the plant far beyond its native range. Leaves are spine tipped with numerous long, curly, fibrous threads peeling back along the margins. Fibers were used to make rope, rough textiles, and paint brushes. The thickened root, a rhizome, was beaten into a lathery pulp, to be used for soap and shampoo. American Indians used the root in salves and poultices for sores, skin diseases and sprains. Pounded roots were put in water to stupefy corralled fish so they would float to the surface for easy harvesting. The flowers of many yucca species are edible and used raw in salads or cooked. Some are said to taste like Belgian endive, others complain of some bitterness – like hot peppers, I guess that’s a matter of personal preferences – personally, I’d rather leave the flowers to the moths! Enjoy your yucca!!

Bob Edelen, DNPS Member


Jeff McMillian. Courtesy of Almost Eden. United States, LA.

Resources & Reviews


Authored by Samuel Thayer. A practical guide to all aspects of edible wild plants: finding and identifying them, their seasons of harvest, and their methods of collection and preparation. Each plant is discussed in great detail and accompanied by excellent color photographs. Includes an index, illustrated glossary, bibliography, and harvest calendar. The perfect guide for all experience levels.
Edible Wild Plants: A North American Field Guide

Authored by Thomas Elias, and Peter Dykeman. Season-by-season guide to identification, harvest, and preparation of more than 200 common edible plants to be found in the wild. Includes jelly, jam, and pie recipes, a seasonal key to plants, and a chart listing nutritional contents.

Feature Article
SUN GROWN COFFEE ALTERNATIVES

Coffee plants (Coffea spp.) but particularly Coffea arabica is a plant that is native to Ethiopia and Yemen, but because of its popularity, it was spread throughout the world and is grown in many countries now. However, conventional, "modern" coffee plantations are replacing wildlife habitat at an alarming rate, and the population of songbirds across North and South America is in significant decline. "Shade grown" coffee, the traditional method of farming, is a promising alternative.

Traditionally, all coffee was shade grown. Most varieties of coffee are naturally intolerant of direct sunlight, and prefer a canopy of sun-filtering shade trees. The trees not only protect the coffee from direct sun, they also mulch the soil with their fallen leaves which helps retain soil moisture. The nitrogen-fixing shade trees enhance the soil, and also provide habitat for birds. The birds in turn provide natural insect control with their constant foraging. This sustainable method of farming uses little or no chemical fertilizers, pesticides or herbicides.

In 1972, new hybrid varieties of coffee were developed to help increase production of the valuable crop. These new varieties produced significantly more coffee beans, were smaller and easier to harvest, and produced best in direct sun. Many growers cut their shade trees and switched to the new varieties. Of the 6 million acres of coffee lands, 60% have been stripped of shade trees since 1972. Only the small, low-tech farms, often too poor to afford chemicals, preserved their shade trees.

Unfortunately, the new varieties of "sun" coffee came with an additional cost: the hybrids were dependent on high doses of pesticides and chemical fertilizers. Soil erosion, water runoff and soil depletion caused producers to clear vast tracts of rainforest for new soil to plant, and it became apparent that this new method of growing coffee was unsustainable.

The loss of the shade trees on such a large scale also caused an estimated 20% decline in migratory bird populations in the last ten years, due to habitat loss. The diminished songbird population has been noted as far away as 1500 miles from the coffee growing regions. In 1996, the movement to support shade grown coffee was sparked by the Smithsonian Institute's Migratory Bird Center, which gathered environmentalists, farmers and coffee companies to address the problem and promote awareness of shade coffee. Today, sales of organically grown, shade coffee represent about 1%, or $30 million, of the U.S. market for coffee beans.

How to know if your coffee is shade grown:

- Look for coffee plantations which state in their literature, or on their website, that they produce "shade-grown" coffee and use no pesticides or herbicides.
- Country of origin is an indicator. While there are exceptions, coffee produced from southern Mexico, El Salvador, Peru, Panama, Nicaragua and Guatemala are primarily shade grown. Also, coffee from Sumatra, Timor, New Guinea and Ethiopia are mostly shade grown. Coffees from Colombia, Brazil, and Costa Rica are more likely to be "sun" coffees, although there are some shade producers from these regions.
- Cost: Shade grown coffee ranges in price from $8 - 12 per pound for roasted blends. Although more expensive than regular coffee, there is far less cost to the environment.

But, there are times when our bodies want something else—something warming and filling, but with none of the "speed" of coffee. Fortunately, there are many coffee alternatives. You can drink them straight or with honey or cream or both. Some you can buy, while others you have to make yourself.

By sampling as many of the following as you can find in your area, you'll come to know their individual flavors and aromas. Once accustomed, you may want to try some in combination or experiment with lighter or darker roasts. Just about everyone who makes his or her own "backwoods coffee" eventually settles on a favorite blend and recipe.

ACORNS

Acorns grow worldwide, falling from oak trees (Quercus) in the autumn. They tend to be most abundant during September and October. Acorns are bitter when raw and so must be peeled and then "leached"—boiled or soaked to remove the tannic acid. Once the bitterness is gone, your options are many. If you want to use processed acorns in your "coffee" blend, grind it coarsely. Roast the acorns as dark or light as you generally like your coffee. Keep in mind, however, that in all cases, the darker roasts (those that are nearly black) can be borderline carcinogens, the level of risk depending on the material being roasted. This is due to the fact that you are nearly burning the material; excess heat causes a change in the oils that makes them detrimental—even possibly cancer-causing—if consumed. We generally roast to a brown color, sometimes dark brown, but never let it approach black.

BURDOCK

Burdock root (Arctium minus and A. Iappa) also makes a delicious coffee substitute. And, as an added bonus, it's well-known for its medicinal uses. Herbalists have long used burdock as a blood purifier, as well as to soothe the symptoms of rheumatism.

For coffee, we generally prefer the first-year root, though the tougher second-year root may also be used. Wash the burdock, then grate it or cut it into slices. Slowly dry it in your oven and then grind coarsely. Roast the ground burdock to

Continued on page 5
**Gardening With Native Plants**

**COMMON YUCCA (YUCCA FILAMENTOSA)**

**NATURAL HISTORY**

I never cease to be amazed at the resiliency of nature and her ability to rebound when given the opportunity. Such was the case recently when Nan & I walked down the rural road that fronts our home to a field that had been farmed for decades and was recently put into wildlife preservation and planted with grasses attractive to wildlife. In addition to the ubiquitous alien invasive Autumn Olive and Multiflora Rose that seemingly sprout everywhere, there are a large assortment of native plants repopulating what was a few years ago a marginal corn or soybean field. Lobellly and Virginia Pine, oaks and maples, Wax Myrtle, Joe Pye Weed, Tall and Swamp Sunflowers appeared everywhere, and there in the middle of the field, several tall flowering spikes of *Yucca filamentosa* or common yucca. Obviously this new vegetation found its way to this field by way of the wind or bird droppings and it piqued my curiosity about the yucca that I was most accustomed to seeing along the seashore. Common Yucca, also known as Adam's Needle looks a little like a small palm, but is actually more closely related to the lilies. The 2 to 3 ft. sword like leaves all originate from one point, taking the form of a rosette and their succulent appearance is reminiscent of its agave relatives of the deserts of the southwest and Central and South America. A 6 ft. flowering stalk rises above these rosettes of blue-green leaves hosting perhaps dozens of cream colored 2 inch nodding, bell shaped flowers that are popular with insects, bees, butterflies, moths and humming birds.

*Yucca filamentosa* was spread widely by Native Americans for its many and varied uses, so there is some debate as to its original native range. Today, Common Yucca grows in a wild state in dry soils and sand dunes in coastal regions from southern New York south to Florida and west to Texas and is cultivated in flower gardens throughout the eastern states. In Delaware, it is commonly found in southern coastal areas. The yuccas only known pollinator is the Yucca Moth. Yuccas depend on the Yucca Moth for pollination, and the moths and larvae depend on yuccas for food. The female yucca moth has specialized mouthparts for collecting pollen. She lays her eggs in an ovary of the yucca flower and then packs the hole with a ball of pollen, thus ensuring pollination and subsequent development of the seeds. As the seeds enlarge, they become the food source for the moth larvae that require these nutritional seeds for growth and development. Many of the seeds remain uninjured and are eventually dispersed, potentially producing new plants. The yucca can also regulate the percentage of seeds eaten by the moth. If seed consumption is high, yuccas will selectively drop severely affected fruit, ending seed and larval development. In this highly specialized system, each species has evolved adapting to the other, back and forth in a see-saw fashion. (Riley, 1892; Ramsay & Schrock, 1995) Each species relies on the other for successful maturation of offspring.

**WHERE TO GROW**

If you live in coastal Delaware, then Common Yucca is the plant for you! As a bold evergreen focal point in the landscape, either in group plantings or solitary, its tolerance to dry sandy soils, maritime environments, drought and heat make it the perfect plant for the beach. Don’t live at the beach? Not to worry! Like the plants growing wild in the fields near our home in Harbeson (where?), Common Yucca is adaptable to a wide range of soils, lighting conditions and pH. Perhaps the only environments to avoid would be wetlands and heavy shade where flowering is unlikely to occur. Use yucca at entrancesways, mixed borders, rock gardens, island beds, natural areas or as a specimen accent. If you are limited in space and time to care for your plants yuccas will do well in an outdoor container even without supplementary irrigation. Though Common Yucca is relatively slow growing, be forewarned, once it is established, it can be difficult to remove without the use of herbicides.

**PROPAGATION AND CARE**

Common Yucca are not fussy when it comes to propagation, they can be propagated from seed, root cuttings, offshoots and division. A single seed capsule can contain up to 100 seeds. Seeds can be collected in late August, into September when ripening occurs, sewn directly into the soil or preferably in a cold frame for later transplanting (remember they are slow to develop). Germination will be aided by presoaking in water for 24 hours and will usually occur within 1 to 12 months. Prick out the seedlings into individual pots when they are large enough to handle and grow them on in the greenhouse or cold frame for their first two winters.

After the yucca plant flowers it will produce a series of small plantlets/suckers around the base. Once these plantlets develop their own small roots, they are easily broken free and transplanted. Larger divisions can be planted out direct into the soil or preferably in a cold frame for later transplanting (remember they are slow to develop). Germination will be aided by presoaking in water for 24 hours and will usually occur within 1 to 12 months. Prick out the seedlings into individual pots when they are large enough to handle and grow them on in the greenhouse or cold frame for their first two winters.

**LORE**

Native Americans found may uses for yucca. They grew this plant near settlements for fiber, soap, food and medicinal

*Continued on page 2*

**Resources & Reviews**

*Agaves, Yuccas, and Related Plants: A Gardener's Guide*

Authored by Gary Irish, and Mary Irish. A wealth of information on the cultivation and gardening uses of Agave and Yucca. Useful for botanists as well as gardeners and horticulturalists. Extensive collection of photos of each species.
Dandelion (Taraxacum officinale) is second only to chicory as a coffee substitute. To prepare the dandelion root, follow the instructions for chicory. Though it is somewhat better to collect the dandelion roots before the plants flower, as a practical matter it is easier to locate the plants when you can see the yellow tops. Either way, the roots make a good coffee— with even more flavor, in our opinion, than the chicory blend.

GRAINS

Various grains have long been roasted and percolated like coffee or added to different coffee blends. Barley and wheat are popular and can be found in several commercial alternative coffees.

Most of the wild grass seeds will work as coffee alternatives as well. Experiment to discover which ones you prefer. Keep notes as you try the various wild grasses in your area, so you can repeat any recipes you find to your liking.

SOW THISTLE

Sow thistle (Sonchus) is a common plant with worldwide distribution. Its roots tend to be smaller and more tender than those of its cousin, dandelion. Nevertheless, treat these roots as you would dandelion, and either use them alone or mixed with other wild plants as a coffee substitute or extender.

These are by no means the only roots and seeds you can use to make your backwoods coffees. You can also of course buy coffee alternatives at the market. But by learning to collect our own foods, our own herbs, our own "coffees," we become more attuned to the wild bounty of the natural world, a necessary step on our journey toward self-reliance.

REFERENCES

1) An article in the August/September 1999 issue of Mother Earth News
2) http://www.eartheasy.com/eat_shadegrown_coffee.htm
3) Wikipedia

DANDELION
Out Of The Wild & Into The Kitchen

At the suggestion of Bill Pike who successfully made Autumn Olive Jam, I found this recipe via a link from the website of the Indiana Nature Conservancy. If you try the recipe, bring a jar to the next meeting to share.

Autumn Olive Jam

8 cups ripe autumn olive berries
1 cup water
3 1/2 cups sugar
1 package of "no sugar-needed Sure Jell"

Wash berries. Place in large pot and add the water. Bring to boil and simmer for 20 minutes. Run the resulting mash through a sieve which will yield about 5 cups of fruit puree. Mix 1/4 cup of sugar to the package of Sure Jell. Mix this with the fruit and heat to boiling. When mixture boils, Add remaining sugar to fruit, return to boiling and boil for one minute. Process according to hot pack directions.

Although the directions say nothing about stirring the mixture, I suspect that the jam mixture would benefit from stirring and will be best prepared in a heavy pot.

Share your recipes. Win a lovely gift; the work of a renown local artist—by submitting a recipe for the next newsletter.

If you have a recipe you would like to share, please contact Flavia Rutkosky at 302.653.9152, ext. 111.

8th Annual Native Plant Sale

When: Saturday, 1 November 2008, 10:00 AM – 3:00 PM

Where: DE Native Plant Society’s native plant nursery.

Directions: The nursery is located at 818 Kitts Hummock Road, at the St. Jones Research Reserve in Dover. Take Route 113 to the Dover Air Force Base. Kitts Hummock Road is directly at the southern border of the air base at the three way intersection of 113, Route 9, and Kitts Hummock Road. Kitts Hummocks Rd. only goes east, and if you go almost one mile you'll see a large sign for the St. Jones Reserve. Turn right onto the gravel road and the nursery is all the way in the back to the left of the parking lot.

What’s for sale: Hundreds of trees, shrubs, herbaceous species, ferns, vines and grasses will be available at very reasonable prices. An inventory list will be posted on our website.

Come early, some quantities are limited!

For more information: Call 302.735.8918, email ezuelke@juno.com, or on the web at www.delawarenativeplants.org.

We had a great sale last year and hope to have an equally great sale this year.

So come out and join the fun!
SATURDAY, 18 OCTOBER 2008—Native plant sale at Herring Run Native Plant Nursery from 9 AM to 2 PM. Herring Run Watershed Association carries a wide array of trees and shrubs native to Maryland and the Mid-Atlantic region. This allows us to plant at schools, parks, and other public spaces, and allows homeowners to purchase trees for their yards knowing that their efforts will help the environment and provide habitat for native wildlife. For more information call 410-254-1577, or on the web at http://herringrun.org/HomeSection.

THURSDAY, 23 OCTOBER 2008—Garden Design and Autumn Color lecture at Adkins Arboretum from 1 PM to 2:30 PM. Autumn color, so beautiful in the woods, can also be brought to your home landscape with thoughtful design. Capture what makes fall color happen—the science of when and how these changes occur—and come away with some new ideas for incorporating the colors and textures of autumn into your own landscape. Mother-and-daughter team Julianna Pax and Chris Pax will lead this course on garden design and autumn color. Chris Pax is a landscape designer specializing in native plants and Julianna Pax is a chemist. Both are trained as Arboretum docents. Come prepared for a walk. Limit 25 participants. More information on the web at http://www.adkinsarboretum.org/calendar.html.

SATURDAY, 1 NOVEMBER 2008—Delaware Native Plant Society annual plant sale. See details inside this newsletter on page 6.

TUESDAY, 18 NOVEMBER 2008—Ferns and Fern Relatives of the Delmarva Peninsula at Adkins Arboretum from 5 PM 7 PM. The Delmarva Peninsula supports a diverse collection of flora, including 58 varieties of ferns and fern relatives. Join Bill McAvoy, botanist with the Delaware Natural Heritage Program, to learn about the true ferns and related plants, such as clubmosses, spikemosses, and quillworts, found in our region. This program includes a walk and an indoor presentation. More information on the web at http://www.adkinsarboretum.org/calendar.html.

SATURDAY, 18 OCTOBER 2008—Center for the Inland Bay’s Annual BBQ to benefit the James Farm from 12 Noon to 4 PM at the James Farm Ecological Preserve on Cedar Neck Road. All you can eat Pork, Chicken, Sides, and Dessert. Catering by Bethany Blues! Cold beverages provided along with musical entertainment from STAC’s very own Scott Andrews and the Bay Grass Boys. $25 ticket, kids 10 and under eat free. Tickets on sale now. For more information Call 302-226-8105, or on the web at http://www.inlandbays.org/cib_pm/cib_events.php

AUTUMN AND WINTER 2008—Continuing education at Mt. Cuba Center. This non-profit organization has a fantastic education department. They offer dozens of classes and symposia throughout the year. For more information call 302.239.4244, or on the web at http://www.mtcubacenter.org.

DNPS BI-MONTHLY MEETINGS FOR 2008—are currently scheduled for 15 January, 8 March, 20 May, 15 July, 16 September, 1 November (not a meeting, but the annual plant sale) and 18 November. All meetings are on the third Tuesday of every other month at 7 PM, unless otherwise noted. The meeting will be held in 3 locations around the state. The Kent County location is at the St. Jones Reserve, the New Castle County location is at the New Castle County Conservation District office at 2430 Old County Rd., Newark, DE, 19702, and the Sussex County location is at the Redden State Forest Education Center at 18074 Redden Forest Dr., Georgetown, DE, 19947. See our website for maps and directions to each meeting location. See out website (www.delawarenativeplants.org) for more details, and for details on upcoming field trips.
### Membership Application

**DELAWARE native Plant Society**

#### Member Information

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- Full-time Student $10.00
- Individual $15.00
- Family or Household $18.00
- Contributing $50.00
- Business $100.00
- Lifetime $500.00
- Donations are also welcome $________

Membership benefits include:
- The DNPS quarterly newsletter, *The Turk’s Cap*
- Native plant gardening and landscaping information
- Speakers, field trips, native plant nursery and sales

**Total Amount Enclosed: $**

Make check payable to:
DE Native Plant Society
P.O. Box 369, Dover, DE 19903

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**DELAWARE native Plant Society**
P.O. BOX 369
DOVER, DELAWARE 19903

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**COMPLIMENTARY COPY**
The purpose of the Delaware Native Plant Society (DNPS) is to participate in and encourage the preservation, conservation, restoration, and propagation of Delaware’s native plants and plant communities. The Society provides information to government officials, business people, educators, and the general public on the protection, management, and restoration of native plant ecosystems. The DNPS encourages the use of native plants in the landscape by homeowners, businesses, and local and state governments through an on-going distribution of information and knowledge by various means that includes periodic publications, symposia, conferences, workshops, field trips, and a growing statewide membership organized by the DNPS.

The DNPS Vision

How Can I Get Involved?

The Delaware Native Plant Society is open to everyone ranging from the novice gardener to the professional botanist. One of the primary goals of the society is to involve as many individuals as possible.

The DNPS is working on some significant projects at this time. We have completed four reforestation projects in the Prime Hook area, at Blackbird Creek in New Castle County and Cedar Creek in Sussex County where we have installed tree tubes around newly sprouted seedlings, and are performing annual management of the sites. Help is also needed at our native plant nursery at the St. Jones Reserve with the monitoring and watering of plants along with many other nursery activities.

For more information, visit our website at www.delawarenativeplants.org. Our very informative, up-to-date website has all the contact information for the Society, along with a section on native plants, volunteering, and links to other environmental and plant related organizations.

Welcome To Our Newest Members

October through December

Barbara Busch
Amy Dill
Patrick Kelly (Anne Arundel Parks)
Bert & Penny Long
Jason & April Miller
Marie Schwalbauch
Carl Swanson

Natural Quotes

“Adversity draws men together and produces beauty and harmony in life’s relationships, just as the cold of winter produces ice-flowers on the window-panes, which vanish with the warmth.”

Soren Kierkegaard
**Thoughts From The Edge Of The Garden**

**Website Update**
Our website is just humming along and being as informative as can be. We are going to be doing some modifying and tweaking to it with the folks at Delaware.net (our website hosting and design firm) in the month of January. There are a few aspects of it that we want to change, such as removing the blog and adding a section on our Big Oak Park Adopt-A-Wetland site. Our original intention for the site was to be a repository for all the information that anyone would want to know about the Society, and being educational as well. It is well on its way to being just that, and with these changes it will be even better. Our site is at www.delawarenativeplants.org. See page 5 for more info.

**Event Highlight**

2008 Annual Native Plant Sale Results

Our 8th annual native plant sale was again a huge success thanks to everyone involved. We experienced a very mild, sunny day, and it was quite a contrast to the weather of past years. We had our 3rd best sale in history in terms of money, and our best ever in terms of available species. We did $1742.00 in pure plant sales, which yielded a “profit” for us of just under $950.00 (we bulked up our inventory with purchased plants this year a little more than in past years). Our annual plant sale is our only true fund raising event of the year and every little bit helps! We’d also like to thank everyone who came out and helped to label, price, haul plants, or brought food. You are all essential and greatly appreciated!

Here’s the results:

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**Lore**

Native Americans squeezed the ripe fruits then dried and stored them for winter cooking. Women drank a concoction made from the root for menstrual pain and the thorns were used for needles and awls. Hawthorns in general are edible, but not particularly desirable. They may be used to make apple jelly or steeped to make tea. Because of its size, the immensely tough wood has no commercial value. However it is prized by craftsmen for its use in tool handles and other small items.

Bob Edelen, DNPS Member

**Resources & Reviews**

**Woody Plants in Winter**

Authored by Earl Lemley Core and Nelle P. Ammons. Now a classic text on the criteria for identifying trees and shrubs in winter as reliably as in other seasons of the year. Based on years of teaching, the authors present keys to recognize dormant woody plants by their buds and branches. The information details representative plants from habitats in the northeastern US and southeastern Canada. Illustrated with over 300 line drawings.
FEATURE ARTICLE

MISTLETOE

Along with the Christmas holly, laurel, rosemary, yews, boxwood bushes and, of course, the Christmas tree, mistletoe is an evergreen displayed during the Christmas season, and it has a very interesting story.

Mistletoe (Phoradendron leucarpum) is an obligate stem hemiparasite. It cannot complete its life cycle without a host. The seeds are coated with a sticky material called viscin thruster (containing both cellulosic strands and mucopolysaccharides), which hardens and attaches the seed firmly to its future host of parasites. When one of the sticky berries comes into contact with the bark of a tree, typically with the help of a bird, and typically only on a stem or branch, it sends forth a modified thread-like root (haustorium), flattened at the extremity like the proboscis of a fly. This finally pierces the bark and roots itself firmly into the xylem, phloem, or both. The root ultimately becomes woody and thick and can often deform the branch it is growing in, but it will rarely kill the host. If the host dies, the Mistletoe dies. Hemiparasites may just obtain water and mineral nutrients from the host plant, as many, such as Mistletoe, are photosynthetic. Many obtain at least part of their organic nutrients from the host as well.

The word mistletoe is of uncertain etymology; it may be derived from the Anglo-Saxon words mist or mistel, for dung and tan or tang for twig or branch. Misteltan is the Old English version of mistletoe, but Old English mistel was also used for basil.

One of the beliefs in the early centuries was that mistletoe grew from birds. People used to believe that, rather than just passing through birds in the form of seeds, the mistletoe plant was an inherent result of birds, particularly the mistel (or missel) thrush, landing in the branches of trees.

Mistletoe is an evergreen shrub that has pointy, green, leathery leaves, with 2-10 waxy berries that are either red or white and grow in clusters. The plant's flowers can be a wide variety of colors, from bright red to yellow to green. Some species have small insect-pollinated flowers, while others have large, showy, bird-pollinated flowers.

There are myriad myths in ancient cultures about mistletoe, dating back to the eighth century and has been written about in numerous stories and fables. But in modern times, it is most well-known as a Christmas decoration which is traditionally to be hung in the arch of a doorway. According to a custom of Christmas cheer, any male and female that meet under a hanging of mistletoe are obliged to kiss.

The origin of the tradition of kissing under the mistletoe is vague. However, the tradition may have stemmed from either the Viking association of the plant with Frigga (the goddess of love), or from the ancient belief that mistletoe was related to fertility. Another explanation for the tradition is that it is derived from the festival of Saturnalia, a popular mid-December celebration in ancient Rome. Yet another explanation is that it was the plant of peace in Scandinavian antiquity. If enemies met by chance beneath it in a forest, they laid down their arms and maintained a truce until the next day. This ancient Scandinavian custom led to the tradition of kissing under the mistletoe.

Mistletoe is also said to be a sexual symbol, because of the consistency and color of the berry juice as well as the belief that it is an aphrodisiac, the “soul” of the oak from which it grows.

The correct mistletoe etiquette is for the man to remove one berry when he kisses a woman. When all the berries are gone, there's no more kissing permitted underneath that plant, but this bit of etiquette seems to have been lost in the joy of all that kissing.
Gardening With Native Plants

Cockspur Hawthorn (Crataegus crus-galli)

NATURAL HISTORY
It’s Sunday, December 21st, the first day of winter and one of my very favorite days of the year. Beginning today, the days will be getting longer and nights shorter with the promise of a spring to come and the flowers, gardening, return of summer migrating birds and all else that makes spring such a special time of year. But, hold on just a minute, there’s still a harsh winter ahead and for the hardy birds and wildlife that choose to stay in Delaware and endure the winter months times will surely get tougher. The bounty of fall with its nutritious and readily available seeds, berries, fat insects and abundant cover is but a memory, and local birds will have to subsist by foraging far and wide for what food and cover that remains. Fortunately, there remain a number of native trees and shrubs that maintain their fruit and provide cover into the late fall and early winter months. Among these are included the hawthorns, small trees with dense foliage for cover, sharp spines for protection and an abundance of bright red fruits for sustenance. Ones such hawthorn is Crataegus crus-galli, or the Cockspur Hawthorn.

The Cockspur Hawthorn is one of only two of the eight native Delaware hawthorns that are found in both the piedmont and coastal plain. It is widely distributed along fencerows, hillsides, thickets, old fields and both lowland and upland openings, throughout the eastern United States and Canada from Quebec south to North Carolina and west to Kansas. As you might guess from both its botanical and common names the thorns of the Cockspur Hawthorn are particularly formidable - crus, resembling a leg, galli, chicken; resembling a chicken leg, a reference to the thorns which may bring to mind the spur on a chicken's leg, hence Cockspur Hawthorn. The numerous thorns range in length from 1.5 to 3 inches and occur all over the tree from trunk to branches to limbs. These thorns are actually abortive branches that develop from short shoots that sprout leaves. The shoots lose their leaves and become hardened woody thorns. But the thorns are not the only noteworthy characteristic of this valuable and highly propagated tree. The Cockspur Hawthorn is an excellent four-season accent ornamental tree! It is a small tree with dense well rounded branching, maturing at 15 feet tall by 20 feet wide and potentially reaching a height of 35 ft. under ideal conditions. In spring, white 2” wide inflorescences blanket the tree. These dense clusters of somewhat malodorous flowers are a magnet to bees, butterflies, and other insects that are attracted by the nectar. The white hawthorn blossom is the Missouri State Flower. Flowering is followed by development of clusters of pendulous 0.5” round fruits that are produced in masses and provide excellent color making this a very attractive ornamental tree in early winter. These fruits provide a much needed meal for fox sparrows, cedar waxwings, wood ducks, wild turkeys, robins, bluebirds, thrushes, mockingbirds, thrashers, and other wintering birds and small mammals. The dense branching pattern and thicket forming habit of this hawthorn make it a particularly desirable nest and shelter tree for numerous species of birds. The Cockspur Hawthorn is also a larval host for Striped Hairstreak, Banded Hairstreak, Soapberry Hairstreak, Kings Hairstreak, and Gray Hairstreak butterflies. Fall color is often a showy multicolored array of red, purple, orange, and yellow waxy leaves. The branches are arranged in a pleasing layered habit that combined with the large thorns create a picturesque winter silhouette.

WHERE TO GROW
Common and widespread, the Cockspur Hawthorn has been planted ornamental and as a hedge since colonial times. It has an attractive, wide spreading plant habit, glossy dark green foliage, showy flowers and attractive fruit providing a distinct horizontal accent in the landscape. Its horizontal spreading growth habit and bold texture is very distinctive and architecturally useful in the landscape, especially in winter. It may be planted as a focal point, specimen, deciduous screen, tall barrier hedge, seasonal accent, entranceway, group planting, and is excellent planted in a thicket as a winter wildlife shelter. The Cockspur Hawthorn grows well in full to partial sun and prefers a moist, well-drained soil. It is very urban tolerant, including adaptability to poor soils, various soil PHs, compacted soils, drought, heat, and winter salt spray.

The Cockspur Hawthorn is not without some liabilities: The hawthorns are members of the rose family and as such pests and diseases may be a problem. Plants are susceptible to cedar hawthorn rust (rust stage where eastern red cedars are present in the area), and fire blight. Other potential diseases include fungal leaf spots, powdery mildew, cankers, apple scab, leaf blight and twig blight. Numerous thorns pose significant risks for young children and also make culture/pruning more difficult. If you are concerned about these potential problems, a cultivated thornless variety that is more disease resistant is available.

PROPAGATION AND CARE
Propagation of Crataegus crus-galli is not the easiest, but is possible from seed. This species has one of the thickest of seed coatings and requires an acid treatment for germination. A 2 to 3 hour or longer acid treatment followed by a variable warm and 3 to 4 month cold period has been proven successful. Seed may be sown in the fall without acid treatment but germination will be sparse and will require 2 to 3 years.

Continued on page 2

Resources & Reviews

Winter guide to woody plants of wetlands and their borders: Northeastern United States

Resources & Reviews

Wildflowers and Winter Weeds

Authored by Lauren Brown. This book will be a joy to those wood-walkers and strollers who have been puzzled by the skeletal remains of herbaceous plants that they see in winter.

The home page of our website for those who have not seen it yet.

On January 7th, Eric Zuelke had a meeting with the folks at Delaware.net and we have purchased a new feature for our website. It’s called Content Management Services and is produced by a company called Team-Logic. The product is a web-based tool that will allow our Webmaster (Eric) to update the website using website editing widgets, wizards, and modules. This method is much, much easier than our current method which is ftp access through Dreamweaver (website creation software). We also purchased an email product called Email-Logic produced by the same company. This will allow us to send out html-based emails with our logo in it, it will also allow us to organize the membership list by anniversary date. So, in the future be on the look out for much fancier emails from us, and when your renewal time comes up, a custom email will be sent to you with the renewal form attached as an Adobe Acrobat PDF file. We are asking that everyone update their email with us so we can have the most recent one for you. If you need to update that information, please write to Eric at czuelke@juno.com.
OUT OF THE WILD & INTO THE KITCHEN

At the suggestion of Quentin Schlieder (our part-time Events Coordinator), here are some great recipes using garlic mustard (*Alliaria petiolata*). These came from cooks who submitted recipes to the website of the Mid-Atlantic Exotic Pest Plant Council (http://www.ma-eppc.org/index.html). Garlic mustard is a scourge in Delaware, especially in New Castle County, and the best time to pull the entire plant up is definitely before it seeds out, but an even better time is just before it flowers.

**APPETIZERS**

**Garlic Mustard Ricotta Dip**
Submitted by Lucy McLean, Garlic Mustard Cook’s Challenge 2001

¼ cup chopped garlic mustard  
¾ cup non-fat ricotta cheese  
¼ cup non-fat mayonnaise  
McCormick’s steak seasoning  
White wine Worcester sauce  
Salt  
Fresh ground pepper

Mix all ingredients together. Adjust seasonings to taste. Serve with French bread, crackers, chips or fresh cut vegetables for dipping.

**Garlic Mustard Salsa**
Submitted by Cam MacLachlan

2 cups finely chopped tomatoes  
1 cup finely chopped green pepper  
½ cup finely chopped onion  
1 to 2 jalapenos seeded and minced  
1 small green chili, seeded and minced  
1 tablespoon olive oil  
1 tablespoon minced garlic mustard or to taste  
Salt to taste (optional)

Combine ingredients in a bowl, cover, and chill. For more intense flavor, chop garlic mustard ahead of time and let stand for several hours or overnight.

**Stuffed Garlic Mustard Leaves**
Submitted by Alex Streat, The Garlic Mustard Cook’s Challenge 2001

20 medium garlic mustard leaves, washed and dried on paper towels  
5 wooden spoonfuls of cooked sausage  
4 wooden spoonfuls of cooked rice  
2 Tbsp chopped garlic mustard leaves  
1 Tbsp lemon juice

Mix rice and sausage and stir well. Add chopped leaves and lemon and toss. Put a teaspoon of this mix on a medium leaf of garlic mustard. Hold leaf together with a toothpick. Serve on a plate.

If you have a recipe you would like to share, please contact Flavia Rutkosky at 302.653.9152, ext. 111.
SATURDAY, 17 JANUARY 2009—DELAWARE CHAPTER OF THE SIERRA CLUB ENVIRONMENTAL SUMMIT. FROM 8:30 AM TO NOON AT WILMINGTON UNIVERSITY IN DOVER, DE. DIRECTIONS AT HTTP://WWW.WILMU.EDU/DOVER/DIRECTIONS.ASPX, AND MORE INFORMATION AT POLITICS@DELAWARE.SIERRACLUB.ORG.

TUESDAY, 20 JANUARY 2009—DELAWARE NATIVE PLANT SOCIETY BI-MONTHLY MEETING. THIS MEETING WILL BE AT OUR SUSSEX COUNTY MEETING LOCATION. SEE BELOW FOR LOCATION DETAILS, AND ON OUR WEBSITE.

TUESDAY, 27 JANUARY 2009—MARYLAND NATIVE PLANT SOCIETY MONTHLY MEETING. THIS MEETING’S TOPIC WILL BE WINTER FRUITS, BERRIES, SEEDS, AND PODS. STARTING AT 7:30 PM. NATIVE TREES, SHRUBS, AND FORBS PROVIDE AN ABUNDANCE OF FRUITS, BERRIES, AND SEEDS THAT SUPPORT A WIDE VARIETY OF WILDLIFE THROUGHOUT THE WINTER MONTHS. BOTANY COMMITTEE MEMBERS WILL GIVE A PRESENTATION ON THE WEALTH OF NATIVEPlANTS THROUGHOUT THE STATE THAT PRODUCE FRUITS, BERRIES, AND SEEDS THAT LAST INTO WINTER. MORE INFORMATION ON THE WEB AT HTTP://WWW.MDFLORA.ORG.

SATURDAY, 14 FEBRUARY 2009—DELAWARE NATIVE PLANT SOCIETY FIELD TRIP TO MIDDLE RUN NATURAL AREA AND THE JUDGE MORRIS PORTION OF WHITE CLAY CREEK STATE PARK. WE WILL BE DOING A 5-MILE LOOP THROUGH THESE BEAUTIFUL FORESTS. WE MEET AT THE PARKING AREA AT MIDDLE RUN AT 10 AM. BRING LUNCH AND WATER, DRESS WARM AND WEAR STURDY BOOTS. WE WILL BE HIKING THROUGH EARLY TO MID-SUCCESSIONAL HABITATS, AS WELL AS MATURE WOODLANDS. BE PREPARED FOR HILLS AND SLOPES. PLEASE REGISTER WITH BILL MCAVOY AT WILLIAM.MCAVOY@STATE.DE.US PRIOR TO FEB. 14, NO SIZE LIMIT.

THURSDAY, 19 FEBRUARY 2009—BOWMAN’S HILL WILDFLOWER PRESERVE PRESENTS ITS 9TH ANNUAL LAND ETHICS SYMPOSIUM: CREATIVE APPROACHES FOR ECOLOGICAL LANDSCAPING FROM 8 AM TO 4 PM. THE SYMPOSIUM WILL BE HELD AT THE SHERATON BUCKS COUNTY HOTEL IN LANGHORNE, PENNSYLVANIA. REGISTRATION DEADLINE IS 9 FEB 2009. FOR MORE INFORMATION CALL 215.862.2924, OR ON THE WEB AT HTTP://WWW.BHWOP.ORG.

TUESDAY, 24 FEBRUARY 2009—MARYLAND NATIVE PLANT SOCIETY MONTHLY MEETING. THIS MEETING’S TOPIC WILL BE WINTER EVERGREENS. STARTING AT 7:30 PM. JOIN MEMBERS OF THE BOTANY COMMITTEE FOR A PRESENTATION ON NATIVE EVERGREEN PLANTS FOUND THROUGHOUT MARYLAND, INCLUDING PINES AND OTHER GYMNOSPERMS, HOLLIES, BAYBEERRIES, AND OTHER SHRUBS, GROUNDCOVERS AND CLUBMOSSES, AND NUMEROUS OTHERS. SOME HISTORICAL EVERGREENS WILL ALSO BE INCLUDED. MORE INFORMATION ON THE WEB AT HTTP://WWW.MDFLORA.ORG.

WINTER AND SPRING 2009—CONTINUING EDUCATION AT MT. CUBA CENTER. THIS NON-PROFIT ORGANIZATION HAS A FANTASTIC EDUCATION DEPARTMENT. THEY OFFER DOZENS OF CLASSES AND SYMPOSIA THROUGHOUT THE YEAR. FOR MORE INFORMATION CALL 302.239.4244, OR ON THE WEB AT HTTP://WWW.MTCUBACENTER.ORG.

DNPS BI-MONTHLY MEETINGS FOR 2009—ARE CURRENTLY SCHEDULED FOR 20 JANUARY, 17 MARCH, 19 MAY, 21 JULY, 15 SEPTEMBER, 1 NOVEMBER (NOT A MEETING, BUT THE ANNUAL PLANT SALE) AND 17 NOVEMBER. ALL MEETINGS ARE ON THE THIRD TUESDAY OF EVERY OTHER MONTH AT 7 PM, UNLESS OTHERWISE NOTED. THE MEETING WILL BE HELD IN 3 LOCATIONS AROUND THE STATE. THE KENT COUNTY LOCATION IS AT THE ST. JONES RESERVE, THE NEW CASTLE COUNTY LOCATION IS AT THE NEW CASTLE COUNTY CONSERVATION DISTRICT OFFICE AT 2430 OLD COUNTY RD., NEWARK, DE, 19702, AND THE SUSSEX COUNTY LOCATION IS AT THE REDDEN STATE FOREST EDUCATION CENTER AT 18074 REDDEN FOREST DR., GEORGETOWN, DE, 19947. SEE OUR WEBSITE FOR MAPS AND DIRECTIONS TO EACH MEETING LOCATION. SEE OUR WEBSITE (WWW.DELAWARENATIVEPLANTS.ORG) FOR MORE DETAILS, AND FOR DETAILS ON UPCOMING FIELD TRIPS.
# Membership Application

**DELAWARE native Plant Society**

## Member Information

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- Full-time Student $10.00
- Individual $15.00
- Family or Household $18.00
- Contributing $50.00
- Business $100.00
- Lifetime $500.00
- Donations are also welcome $________

Membership benefits include:

* The DNPS quarterly newsletter, *The Turk’s Cap*
* Native plant gardening and landscaping information
* Speakers, field trips, native plant nursery and sales

## Total Amount Enclosed: $

Make check payable to:

DE Native Plant Society

P.O. Box 369, Dover, DE 19903

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**DELAWARE native Plant Society**

P.O. Box 369

Dover, Delaware 19903

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