

# THE TURK'S CAP

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*THE NEWSLETTER OF THE DELAWARE NATIVE PLANT SOCIETY*

[www.delawarenativeplants.org](http://www.delawarenativeplants.org)

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DELAWARE  
Native Plant Society

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. For more information, visit our website at [www.delawarenativeplants.org](http://www.delawarenativeplants.org).

### NATURAL QUOTES

*"How doth the busy little bee  
Improve each shining hour  
And gather honey all the day  
From every opening flower!"*

*from Divine and Moral Songs for Children  
by Isaac Watts (1674-1748)*



Spring view at Mt. Cuba Center

Photo by Rick Mickowski, May 2014

## Notes from Newcroft

In this column last month, I thought this month I'd highlight the ginkgo tree but after reading the book "[Ginkgo: The tree that time forgot](#)" I

found that it was never a native in our area. What is native is the Black cherry tree Bob Edelen selected for this issue's *Gardening with Native Plants* column. I

moved to Newcroft almost 20 years ago and before I knew it the tree pictured above was growing in the corner of my lot. Over the years I've learned to pull the multitude of saplings that come up everywhere. You know, you learn to ID a plant like that with only a few young leaves sticking out of the ground.



Black cherry tree at Newcroft

The rest of this issue is buzzing with bee info. For years there have been reports about the decline in the bee population. I'm still able to buy honey for my toast and buy fruits and vegetables at the market. Perhaps the commercial beekeepers have filled in the gap. All but the one whose truck had an accident in DE on I-95 recently. It was hauling 460 hives of honeybees from Florida to Maine when it crashed and released its cargo of live bees -- an estimated 16 to 20 million of them. New Castle County emergency squad followed *bee swarm removal procedures* including calling three bee providers for assistance.

Thanks to Rick Mickowski who will be finishing up this issue. I am traveling to Sweden to pay homage to Carl Linnaeus in Uppsala.

Cindy Albright



## Why Plant for Bees?

The term "native bee" refers to any of a large and diverse group of wild bees that are indigenous to North America. There are some 4,000 species of native bees north of Mexico, around 200 of which have been found in

Delaware. Native bees are a vital component of natural ecosystems, providing pollination services to countless species of wild trees, shrubs and flowers.

While honey bees are still very important pollinators, native bees can provide "pollination insurance" during times when honey bees are not available.

Bees benefit from patches of **native flowering plants** on farms, in home garden and in public spaces. Adult bees drink nectar and gather pollen to provide food for their young. A supply of pollen- and nectar-rich plants available throughout the growing season will help maintain large, healthy native bee populations.

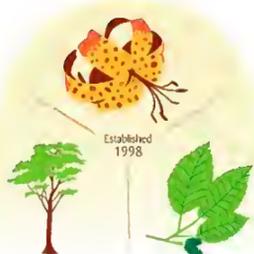
This DE Dept. of Agriculture guide provides a section on "Choosing Plants for Bees." It includes factors to consider eg. 1. Timing 2. Diversity 3. Origin 4. Ecotype 5. Annual vs. Perennial and 6: Hybrids.

\* [Download entire booklet](#)

**Also see: USDA Bee Pollination website:**

<http://www.fs.fed.us/wildflowers/pollinators/animals/bees.shtml> and the Xerces Society website at [www.xerces.org](http://www.xerces.org). They have just released a report about native milkweeds— "Milkweeds: A Conservation Practitioner's Guide". Download at this link:

[Milkweeds: A Conservation Practitioner's Guide](#)



**The American Chestnut Foundation**  
**Delmarva Restoration Branch *Kick-off***

**at Abbotts Mill Nature Center**

**Saturday, October 11, 2014**

**15411 Abbott's Pond Road, Milford, DE 19963 [\(Directions\)](#)**

**(see page 7 for details)**





Spotted Knapweed in bloom and basil rosette of silver leaved foliage

## NEW OFFICERS ELECTED AT DNPS 2014 ANNUAL MEETING NATIONAL TRAILS DAY AT CAPE HENLOPEN STATE PARK

Article and photos by Rick Mickowski ✨



Remnant chestnut tree at Abbott's Mill Nature Center and nut sample

### National Trails Day



Saturday, June 8 turned out to be a beautiful day for DNPS members to volunteer their time as part of National Trails Day at Cape Henlopen State Park. Nine DNPS members participated in this event – Jan and John Ferrell, Richard Kacynski and Linda Sperry, Ed Crawford, Rick Mickowski, Eric Wahl, Eric Zuelke and Cindy Albright. Rob Line from Delaware State Parks was the group leader for the invasive species removal project. We were shown a sample of the plant we were to pull that morning. It was an invasive plant called Spotted Knapweed (*Centaurea stoebe*). We found and pulled a lot of this plant along the edges of the parking lot and a little along one of the trails leading to the dunes and beach. We looked in the dunes where the native beach heather grows but previous efforts at these locations seemed to have stopped the plant as none could be found.



After lunch, DNPS members held the 2014 annual business meeting. Eric Zuelke gave a financial report. DNPS has \$7,136.36 in the checking account and \$7,505.04 in the money market savings account. The funds in the money market account were a donation several years ago to DNPS from the Delaware Chapter Sierra Club from a settlement with Exxon. Some of the funds were used to purchase the greenhouse located at the St. Jones Reserve. Most expenses consist of postage, making copies, newsletter costs and miscellaneous expenses. We currently have around 100-110 members. Eric also filed the online reports for DNPS to keep our not-for-profit status. The filing fee is \$25.00 per year.

The annual plant sale will be held on **September 27<sup>th</sup> in conjunction with the St. Jones Reserve Open House**. Eric will be contacting the native plant vendors soon to confirm their attendance. Last years' vendors were Yellowspring Farm from PA and Nature Design Garden Center from DE. The annual symposium will be held on the same day at the Bombay Hook National Wildlife Refuge. The speaker this year will be Rick Darke, a noted landscape designer, photographer, and author on the topic "Planting for Beauty and Biodiversity: Putting Back the Layers". Bill McAvoy, botanist with the Delaware Natural Heritage Program and DNPS Past President, will speak about the layers of a Delaware forest as a model layers of a Delaware forest as a model.

Ed Crawford, a volunteer with the Abbott's Mill Nature Center, has volunteered to coordinate the upcoming American Chestnut Restoration Branch event being held on October 11<sup>th</sup> at the nature center in Milford. The event will include a tour of the Abbott's Mill Chestnut Trail. The President of the American Chestnut Foundation will be the featured guest speaker. Also speaking will be the President of the Maryland Chapter. Plans are to offer door prizes of items made out of chestnut wood, possibly a coaster with the ACF logo on it. There will be exhibits and possibly a silent auction. Dog Fish Head brewery will be contacted about becoming a sponsor since the business is located on Chestnut Place in Milton. This event will be promoted to businesses, organizations, and conservation groups. The plan is to get nuts and trees to plant from ACF. The restoration chestnut trees are hard to get. They are 95% American chestnut and 5% Chinese chestnut. There are however, techniques that can be used on the remnant native chestnut trees in the woodlands to get the sprouts to regrow long enough to bear fruit.

The slate of officers was presented by Rick Mickowski. They were Eric Wahl for President; Rick Mickowski for Vice-President; Eric Zuelke for Treasurer; and Alison Long for Secretary. Linda Sperry made a motion to accept the slate of officers as presented, seconded by Cindy Albright. The motion was unanimously approved. Several members then toured the native plant demonstration garden and rain garden at the U of D Sharp Campus in Lewes.

Eric Wahl is a landscape architect with Element Design Group in Lewes. Rick Mickowski is a conservation planner with the New Castle Conservation District in Newark. Eric Zuelke is our long-time treasurer who runs his own computer business. Alison Long owns her own design firm where she designs sustainable landscapes and wildlife habitat restoration. She also works as a teacher/naturalist for the Delaware Nature Society at the Russell W. Peterson Urban Wildlife Refuge. Thank you to John Harrod for serving as DNPS President for the past two years.

✨ **Author's note: The card in my camera malfunctioned, so I lost all the photos taken the day of the annual meeting.**



Eric Wahl, Rick Mickowski, Alison Long, & Eric Zuelke

## GARDENING WITH NATIVE PLANTS

### Black cherry *Prunus serotina*

#### Natural History

A tree for all gardens? **NOT!** Black cherry, also known as wild black cherry, rum cherry, cherry-bounce or mountain black cherry by most accounts is not a garden friendly tree. Its foliage is toxic, known to severely sicken and even cause death to horses and cattle, it is plagued by a host of insect pests including the scourge of fruit gardeners, the dreaded tent caterpillar, it is susceptible to a variety of diseases and its fruits litter the ground sprouting numerous invasive seedlings. So why write about it? Well, on the other hand many of the characteristics that make the black cherry undesirable for many landscapes, also make it a natural panacea for wildlife! It is perhaps most noted for its profuse spring bloom of fragrant white flowers that occur in slender clusters up to 6" long attracting a myriad of butterflies, bees and other insects. Black cherry is a larval host to Eastern Tiger Swallowtail and Viceroy Butterflies, Colombia Silk Moth, Promethea Moth, Sphinx and other moths and is of special value native bees, bumble bees and honey bees! Did I mention tent caterpillars? Yes, in spring, black cherry trees are often disfigured by tent caterpillars, but these usually do no long term harm, and are themselves eaten by yellow-billed



Photo courtesy of  
Backyard Nature

cuckoos, great crested flycatchers and other native songbirds. The berries are themselves eaten by a myriad of songbirds including robins, thrushes, bluebirds, cedar waxwings, mocking birds, catbirds, quail, wild turkey, and many more! Deer will browse the lush foliage, and are seemingly unaffected by the toxins so injurious to domesticated animals! In the north, porcupines will eat the bark.

Black cherry is native to eastern North America and can be found from eastern Canada through southern Quebec and Ontario, south through the eastern United States to Texas and central Florida, west to Arizona and New Mexico and in the mountains of Mexico and Guatemala. It is the largest of native cherry trees typically growing to 50 to 80'. The Delaware record is an impressive 90+ foot tree found in Wyoming, Delaware! Black cherry is very adaptable and typically occurs in both lowland and upland woods and along streams. Flowers are followed by drooping clusters of small red cherries (to 3/8" diameter) that ripen in late summer to dark purple-black with foliage that turns attractive shades of yellow and rose in fall. Mature trees develop a dark scaly bark.

#### Where to Grow

Black cherry is a medium to large flowering shade tree, easily grown in average, medium, well-drained soils in full sun to part shade and is salt and drought tolerant. It will do best in moist, fertile loams in full sun. As with most cherries, however, it is susceptible to a large number of insect and disease pests. Potential diseases include leaf spot, die back, leaf curl, powdery mildew, root rot and fire-blight. Potential insects include aphids, scale, borers, leafhoppers, caterpillars, tent caterpillars and Japanese beetles. Spider mites may also be troublesome. The tree drops lots of twigs, leaves and fruit and in cultivation can be allelopathic, negatively affecting the growth of garden plants. So, it is perhaps best suited to woodland edges, naturalized with other native species and is definitely not recommended for those who pasture livestock! Considering all the negative aspects written of the black cherry, the trees growing wild in the woodlands surrounding our home in Harbeson appear quite healthy and save a few spring tent caterpillars exhibit little of the more detrimental characteristics!

## Resources & Reviews

[American Botanical Paintings: Native Plants of the Mid Atlantic](#) Feb. 2014

by [Bonnie Driggers](#) (Editor)

Published by the [Botanical Artists for Education & the Environment](#) (BAEE)

The United States Botanic Garden exhibited original paintings and drawings published in the book. (2014 Feb.—June) Juried botanical art that included both native plants and insect pollinators.



(cont. from page 4)

### Propagation

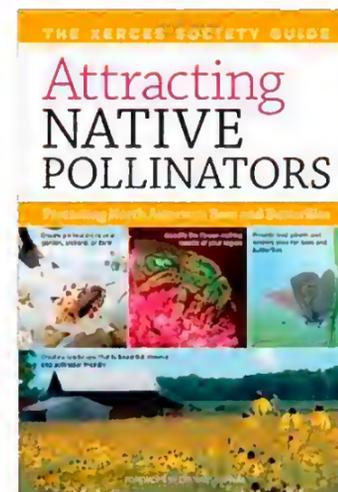
Black cherry is a pioneer species sprouting readily in disturbed areas and as you might expect, propagation from seed is not difficult. Seeds require cold stratification. Collect fruit when ripe, clean seeds from the pulp and briefly air dry. Seeds may be directly sown in the fall or held for spring planting, stratified in moist sand for a period of 30 to 60 days. Seedlings may need protection from deer, rabbits and mice until well established, usually within the first two to three years. Young trees will develop a taproot, making transplanting difficult.

### Lore

Widespread and the largest of native cherries, black cherry is by far the most important native cherry. The valuable hard, reddish brown wood is used for furniture, paneling, veneers, gun stocks, musical instruments, handles, cabinets and toys. Wild cherry syrup, a cough medicine, is obtained from the bark, and Native Americans used the inner bark to prepare cough medicines and tea-like cold remedies. While the fruit is bitter fresh off the tree, it is popular for making jelly and wine, and for flavoring ice cream (black cherry is one of my favorites) and certain liquors, hence the names 'rum cherry and cherry-bounce', but beware, the rest of the plant can be toxic to humans and domesticated animals if consumed!

Bob Edelen

**(Thanks to Bob for 10 years of columns as he retires from that authorship. They are priceless articles which we have archived.)**



Protect the Pollinators That Help Feed the World  
Bees, wasps, butterflies, moths, flies, and some beetles pollinate more than 70 percent of flowering plants, but North America's native pollinators face multiple threats to their health and habitat. The Xerces Society offers a complete action plan of protecting these industrious animals by providing flowering habitat and nesting sites.

Providing Healthy Habitats for Pollinators:  
Supports bountiful farm and garden harvests  
Maintains healthy plant communities  
Provides food for other wildlife  
Beautifies your landscape with flower plants

"Precise, elegant, and thoughtful, the recommendations offered by the Xerces Society will become essential to advancing a healthy and diverse food-production system." - Gary Paul Nabhan, *The Forgotten Pollinators* and *Renewing America's Food Traditions*.

[Book available from Amazon](#)



Native milkweed blooming along Porter Road in New Castle County on June 23, 2014. Photo by Rick Mickowski

## An insecticide-infection connection in bee colony collapses

Researchers discover a common insecticide shuts down a key immune protein in bees.

\*[by John Timmer](#) - October 21, 2013

Colony collapse disorder has been decimating bees for several years, but explanations have been hard to come by. After some spurious claims about cell phones causing the problem, researchers began identifying factors that *did* create problems for the health of bees, including [infections](#), [insecticides](#), and [agricultural practices](#). The problem is that all of these seemed connected to colony collapse, which suggested the cause was likely to be complex.

Now, some researchers may have cut through the complexity. They've found that a common insecticide causes changes in the immune system of insects, which in turn leaves them more vulnerable to infection. And they've begun the process of determining how those immune changes come about on the molecular level.

The Italian researchers behind this current work previously analyzed an infection present in bees. But the concerns being raised about insecticides motivated them to look into whether there might be a connection between the two. Rather than focusing on bee mortality, they decided to look at the pathways that mediate immune responses in insects.

Bees lack that adaptive immune system that generates pathogen-specific antibodies and T cells in mammals. But they share an innate immune system, which is able to generally recognize infectious agents like bacteria. In fact, this innate immune system is evolutionarily ancient, as the same genes are used to control the response in animals as distantly related as bees and humans.

Previous toxicology work in mammals indicated that a specific class of insecticides, the **neonicotinoids**, could influence the activity of genes involved in the innate immune system. These genes were activated by the presence of neonicotinoids, and they shut down a key regulator of the innate immune system (a protein called NF- $\kappa$ b). Thus, the more of these insecticides, the less effective the innate immune system is likely to be—at least in mammals.



The researchers started by showing that the same is true in insects. Initially, they worked with everyone's favorite fruit fly, *Drosophila*, showing that the equivalent genes responded in the same ways in the flies. They then showed that the innate immune response isn't activated when these same flies are exposed to an infection. A different class of insecticide (an organophosphate) had a much weaker effect on the fly's innate immunity. With the molecular activity well characterized, they went on to demonstrate that the same effects could be seen in bees.

To show that the changes in gene activity had an impact on the bees' immune function, the authors turned to the deformed wing virus. Animals that were not given a dose of a neonicotinoid were able to largely keep the viral infection in check. But two different neonicotinoid insecticides showed a dose response: the more you gave the bees, the more likely the infection was to flourish.

If this result holds up, it neatly ties together a number of observations. Various infections may still be doing the ultimate job of killing the bees, but their virulence could be explained by compromised immune function, caused by a combination of insecticide use and agricultural practices. The results will also provide further support for the European Union's attempt to ban the use of neonicotinoid pesticides, [a decision](#) that was made earlier this year. Several chemical companies have announced that they will sue to block the ban.

- *John Timmer became Ars Technica's science editor in 2007 after spending 15 years doing biology research at Berkeley and Cornell.*
- *The Xerces Society website under the "Publications/Guidelines" tabs has two articles on this timely topic. Link on [www.Xerces.org](http://www.Xerces.org)*

# Upcoming Events

## Delaware Native Plant Society - Fall 2014 Events

### DNPS Plant Sale at the St. Jones Reserve Annual Open House September 27

### DNPS and Bombay Hook GardenKeepers Annual Native Plant Symposium September 27

The annual symposium will be held on the same day at the Bombay Hook National Wildlife Refuge. The speaker this year will be Rick Darke, a noted landscape designer, photographer, and author on the topic "Planting for Beauty and Biodiversity: Putting Back the Layers". Bill McAvoy, botanist with the DE Natural Heritage Program and DNPS Past President, will speak about the layers of a Delaware forest as a model. Information on how to register for this event will be sent out to members later this summer by email or contact DNPS member Quentin Schlieder by phone at 302-653-6449 or by email at qcsjr@comcast.net.



### American Chestnut Restoration Branch — Abbotts Mill Nature Center Saturday, October 11, 2014 15411 Abbott's Pond Road, Milford, DE 19963 ([Directions](#))

Make your plans to attend the kick-off event for the first Delmarva-based American Chestnut Foundation Restoration Branch. This event will feature presentations on the ecology of the chestnut and the efforts to restore it to the landscape. A field session will include a visit to Abbott's Mill Nature Center's chestnut orchard and to see surviving American chestnuts and chinquapins in the Milford Millponds Nature Preserve. The formal evening event will feature a keynote speech by the president of The American Chestnut Foundation, Byran Burhans. Also highlighting this unique event will be a silent auction, wood working demonstrations, live music, and dinner. Ticket prices will include a membership in The American Chestnut Foundation. Stay tuned for additional information about time, location, additional speakers, and ticket prices.



### Summer 2014—Mt. Cuba Center [www.mtcubacenter.org](http://www.mtcubacenter.org) Visit website for details.

July 10 10:00 a.m. to 12:00 p.m.

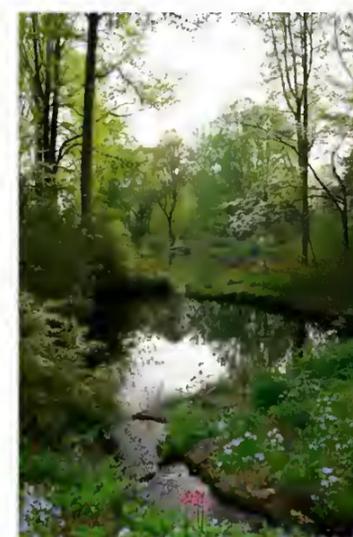
[The Top Ten: Trees and Shrubs for Wildlife](#)

July 12 8:00 am to 5:00 pm Meet at Ashland Nature Center

[Copeland Native Plant Series:](#)

[Pine Barrens Wildflower Ramble](#)

Mt. Cuba Center pond



### Summer 2014—Adkins Arboretum [Native Plant Nursery](#) is open for business

#### Native Plant Nursery Hours

Tuesday–Friday, 10 a.m. to 4 p.m.

Weekend hours by arrangement. For more information about special orders, special pick-ups, help with restoration projects plant choices, or pricing for nonprofits or commercial contractors, contact Nursery Manager Joanne Healey at 410.634.2847 x32 or [jhealey@adkinsarboretum.org](mailto:jhealey@adkinsarboretum.org).

### Maryland Native Plant Society annual conference at Cecil College in Northeast, Maryland

September 20-21: "The Diverse Flora and Habitats of Cecil County and the Tri-State Area"

<http://www.mdflora.org/2014conference.html>

# Membership Application

## DELAWARE NATIVE PLANT SOCIETY

[WWW.DELAWARENATIVEPLANTS.ORG](http://WWW.DELAWARENATIVEPLANTS.ORG)

### 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 \$ \_\_\_\_\_

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Membership benefits include:

- \* The DNPS quarterly newsletter, The Turk's Cap
- \* Native plant gardening and landscaping information

**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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