

The Turk's Cap



THE NEWSLETTER OF THE DELAWARE NATIVE PLANT SOCIETY FALL 98

DNPS WELCOMES OUR NEWEST MEMBERS

July-September

Mick McLaughlin

Wayne and Rhonda Tyndall

Chris Winters

The Adkins Arboretum

Flavia Rutkosky

HOW CAN I GET INVOLVED?

DNPS is open to everyone ranging from the novice to expert. One of the primary goals of the society is to involve as many individuals as possible. Our meetings have been held on the third Tuesday of each month at 7:00, at the Aquatic Resource Education Center, Woodland Beach Wildlife Area, Rt. 9 (Hay Point Landing Road). For directions or questions, call Keith Clancy at (302) 674-5187.

SPECIAL NOTE: During our September meeting, it was decided that our monthly meeting locations will rotate between the New Castle, Kent, and Sussex Counties.

October meeting: New Castle County

November meeting: Sussex County

December meeting: Kent County

(specific locations are to be determined)

NATIVE PLANT HIGHLIGHT: GOLDENRODS

One of the most conspicuous of native wildflowers seen in Delaware during late summer and fall are the goldenrods. Goldenrods are within the genera *Solidago* and *Euthamia* (the flat-topped goldenrods). The Latin meaning of *Solidago* is "to make whole," referring to its ancient medicinal properties.

Goldenrods are fibrous rooted perennials with simple, alternate leaves. The inflorescence is made-up of flower clusters that are either plume, or wand like, axillary, or flat-topped. Goldenrods have both yellow ray and disk flowers, which are specialized types of flowers restricted to the Aster family. One species of goldenrod has white flowers (*Solidago bicolor*, white goldenrod).



Goldenrods are in the family Asteraceae (the Aster family) with North America having the highest diversity of goldenrods in the world. Of the nearly 100 species and varieties in the world, only one species is found in Europe

and Asia, a few in South America and the remainder occurring in North America. In Delaware, there are 25 species and varieties of the genus *Solidago* and 2 species and 2 varieties of the genus *Euthamia*. Of the 25 *Solidago* species in Delaware, 9 are thought to be rare in the state.

Goldenrods begin flowering in mid-summer and continue to bloom into the fall. One of the earliest goldenrods to bloom is *Solidago juncea* (early goldenrod), typically beginning in July. Next to be seen in flower is usually *Solidago odora* (sweet goldenrod). *S. odora* has officially been designated as Delaware's state herb, the only such designation in the country. Goldenrods are pollinated by insects and have sticky, heavy pollen that is rarely airborne. Goldenrods often hybridize, which can make identification difficult.

Goldenrods can be found growing in a variety of habitats, which include woods, old fields, swamps, salt marshes, and beaches and dunes. Goldenrods are especially abundant along country roads throughout the state.

William A. McAvoy

ALIEN WEED CAUSING INCREASING PROBLEMS

Mile-a-minute weed (*Polygonum perfoliatum*) is rapidly becoming a serious problem in the mid-Atlantic states. Annual vines of this nonnative, invasive plant form dense mats that can suppress native vegetation. The presence of this weed has been confirmed in New Castle and Sussex Counties. It has not been positively confirmed in Kent County but is suspected to occur there.

A member of the buckwheat family (Polygonaceae), mile-a-minute thrives in moist, well-drained, sunny habitats. Its pea-sized fruits are berry-like, fleshy, and blue when ripe, and are readily eaten and dispersed by birds and rodents. A unique feature of this species of *Polygonum* is a saucer-shaped sheath at the base of each bright green, triangular leaf. Mile-a-minute grows along roadsides, edges of woods, ditches, stream banks, wet meadows, and forest clearings. Rapid growth and a viney nature allow mile-a-minute to overtake native vegetation by smothering seedlings and out-competing mature plants for space, nutrients, and sunlight. Unless effectively controlled, we can expect mile-a-minute to spread throughout Delaware and become more noticeable in the next several years.

The DNPS Vision

The purpose of the Delaware Native Plant Society (DNPS) is 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 public at large on the protection, management, and restoration of native plant ecosystems. The DNPS encourages and advocates 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, fieldtrips, and a statewide membership organized by the DNPS.

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Upcoming Events

Control of mile-a-minute weed is often difficult. For small infestations, plants can be removed by hand-pulling (the use of gloves is highly recommended) and should be destroyed before seed set in late summer. Larger infestations are more difficult to deal with and a herbicide might be needed for effective control. The long term solution to this oncoming problem may rely on classical biological control techniques that will reunite mile-a-minute with its natural enemies.

It may take many years to initiate a biological control program, but once successfully established, natural enemies have the potential to keep mile-a-minute at very low, tolerable levels. The USDA Forest Service, in cooperation with the Department of Entomology and Applied Ecology at the University of Delaware, is currently exploring the possibility of mitigating the effects of mile-a-minute through biological control.

Michael A. Valenti
Delaware Department of Agriculture Forest Service

LETTER FROM THE EDITOR **ONE OF DELAWARE'S MOST ENDANGERED ECOSYSTEMS**

At almost every meeting of the DNPS, a reoccurring discussion topic is associated with the growing concerns of Delaware's forests. Most people take this valuable and aesthetic resource for granted. However, we as community, usually unintentionally, are constantly eliminating and/or degrading this ecosystem. Forests, unlike wetlands, streams and rivers, and agricultural fields, have no federal or state laws which were specifically designed for their preservation.

The DNPS is in the process of identifying proactive and cooperative opportunities to help restore forests to Delaware. One such opportunity is supporting the Nature Conservancy. The Nature Conservancy seeks volunteers to help in collecting seeds of native trees and shrubs from forests at Milford Neck (in southeast Kent County) for a reforestation project at TNC's Milford Neck Preserve. Anyone interested in working on this project or needs more information, please call Mark Zankel at (302) 369-4146. Seed collecting will take place on Friday, October 16 and Saturday October 17.

It has also been noted that the biggest obstacle associated with reforestation efforts is labor. Plants can usually be acquired through different funding mechanisms. But when it comes to planting, warm bodies are hard to find. The DNPS is considering developing a volunteer on-call phone list for such efforts as they arise. Volunteering to be on the list is not a commitment, it just allows you to be contacted as a potential planter. Don't worry about not knowing how to plant trees. There will be experts present to train and help you; its really simple. If you are interested contact Rick McCorkle at (302) 653-9152, ext 17.

From the Editor



PICK THE TURK'S CAP

Q. 'Tis the season to plant bulbs. So I thought a few useful tips might be appropriate.

A. Using bulb planters: Bulb planters are tapered metal cylinders from six to ten inches tall. They typically have depth markings on their sides and a D-shaped handle. The cylinder is pushed into the soil and removed, usually taking a plug of soil with it. The bulb is placed in the hole and the plug is replaced. Many gardeners prefer a trowel to the hand-held bulb planter. However, bulb planters are useful in tight spots, provided the soil is loose. I used on once, and broke it after five minutes. I've been a trowel man ever since.

A. When buying bulbs: Avoid "bargain mixes," which may just be a mix of bad or undersized leftovers. Always look for the largest bulbs of each type. They should be solid, not squishy. Don't buy bulbs with mold on their top crowns or basal plate (bottom). Solid plastic bags without holes are generally not good for bulbs. These containers create conditions ripe for these problems. Try those in net bags or loose.

A. When to plant bulbs: Popular planting times for bulbs is the fall, and secondly the spring. This is because most bulbs bloom in the spring. However, there are a number of bulbs that bloom in the summer and even in the early fall. As for planting times, many source suggest and even sternly indicate that specific times are crucial. I have had success virtually any time of year. I have planted bulbs in the early summer, when I can get quality bulbs at clearance sales. However, never plant bulbs once the ground freezes.

I recommend putting a general, slow-release fertilizer on the ground surface after you plant bulbs. It provides a nutrient sources for the storage root and feeder roots. The key factors associated with bulbs seem to be desiccation (dehydration), excessive moisture, and lack of nutrients. When you plant a bulb off-season, don't necessarily expect it to bloom until next year. It is not uncommon for a bulb to have a magnificent bloom the first year, then disappear. This is often because the first year the bulb used its storage root and was not able to replenish it. Small mammals, especially vole, may also decimate stands of bulbs. If your bulb blooms well through the second year, its chances of having many years of blooms greatly increase.

By Douglas Janiec
Ref.: (Ettlinger, 1990)

DNPS WEB PAGE

For those of you who may have noticed, little has been done regarding the updating of the webpage. But rest assured, it has not been forgotten. During the fall, extensive work will be performed on this site. In addition, the DNPS webpage page will have its own dedicated site. So please accept our apologies and look forward to a new and improved DNPS web site.

Until the updates are complete and for a limited time thereafter, you will still be able to access the website at the current address.

www.delanet.com/~wildlife.

NATIVE PLANT COMMUNITY HIGHLIGHT: YELLOW POPLAR FOREST COMMUNITY

(*Liriodendron tulipifera* Forest Community: a community profile)

Introduction

This stately tree, that names the community type, is also known as tulip tree, tulip-poplar, white-poplar, or whitewood, and is widely distributed throughout much of eastern North America. Ranging from Vermont to Michigan and south to Florida and Louisiana, *Liriodendron tulipifera* is most frequently found as an associate in several different community types and only rarely occurs in nearly pure stands. In Delaware, forest stands that support yellow-poplar in pure stands, or as the dominant tree, usually occur in small patches while elsewhere in its range (e.g., in the central and southern Appalachians) this community may form broad bands covering hundreds of acres.

Community structure/composition

The community is characterized by yellow poplar in pure stands or as the dominant canopy species. While old growth stands may reach 250-300 years old and as tall as 200 feet with trunks up to 8 feet in diameter, more often they are under 150 feet with trunk diameters of two to four feet. The latter dimensions typify Delaware's *Liriodendron tulipifera* forests some of which are known to be upwards of 200 years old. Infrequent canopy trees in this community type include *Quercus alba* (white oak), *Q. rubra* (northern red oak), *Q. velutina* (black oak), *Q. prinus* (chestnut oak), *Fraxinus americana* (white ash), and *Liquidambar styraciflua* (sweet gum). The sub-canopy may be diverse with such species as *Carya glabra* (pignut hickory), *C. tomentosa* (mockernut hickory), *Fagus grandifolia* (beech), *Sassafras albidum* (sassafras), *Nyssa sylvatica* (black gum), *Prunus serotina* (black cherry), *Acer rubrum* (red maple), and *Carpinus caroliniana* (ironwood). The shrub layer may include an abundance of *Lindera benzoin* (spicebush) and/or *Viburnum acerifolium* (maple-leaved viburnum), with lesser numbers of *Viburnum prunifolium* (black haw), *V. dentatum* (arrow-wood), *Euonymus americanus* (burning bush), *Cornus florida* (flowering dogwood), *Hamelis virginiana* (witch-hazel), *Corylus americana* (hazel-nut), *Kalmia latifolia* (mountain laurel), *Vaccinium pallidum* (hillside blueberry), and *Rhododendron periclymenoides* (pinkster flower). Vines may be sparse or dense (usually in disturbed sites) and include native species such as *Toxicodendron radicans* (poison-ivy) and *Menispermum canadense* (moonseed), and invasive exotics such as *Rubus phoenocalisius* (wineberry), *Lonicera japonica* (Japanese honeysuckle), and *Celastrus orbiculatus* (oriental bittersweet). The herb layer may vary substantially from one forest stand to the next and includes some combination of the following species: *Arisaema triphyllum* (jack-in-the-pulpit), *Claytonia virginica* (spring beauty), *Podophyllum peltatum* (bloodroot), *Asarum canadense* (wild ginger), *Thelypteris hexagonoptera* (broad beech-fern), *Botrychium virginianum* (rattlesnake fern), *Circaea lutetiana* (enchanter's nightshade), *Sanguinaria canadensis* (bloodroot), *Erythronium americanum* (trout-lily), *Adiantum pedatum* (maidenhair fern), *Aster divaricatus* (white wood aster), *Agrimonia pubescens* (downy agrimony), *Sanicula canadensis* (snakeroot), *Cimicifuga racemosa* (black snakeroot), *Panax trifolium* (dwarf ginseng), *Viola* spp. (violets), *Polystichum acrostichoides* (Christmas fern), and *Cardamine concatenata* (toothwort), among many others.

Delaware's yellow poplar forests are generally found between 100 and 350 feet on steep boulder-strewn slopes of the piedmont. It is found on well-drained Glenelg and Manor loam soils. Less frequently the community may be found on floodplains on wet Hatboro silts. In these wetter soils associates in the yellow poplar floodplain forest may include species found in mesic to hydric habitats, such as

Platanus occidentalis (sycamore), *Acer negundo* (box-elder), *Alnus serrulata* (smooth alder) and *Salix nigra* (black willow).

Community dynamics/succession

The yellow poplar-dominated forest is a mid-successional community. The species is shade-intolerant and requires canopy openings, such as occurs when tree gaps form, to develop properly. As the trees that compose the yellow poplar forest age and reach senescence they are replaced by other hardwoods such as oaks, beech, hickories and maples. One reproductive advantage the yellow poplar has that helps it maintain itself in the forest is the ability of its seeds to remain dormant for several years in the leaf litter and humus. When tree fall canopy gaps form there may be a substantial yellow poplar seed bank present. Yellow poplar seedlings that develop from this seed bank grow rapidly and are able to out-compete other species.

Distribution

The *Liriodendron tulipifera* Forest Community is principally found on the steep and rocky slopes of the piedmont. It is primarily found in the Brandywine River valley. Exceptional examples are known from Brandywine Creek State Park (e.g., the "Tulip Tree Woods," and the Flint Woods; both described by Lorraine Fleming in Delaware's Outstanding Natural Areas and their Preservation, and in the White Clay Creek watershed (e.g., in the "Judge Morris Estate" forest). It occurs infrequently on the coastal plain.

Rare species

Numerous state rare plant species can be found in this forest community. A few examples include *Panax quinquefolius* (American ginseng), *Hydrastis canadensis* (golden seal), *Allium tricoccum* (small white leek), *Apelctrum hyemale* (putty-root), *A. moglossum atriplicifolium* (pale Indian-plantain), *Galium lanceolatum* (Torrey's wild licorice), *Asclepias exaltata* (poke milkweed), *Botrychium matricariifolium* (chamomile grape-fern), *Corydalis flavula* (yellow corydalis), *Trillium cernuum* (nodding trillium), and *T. erectum* (ill-scented trillium).

Keith Clancy

DNPS TRIP TO IRON HILL PARK

On July 25, a small group of DNPS members met at Iron Hill to experience the floristic offerings this geologically and ecologically unique park. Under clear skies and ideal temperatures fellow DNPS members and expert botanists Janet Ebert and Jack Holt led a walk sharing their knowledge of the plants and geology of this site.

Iron Hill, like its neighbor to the northwest (Chestnut Hill), represents an "island of gabbro" surrounded by coastal plain sediments. The soils are primarily Neshaminy and Montalto silt loams. Iron Hill has been documented as an important pre-historical settlement and was known more recently (i.e., in the eighteenth and nineteenth centuries) to be a site important for its iron-ore deposits, which were mined extensively during this time. Unlike the surrounding coastal plain which ranges in height from 0-70 feet above sea-level Iron Hill ranges from 140 to 300 feet above sea level.

Thanks to Bev Barnett, DNPS's first member, for recording the plants that were observed. Because of her efforts I am able to somewhat accurately summarize the diversity of plants that we observed. She recorded more than 55 species, which represents only a small percentage of the total species found at Iron Hill Park, and only a few of the approximately dozen rare plants known from here were observed. A complete listing will be present on the web page in the near future.

Please join us on our next field trip (scheduled for Sunday, November 1, 1998) so you won't be wondering just what were all the other plants we saw on that field trip.

UPCOMING EVENTS

THE DNPS WILL BE PARTICIPATING IN THE 5TH ANNUAL TREE SPREE THAT TAKES PLACE SATURDAY, OCTOBER 24, 1998 FROM 10 A.M. TO 3 P.M. AT THE RED CLAY RESERVATION. THIS EVENT, WHICH IS A CELEBRATION OF THE BENEFITS OF TREES TO OUR ENVIRONMENT, IS HOSTED BY THE DELAWARE CENTER FOR HORTICULTURE, THE RED CLAY RESERVATION, MT. CUBA CENTER, AND THE NEW CASTLE COUNTY TREE COMMISSION. FOR MORE INFORMATION, CONTACT GARY SCHWETZ AT (302) 568-6265. THE DNPS PLANS TO HAVE A DISPLAY AND POSTER THAT INTRODUCES PEOPLE TO OUR SOCIETY AS WELL AS ILLUSTRATES THE IMPORTANCE OF TREES AND OUR FORESTS.

FIELD TRIP: THE DNPS WILL BE SPONSORING A FIELD TRIP ON SUNDAY, NOVEMBER 1ST. WE WILL EXPLORE ANCIENT ZERIC SAND DUNE RIDGES ALONG THE NANTICOKE RIVER AND ATLANTIC WHITE CEDAR AND BALD CYPRESS SWAMP FORESTS. FOR MORE INFORMATION ON MEETING TIME



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THIS IS THE LAST COMPLIMENTARY NEWS LETTERS FOR NONMEMBERS