

The Turk's Cap

THE NEWSLETTER OF THE DELAWARE NATIVE PLANT SOCIETY WINTER 98

A HEARTY WELCOME TO OUR NEW MEMBERS

October-December

Joe Arsenault

Delaware Department of Agriculture (Don Eggen)

John Graham

Carl & Dolores Solberg

HOW CAN I GET INVOLVED?

DNPS is open to everyone ranging from the novice to expert gardener/botanist. One of the primary goals of the society is to involve as many individuals as possible.

Presently, most of Society-related activities and efforts have been performed by only a select few members. The DNPS plans on becoming more active in a number of directions in 1999. Specific 1999 goals will be determined in the upcoming months, and they will be undoubtedly requiring involvement from more of our members.

The next newsletter will include a brief member-specific questionnaire (voluntary of course), the findings of which will be posted in the web page. This will facilitate communication and cooperation within the DNPS.

NATIVE PLANT HIGHLIGHT: EVERGREENS

During the winter months, native evergreen plants are conspicuous in the forests of Delaware and provide us with pleasant observations during snowy woodland hikes. Evergreen plants are those which remain green throughout the year and do not drop their leaves at the end of the growing season as deciduous plants do. The evergreen condition that many families and species of plants have is beneficial in many ways. Short growing seasons, especially in the north, limits the amount of energy available to a plant. Having evergreen leaves, photosynthesis can continue longer into the fall and start sooner in the spring. Being an evergreen species also eliminates the need for growing a whole new set of leaves each year, which allows the plant to channel more energy into reproduction. During the winter, water is often unavailable to plants since it is frozen. The thick, leathery leaves of most evergreen plants have a waxy coating that helps to cut down on evaporation and water loss from drying winds. Evergreen leaves also have the ability to channel water from within cell walls to spaces

between cells. This adaptation allows less damage to occur from the freezing and expansion of water during times of low temperatures. Another adaptation of evergreen plants is to increase the sugar content of leaf cells, this helps to lower the freezing point of the remaining water within the leaves. The following are just a few of the native evergreen plants that are frequently seen in Delaware's forests:

American holly (*Ilex opaca*)
Atlantic white cedar (*Chamaecyparis thyoides*)
Christmas fern (*Polystichum acrostichoides*)
clubmosses (*Lycopodium obscurum*, *Huperzia lucidula*, and *Diphasiastrum digitatum*)
eastern red cedar (*Juniperus virginiana*)
inkberry (*Ilex glabra*)
loblolly pine (*Pinus taeda*)
mountain laurel (*Kalmia latifolia*)
partridgeberry (*Mitchella repens*)
rattlesnake plantain orchid (*Goodyera pubescens*)
spotted pipsissewa (*Chimaphila maculata*)
trailing arbutus (*Epigaea repens*)
Virginia pine (*Pinus virginiana*)
wintergreen (*Gaultheria procumbens*)
woodferns (*Dryopteris marginalis* and *D. intermedia*)

William A. McAvoy

NOVEMBER FIELD TRIP WAS ENJOYED BY ALL!!

Only a handful of souls braved cloudy and 50 degree temperatures to explore the ancient xeric sand dune ridges along the banks of the Nanticoke River within the Nanticoke State Wildlife Area. At this time of the year there were not many plants in bloom (we were a month too early for that!), most of the hardwoods had shed their leaves, and the date and weather clearly were signs that winter was near (though December's warm spell made it seem like summer again). Anyway, field trip participants had the opportunity to see the overall structure, composition and physiognomy of these unique xeric ridges that are irregularly shaped and surrounded by more mesic and lower elevated terrain (and taller forest). These ridge-tops are primarily composed of low-stature Virginia pine and/or mixed oaks (mostly water, post, southern red, or blackjack). In addition, each ridge-top typically contained openings of bare sand devoid of vegetation. The herbaceous cover found on these ridge tops is sparse with scattered sedges, grasses, legumes, lichens, and mosses. Of particular interest to all were the unusual sand hickories (*Carya pallida*) common to this part of Delaware, several rare plants

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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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such as the wintergreen (*Chimaphila umbellata* ssp. *cisatlantica*), and the box huckleberry (*Gaylussacia brachycera*); the latter proved to be much more abundant here than previously thought. In addition, we discovered that two species of very similar huckleberries (the dangleberry, *Gaylussacia frondosa*, and the black huckleberry, *G. baccata*) that form dense colonies and are very common in the Wildlife Area were readily distinguishable at this time of the year: one still had most of its leaves at this time, which were reddish, while the other had lost most of its leaves.

Most of our time on this field trip was spent on the well-drained sandy soils of the uplands and only a brief time was spent exploring the Atlantic white cedar wetlands that occur along Broad Creek and the Nanticoke River. Likewise, since it was getting late in the day, only two of us were able to see the bald cypress of Trussums Pond and along the Hitch-Pond Branch. A more in-depth look at these communities will have to wait for a future field trip.

Keith Clancy

LETTER TO THE EDITOR

DESPITE ITS ECOLOGICAL SIGNIFICANCE, THE GORDONS POND AREA REMAINS A TARGET FOR A LEWES-REHOBOTH BIKE ROUTE

The Gordons Pond area of Cape Henlopen State Park consists of 347 acres of land, formerly preserved as a wildlife area. This area contains a variety of natural communities and includes a globally rare loblolly pine maritime forest/woodland community found on islands in Gordons Pond and to the southwest of the pond along the saltmarshes bordering Lewes Creek. These forest communities are ecologically distinct from inland loblolly forests. There are also several state listed rare plant species present in the area. Furthermore, on March 13, 1992, Delaware nominated this area for listing under the "Convention on Wetlands of International Importance especially as Waterfowl Habitat" sometimes referred to as the Ramsar Treaty. Listings for the Convention are areas to be preserved or managed for the primary purposes of protecting the living resources therein.

Despite the ecological significance of the Gordons Pond area politicians, developers and tourist interests have talked for twenty-six years of building a bike path between Lewes and Rehoboth Beach through this area. However, recent developmental efforts have resulted in the possibility of the bikeway becoming a reality within the next 12 to 18 months. Despite significant resident resistance, legislature is working towards adding significant funding for this project through the Bond Bill. Some State Senate members appear to be ignoring the numerous ecological studies identifying this resource as one of unique and irreplaceable significance.

If you are familiar with this area, you know that it deserves proper planning and that changes in the park should not be irresponsibly added to the Bond Bill. Our legislators need to understand the ecology of the area, the history of community opposition, and that a Master Plan is being developed. To achieve this we need to get as many calls and letters in to our legislators as possible over the next couple of weeks explaining the situation and asking them to vote to repeal of Section 75 of the Bond Bill. Additionally, letters should be sent to the Governor opposing the path in that area with copies going to Chazz Salkin of the Division of Parks and Recreation.

All members of the DNPS are encouraged to write or call their legislators, the Governor and the Director of the Division of Parks and recreation to express their opposition to this proposed bike trail. Governor Thomas Carper can be reached at the Tatnall Office Bldg,

Dover, DE 19901, (302) 739-4101, or 577-3210, and the Director of Parks and Recreation's Chazz Salkin can be reached at Division of Parks and Recreation, DNREC, 89 Kings Hwy, Dover, DE 19903, (302) 739-5285. For more information about this politically-motivated bike trail you can contact Keith Clancy at (302) 674-5187/dnplant@aol.com, or Cornelia Melvin at (302) 945-4708/cornelia.melvin@dol.net

Base letter provided by: Cornelia Melvin

PICK THE TURK'S CAP

In past newsletters, I have been passing on lots of interesting information to DNPS readers. But this issue, I want to see how good your general knowledge is about common gardening equipment and materials. I made a short quiz for you. So test yourself. Just match the definition with the right word. Good Luck. (not all of the answers are real)

- | | |
|------------|-----------|
| 1. Tankage | 4. Widger |
| 2. Dibble | 5. Spud |
| 3. Mattock | 6. Trug |
- A. A common type of greenhouse sprinkler that provides a mist.
 B. Tool used for making holes for transplants and bulbs.
 C. Tool used to remove bark from dead or old trees.
 D. The dried, ground, and rendered by-product of slaughtered animals minus the processed commercial meat.
 E. A thin hose attached to a birdbath providing a slow release of water.
 F. Tool used to remove scales from leaves and fragile stems.
 G. Tool used for transplanting small seedlings.
 H. Shallow basket made of wide wooden strips, with short wooden feet and a large handle.
 I. The capacity of a hand sprayer.
 J. A combination hoe-ax, or -pick used to break up hard ground and grubbing stones.
 K. Tool used to graft trees and shrubs having hollow piths.

To avoid getting more test like these, send in your questions to the editor: Douglas Janiec, 908 Pickett Lane, Newark Delaware, 19711, or e-mail wildlife@delanet.com.

Answers: 1-D, 2-B, 3-J, 4-G, 5-C, 6-H

DNPS WEB PAGE

The DNPS apologizes for the tardiness of the web page. The web page is an effort that is totally voluntary. Therefore, during the holidays, the required amount of time necessary to complete the web page was not plentiful. After much consideration, it was decided to totally Redesign the page, further adding to the delays. Despite this, I think you will be happy with the outcome. The web page will be accessible on February 1. Work on it will continue for the following months until it is completed. Once it is running, I encourage comments and input towards further improving this conservation tool.

www.delanet.com/dnpswp

NATIVE PLANT COMMUNITY HIGHLIGHT:
BALD-CYPRESS—RED MAPLE-(Swamp Tupelo-Black Gum)
SEASONALLY FLOODED FOREST COMMUNITY
(Taxodium distichum-Acer rubrum-Nyssa (biflora, sylvatica))

INTRODUCTION

Bald cypress is a deciduous member of a natural group of plants referred to as Gymnosperms (or conifers); plants that produce “naked” seeds not enclosed by an ovary. The bald cypress produces delicate fern-like green leaves (needles) that occur in two ranks (two rows along the twig) in a flattened plane. In the autumn these needles turn reddish-brown after the first frost before falling to the ground. In Delaware bald cypress red maple [swamp tupelo-black gum] occurs on the coastal plain in swamps adjacent to rivers and creeks. It is found primarily in Sussex County, with the best stands found along the James Branch (a tributary of the Nanticoke River). Disjunct occurrences are found in the Murderkill River and Tidbury Creek drainages of Kent County. The Tidbury Creek occurrence is a small stand (several acres) of tall (> 100 feet) and mature (\pm 120 years in age) trees that appears to be a natural occurrence and was only just discovered in the summer of 1998. The bald cypress is at the northern-most limit of its native range in Delaware.

The Bald Cypress is a majestic tree that may reach heights of 150+ feet and up to 1500 years in age. The flared, swollen or buttressed trunk bases are characteristic of this species and may be more than 12 feet in diameter, though Delaware trees are not quite this robust. Odd swollen bottle-shaped trees occur along the James Branch; the misshapen trunks are believed to result in response to flooding regime. Likewise, cypress “knees” are a unique feature of this species and are known to reach heights of 10 to 12 feet. However, knees of Delaware trees are usually not more than three feet in height. The heights of these knees are believed to reflect the height at which the tree is subjected to prolonged flooding. It is also believed that the cypress knees function in aeration of the root system and as respiratory organs.

COMMUNITY STRUCTURE/COMPOSITION

This community is characterized by bald cypress *Taxodium distichum* (bald cypress) as the canopy dominant or co-dominant tree. It is frequently found growing along side other trees such as *Acer rubrum* (red maple), *Nyssa biflora* (swamp tupelo), and/or *Nyssa sylvatica* (black gum). This community occurs on soils of varying compositions of silt and loam (usually mapped as Johnston silt loam by SCS) in seasonally flooded streamside wetlands that receive periodical overbank flooding. *Taxodium* may form dense stands with almost 100 percent cover, or more often with scattered maples and gums. Cypress knees are abundant and bottle-shaped trunks characterize many of the trees along the James Branch. It is believed that the presence of *N. biflora* is restricted to Sussex County bald cypress stands but its exclusion from Kent County cypress swamps needs confirmation. Additional associates in the tree canopy include *Liquidambar styraciflua* (sweet gum), *Pinus taeda* (loblolly pine), *Chamaecyparis thyoides* (Atlantic white cedar), and *Fraxinus pennsylvanica* (green ash). Other infrequent canopy associates include *Liriodendron tulipifera* (tulip poplar), *Populus heterophylla* (swamp cottonwood), and *Quercus michauxii* (swamp chestnut oak). The shrub stratum can be diverse and includes *Clethra alnifolia* (sweet pepperbush), *Ilex verticillata* (winterberry), *I. opaca* (American holly), *Magnolia virginiana* (sweet bay magnolia), *Itea virginica* (Virginia willow), and *Viburnum dentatum* var. *lucidum* (arrow-wood). Other less abundant shrubs are *Cornus amomum* (silky dogwood), *Rhododendron viscosum* (swamp azalea), *Lindera benzoin* (spicebush), *Sanbucus canadensis* (elderberry), *Rosa palustris* (swamp rose), and *Euonymus americanus* (strawberry bush). Infrequent shrubs may include *Symplocos tinctoria* (sweet leaf), *Aronia arbutifolia* (chokeberry), *A. sinina triloba* (paw-paw), *Leucathoe racemosa* (fetterbush), and *Cephalanthus occidentalis* (button-bush). The herbaceous layer is variable and can be quite diverse. A combined total of 75 vascular plant species were noted from twelve *Taxodium distichum* forest stands in a 1992 study by the Delaware Natural Heritage Program. *Boehmeria cylindrica* (false nettle) has been observed in all *Taxodium* swamps. Other common herbs include

Lycopus rubellus (water horehound), *Impatiens capensis* (jewelweed), *Saururus cernuus* (lizard's-tail), *Woodwardia areolata* (netted chain-fern), *Peltandra virginica* (arrow arum), *Osmunda cinnamomea* (cinnamon fern), and *O. regalis* var. *spectabilis* (royal fern). Infrequent to rare herb associates are *Arisaema triphyllum* ssp. *triphyllum* (jack-in-the-pulpit), *Lobelia cardinalis* (cardinal flower), *Carex crinita* (a sedge), *C. folliculata* (a sedge), *C. debilis* (a sedge), *C. intunescens* (a sedge), *Iris versicolor* (blue flag), *Leersia virginica* (white grass), *Oxypolis rigidior* (water-dropwort), *Thalictrum pubescens* (meadow-rue), *Sphagnum* sp. (sphagnum moss), *Viola cucullata* (blue marsh violet), and *V. primulifolia* (primrose-leaved violet). Vines are a conspicuous component and include *Smilax rotundifolia* (round-leaved greenbrier), *Parthenocissus quinquefolia* (Virginia creeper), *Toxicodendron radicans* (poison-ivy), and the exotic *Lonicera japonica* (Japanese honeysuckle) as the most abundant. In Delaware, the only aspect that differentiates a bald cypress community from a mixed hardwood floodplain community is the presence of bald cypress itself; this may actually reflect historical anthropogenic activities that has resulted in a blurring of ecological differences. In nearly all Delaware instances, *Taxodium distichum* assumes dominance in the canopy over the maples and gums. The soils and associated flora between bald cypress and mixed hardwood swamps are relatively the same. In pristine conditions, hydrology, specifically flooding regime, is probably the single most important factor dictating the presence and integrity of bald cypress swamp communities.

FAUNA

Delaware's bald cypress red maple-[swamp tupelo- black gum] swamps provide home and habitat to myriad groups of animals too numerous to list but these include many species of birds, moths and butterflies, dragonflies and damselflies and numerous other invertebrates, frogs, toads, salamanders, turtles, snakes, fishes, and mammals such as squirrels, rabbits, deer, opossum, raccoons, fox, river otter, mice, and possibly bobcats.

COMMUNITY DYNAMICS/SUCCESSION

Bald cypress is a slow-growing and very long-lived species and as such, forest stands that support a dense cover of this species are expected to be climax in succession. As long as the proper flooding regime is maintained and logging is excluded this community should be relatively stable and long-lasting.

DISTRIBUTION

In Delaware this coastal plain community is primarily found in Sussex County where it is best developed along the James Branch. Other stands are known from the Indian River drainage and within the Great Cypress Swamp where several remnant stands may be found. The *Taxodium distichum-Acer rubrum-Nyssa (biflora, sylvatica)* Seasonally Flooded Forest Community, or nearly identical related communities, range from Delaware south to Florida and west to Texas and southern Indiana.

COMMENTS

Bald cypress at one time was abundant, along with Atlantic white cedar, within the 50,000 acre (now reduced to about 11,000 acres) Great Cypress Swamp along the Maryland-Delaware state line in southern Sussex County. After centuries of logging and several major fires only small remnant stands may be found in this swamp. Efforts are now under way to develop appropriate management and restoration activities within the Great Cypress Swamp that may result in the restoration of this community within this swamp.

CONSERVATION STATUS

In Delaware this is a rare natural community and of conservation concern. It has a Delaware Natural Heritage rank of S2 (6 to 20 occurrences throughout the state).

Keith Clancy

TREE SPREE 98 RECAP

IT WAS A NEAR PERFECT DAY, AND UNSEASONABLY WARM. THE TREE FOLIAGE WAS IN SPECTACULAR COLOR. AND EVERYBODY WAS IN GREAT SPIRITS. TREE SPREE WAS IN FULL SWING. THE DNPS WOULD LIKE TO THANK GARY SCHWETZ AND THE REST OF THE GROUP FOR SUCH AN ENJOYABLE AND INFORMATIVE AFTERNOON.

IN CASE YOU ARE NOT FAMILIAR WITH TREE SPREE, IT IS AN EXTREMELY RELAXING AND FAMILY ORIENTED EVENT THAT PROMOTES THE PROPAGATION OF TREES. THERE ARE REPRESENTATIVES FROM MOST OF THE MAJOR AND MANY OF THE MINOR CONSERVATION GROUPS IN THE AREA, GOVERNMENT AGENCIES, AND CRAFTSMEN/WOMEN. THE SURROUNDINGS ARE SECOND TO NONE IN THE AREA.

AS LONG AS THIS EVENT CONTINUES, IT HAS THE COMPLETE SUPPORT OF THE DNPS. UNTIL NEXT YEAR.

**DELAWARE NATIVE PLANT SOCIETY
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DOVER, DELAWARE 19903**

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