

The Turk's Cap

THE NEWSLETTER OF THE DELAWARE NATIVE PLANT SOCIETY AUTUMN 1999

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A CALL FOR ARTICLES

words flow like pine sap
for writing is an art to
be in The Turk's Cap

We'll take just about anything from gardening tips to book reviews to poetry. Of course, it has to be about native plants, or issues related to native plants; just a minor constraint. Your imagination is the real key.

Contact Eric Zuelke for more information at (ezuelke@juno.com), or Keith Clancy at 302.674.5187.



A COLORFALL WELCOME TO OUR

NEWEST MEMBERS

July through September

Ken Dunne

Bryan Samuel



LETTER FROM THE PRESIDENT

Well, lo and behold, it is autumn once again (what happened to the summer?). The heat and drought conditions that characterized the summer are but a distant memory. I hope most, if not all, of the native trees, shrubs and herbs that were planted this growing season have survived. Now is the time to start collecting, judiciously, seeds to be germinated this fall or first thing next spring. I really should look into buying a place so I can really participate in all the planting fun; there's really only so many plants one can fit on the porch! The property doesn't even need a house on it. Any old field will do nicely; one that I could reforest with species that were probably there prior to

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The DNPS Vision

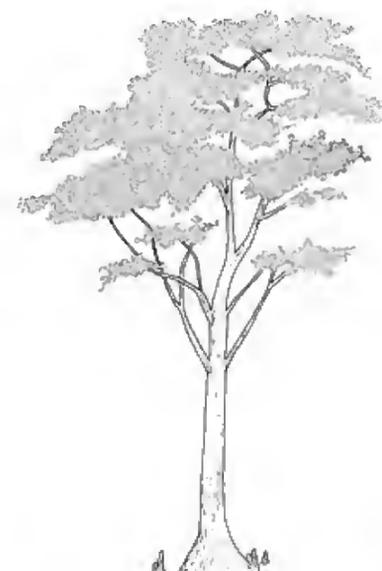
The purpose of the Delaware Native Plant Society (DNPS) is to participate in and encourage the preservation, conservation, restoration, and propagation of Delaware's native plants and plant communities. The Society provides information to government officials, business people, educators, and the general 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, fieldtrips, and a 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 expert botanist. One of the primary goals of the society is to involve as many individuals as possible.

The DNPS is working on two significant projects at this time. We have recently initiated discussions with staff from the Divisions of Parks and Recreation and Fish and Wildlife, DNREC, about potential reforestation on their lands. A second initiative that we are pursuing is the establishment of native plant nurseries in each county. We encourage everyone to participate in these endeavors.

For more information on how to get involved, call 302.674.5187, or E-mail at



LETTER FROM THE EDITOR**THOUGHTS ON AUTUMN**

As my favorite season of the year descends upon us, this issue of our beloved newsletter takes on the themes of the season. Halloween, spooks and ghouls bring candy galore this season, but this issue brings another icon of Halloween, bats, particularly their role in plant pollination. The Native Plant Highlight addresses a less supernatural phenomenon of the season; the changing colors of different species of maple trees. Our Native Plant Community Highlight covers the smooth cordgrass herbaceous community, which, if you get a chance to visit the saltmarshes of Delaware during October and November, you will be rewarded with a wonderful display of the subtle orange and red hues of the senescing *Spartina alterniflora* culms. It's definitely a unique turn on the hum-drum greens and browns of the saltmarsh in summer. The Pick The Turk's Cap talks about which plants are best for fall and winter food sources for birds and why. And our feature article comes from Dr. Milton Beck of Dover Air Force Base. Dr. Beck talks about the Old Woods located on the base.

During the course of putting together *The Turk's Cap*, we've tried to make it a venue of communication for our members and a place where everyone can keep up with events and topics of interest. So far I think we're doing a good job of that. Now we'd like to hear more from you. It's my hope that our members or anyone else who picks up a copy of this news

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PLANT-ANIMAL HIGHLIGHT**BAT POLLINATION**

One of the more intriguing and exotic types of co-evolution is that of chiropterophily, or pollination of flowers by bats (bats are in the animal Order Chiroptera). Bats are primarily known for their use of sonar to locate insects on the wing. However, certain groups of bats, particularly species in the Order Macroglorinae, or "big-tongues", which live in southern Asia and the Pacific have co-evolved with plants so much that pollen and nectar has come to satisfy 100% of their daily nutritional requirements. Flower pollinating bats show extreme morphological variations to suit their specialized feeding habits. They have much longer, smoother snouts than the typical insectivorous bat because they have evolved an incredible sense of smell to detect chemical signals and fragrances from flowers, such as stale, musty or rancid odors reminiscent of urine-like smells or sweaty feet. Their sonar abilities are comparatively undeveloped when compared to North American insectivorous bats. Some species have long tongues with papillae on the end, and in some cases, a soft brush-like tip to lap up the pollen/nectar mixture of bat flowers. They also have very few teeth and one species has specialized hairs with scales on them that were adapted for pollen transport.

Bat flowers are normally large, sturdy, have wide mouths, are white or drab in color, have strong fragrances and copious amounts of nectar and pollen. Like bats, these flowers have some striking adaptations to suit their unique relationships. An obvious one is that some bat flowers are nocturnal to coincide with the peak time of activity of the bats and the pale or white colors enables them to be highly visible in the dimness

of nighttime. They have numerous stamens (the baobab has about 2000 per flower), and *Agave* have large anthers, which easily dust the head of the bat and transfer the pollen. They also have made it easy for bats to approach the flowers. The sausage tree (*Kigelia aethiopica*) dangles its flowers beneath the crown on long, rope-like branches. In other species, the flowers are situated on the main trunk or the larger limbs. The kapok tree (*Ceiba*) has a pagoda shape, and the *Marcgravia umbellata* displays its flowers in a large chandelier. There are no bat-plant associations here in Delaware, so in order to experience this in the flesh you will just have to take a trip to the tropics!



Eric Zuelke, editor

RESOURCES AND REVIEWS**COMING IN THE SPRING OF 2000: CHECKLIST OF THE FLORA OF DELAWARE**

Want to know what plants occur in Delaware? Want to know whether that *Fothergilla gardenii* recommended by your landscaper is actually native to our state? The answers can be at your fingertips when you order your own copy of the first ever Checklist of the Flora of Delaware, by William A. McAvoy and colleagues. McAvoy, through the Delaware Natural Heritage Program (DNHP), is the Delaware Division of Fish and Wildlife's Botanist and is one of the most widely respected field botanists on Delmarva. If you'd like to be on the advance mailing list, or are interested in bulk orders, please contact the DNHP at 302.653.2880, or through e-mail: wmcavoy@state.de.us.

INTRODUCING THE DELAWARE INVASIVE SPECIES COUNCIL

The Delaware Invasive Species Council (DISC), was initiated in August 1998. The Council is made up of almost 30 representatives from federal, state, and local agencies; as well as private organizations. The Council's mission is: "To protect Delaware's ecosystems by preventing the introduction and reducing the impact of non-native invasive species." DISC is a non-profit organization that is actively seeking new partnerships with other interested groups. For more information, please contact Dr. Donald A. Eggen, Chair, at the Delaware Department of Agriculture, 800.282.8685 (DE only) or 302.739.4811 ext. 259.

APPALACHIAN FLORA AND SCENIC VISTAS CD AND BOOK

Appalachian Flora and Scenic Vistas has been developed for a variety of users, including: botanists, plant biosystematists, horticulturists, teachers, students, gardeners, herbalists, hikers, photographers, and, virtually anyone with a love for natural history and ecology. Appalachian Flora and Scenic Vistas has over 900 plant images (photos) representing 348 species, with notes on habitat and nomenclature. In addition, it has over 250 scenic vistas from various areas within the Appalachians.

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NATIVE PLANT COMMUNITY HIGHLIGHT**Smooth cordgrass Herbaceous Community**
Spartina alterniflora* Herbaceous Community*Community structure/composition**

A salt to brackish (polyhaline to mesohaline) regularly flooded marsh community that occurs on shallow to deep peats. It is dominated by the smooth cordgrass, which often gives the appearance of a monospecific stand. The *Spartina alterniflora* Herbaceous Community is generally found in the "low" (between mean sea-level and mean high water level) part of the saltmarsh (where flooding occurs on a daily basis), and covers vast areas of Delaware's estuarine habitats. The short form of *S. alterniflora* forms extensive stands throughout much of this community, while the tall form occupies the lowest zones of the marsh, usually restricted to creek and gut banks and the upper borders of tidal flats. Infrequent associates in this community include *Limonium carolinianum* (sea-lavender), *Atriplex prostrata* (spearscale), *Salicornia* spp. (saltworts), *Baccharis halimifolia* (groundsel bush), *Iva frutescens* (marsh elder), *Kosteletzkya virginica* (seashore mallow), *Hibiscus moscheutos* (marsh mallow), *Amaranthus cannabinus* (water-hemp), *Pluchea odorata* (salt-marsh fleabane), *Tripsacum dactyloides* (gama-grass), *Spartina patens* (salt hay), *S. cynosuroides* (big cordgrass), *Juncus gerardii* (black grass), *J. roemerianus* (needle rush), *Distichlis spicata* (salt grass), and *Phragmites australis* (common reed). Most of these associates are found on spoil banks along ditches, at edges where roads cross the marsh, in the higher portions of the marsh, or along and in salt pannes. Microscopic algae may be abundant and include numerous diatoms, as well as other algal groups. A study by M. J. Sullivan (a 1975 University of Delaware dissertation) reported 82 edaphic diatom species (*Navicula* and *Nitzschia* were the most abundant genera, comprising more than half the total diatom flora, with 27 and 16 species, respectively) from a *S. alterniflora* marsh along Canary Creek, near Lewes.

Distribution

In Delaware the *Spartina alterniflora* Herbaceous Community comprises thousands of hectares of salt and brackish marshes throughout the Delaware and Inland Bays estuaries. This community or slightly different variants are found from Newfoundland and Quebec south to Florida, west to Texas, and disjunct to South America and north Europe.

Synonymy/affinities

This community is classified within The Nature Conservancy's *Spartina alterniflora* Tidal Herbaceous Alliance and has affinities to both their *Spartina alterniflora* (*Ascophyllum nodosum*) Acadian/Virginian Zone Herbaceous Vegetation and *Spartina alterniflora*-*Lilaeopsis chinensis* Herbaceous Vegetation.

Other species

The *Spartina alterniflora* Herbaceous Community is used extensively by various animal assemblages, including birds such as Marsh Wrens, Short-eared Owls, Northern Harrier, Willet, Seaside Sparrow, Red-winged Blackbirds, Snow Geese, and

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NATURAL QUOTES

'How blind that cannot see serenity.'

Henry David Thoreau, Walden

FEATURE ARTICLE**THE OLD WOODS AT DOVER AIR FORCE BASE**

Dover Air Force Base (DAFB) is located in Kent County and comprises approximately 4,000 acres of land, including annexes, easements and leased property. The surrounding area is primarily cropland, industrial lands and wetlands. There were scattered wooded areas on the site before Dover Municipal Airfield was built in 1941; these were small, each being less than 10 to 15 acres in size (based on an analysis of a 1937 aerial photograph of the site). While some of these small forest tracts were cleared during base construction, two significant stands remain intact. Though one of these is now much smaller than in 1959, both tracts represent surviving Oak-Hickory woods.

One isolated parcel of woods was used for bomb storage during WW II. The predominant tree in this area is the pin oak (*Quercus palustris*). Other trees in this forest stand include the sweet gum (*Liquidambar styraciflua*), yellow or tulip poplar (*Liriodendron tulipifera*), black gum (*Nyssa sylvatica*), hickories (*Carya* spp.), American holly (*Ilex opaca*), basswood (*Tilia americana*), black cherry (*Prunus serotina*), and flowering dogwood (*Cornus florida*). Most of this section of woods has little understory vegetation probably due to the disturbance during the war.

The area of woods with the oldest trees comprises nearly 11 acres and is contiguous with nearby and younger second growth woods that has developed since the land was acquired by the DAFB. Trees found in this old woods area include the pin oak, swamp chestnut oak (*Quercus michauxii*), white oak (*Quercus alba*), northern red oak (*Quercus rubra*), pignut hickory (*Carya glabra*), mockernut hickory (*Carya tomentosa*), sand or pale hickory (*Carya pallida*), sweet gum, yellow poplar, red maple (*Acer rubrum*), black gum, American holly, a few mazzard cherry (*Prunus avium*) or wild form of the domesticated sweet cherry, and the flowering dogwood. The estimated age of the old trees in this area range from 160 to 240 years of age. The old stand timber comprise a breeding area for the Broad-winged Hawk, which is a species of state concern. That bird is extremely rare in Delaware. Many different species of wildlife utilize these old woods, including many migratory songbirds which breed in the old woods during the summer. In addition, several so-called game birds also use these woods (e.g., Wild Turkey, Mourning Doves). Mammals seen in the area include White-tailed Deer, Groundhog, Red Fox, Gray Fox, Eastern Cottontail rabbit, Raccoon, and small animals such as squirrels and mice. One of the mazzard cherry or wild sweet cherry trees has a wild bee hive in its trunk. On a warm sum-

mer day the bees can be seen and heard to buzz through the trees. That portion of the trunk bulges slightly and has numerous holes in the trunk on one side of the tree. The wild bees of North America are dying out because of a mite infestation. Some replenishment of the wild bees is occurring due to bees escaping from domestic hives, but the wild bee may be a thing of the past. The tree with its bee hive represents a sight which is disappearing from our woods.

The yellow passionflower (*Passiflora lutea*) is a native plant species of state concern. A large stand of the yellow passionflower is found in the Old Woods. The area of oldest trees has a very diverse array of understory vegetation with trees lying on the ground in various stages of decay and a thick layer of humus on the forest floor. The forest floor vegetation includes the Jack-in-the-pulpit (*Arisaema triphyllum*) and mayapple (*Podophyllum peltatum*) which cover the ground in the spring time. A survey to determine the population size and species of lichens in this section of woods to determine relative age of the woods, the health of the woods, and a biological measure of regional air quality has begun. The woods are also home to the green-fringed orchid (*Platanthera lacera*) which is rare in Delaware.

I feel that these woods represent a hope to humanity that, with their protection, we are securing a small bit of our natural heritage for ourselves and future generations. These old remnant woods give but a glimpse into what nature was really like prior to European colonization and wholesale deforestation of eastern North America. The great forest of eastern North America prior to European colonization was estimated to cover 822 million to 950 million acres of land. Today there are about 1.5 million acres. By 1800, nearly all of the old woods were gone from Delaware and it is reported that Delaware State President, John Dickinson put a moratorium on the cutting of old growth timber. John Dickinson was the head of government of the State of Delaware and he was voted in as president, not governor. The title of the office was changed some time later.

The woods represent various stages of succession from natural reforestation of an area that was farmed as late as 1968 to a mature old woods with a mature understory vegetation. The educational significance of the different stages of succession is tremendous.

According to the Deputy State Forester for Delaware, who commented during his visit to the Old Woods during Earth Week '98, "There are no old woods such as this anywhere in Delaware except on private estates in northern New Castle County." The forest of the northern part of the state is, in general, much different than its counterparts in Kent and Sussex Counties, primarily due to differences in soils and geology (Piedmont versus Coastal Plain Physiographic Provinces). Likewise, because of the geographic location of Delaware on the Delmarva Peninsula, it is considered by many to represent a transition zone between the north and south Atlantic coasts. Plants and animals occur here that also range further north of the peninsula but not south, and vice-versa. Therefore, there is an intermingling of conditions and characteristics of both the north and south Atlantic coasts. One may, therefore, consider these woods in Delaware as different than those found north or south of the peninsula.

Wing Commander, Felix M. Grieder, Colonel, USAF, formerly at DAFB, agreed with the significance of the Old Woods and signed a proclamation designating the woods a "Special Natural Resource Management Area" on 21 Jan 1998.

The Old Woods is an Ecological Reserve according to Air Force guidance. The old woods of DAFB need to be protected.

oooo Dr. Milton M. Beck, Dover Air Force Base



NATIVE PLANT COMMUNITY HIGHLIGHT

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mammals, such as the marsh rice rat, and muskrat, and numerous invertebrates, especially the fiddler crab, grass shrimp, ribbed mussel, coffee-bean snail, saltmarsh mosquito, and mud snail. Likewise, mummichog (*Fundulus heteroclitus*), as well as other fishes, are known to spawn in *Spartina alterniflora* marshes and the state rare plant, *Polygonum ramosissimum* (bushy knotweed) (S1), is a rare associate in this community.

Comments

Many examples of this community in Delaware have been previously grid-ditched for mosquito control. High quality, unditched, examples of this community are found along stretches of the Murderkill River, St. Jones River, Smyrna River, Duck Creek, and Leipsic River. Based on historical documentation this community has spread further up into the estuary in recent decades as sea level and salinity have increased. Undoubtedly, this trend will continue.

Conservation status

In Delaware this community has a Natural Heritage rank of **S4** (widespread, abundant and apparently secure) and a global rank of **G5** (demonstrably widespread, abundant and secure throughout its range).

oooo Keith Clancy, DNPS president

RESOURCES AND REVIEWS

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ans, including the States of North Carolina, West Virginia, and especially Virginia.

Appalachian Flora and Scenic Vistas will serve as a coffee table book, a supplement for botany and ecology texts, and as a field guide. Although many of the plants found within this CD are widely distributed east of the Mississippi River, most of them were photographed within the Appalachians. In addition to the vistas, I like to think that they have captured some of the Appalachian enchantment

For more information write to Appalachian Flora, 3510 Indian Meadow Dr., Blacksburg, VA 24060, or on the web at <http://www.usit.com/floracd/>.

oooo Kenneth J. Stein, Ph.D., Virginia Tech

LETTER FROM THE EDITOR*Continued from page 2*

letter will submit their thoughts, good or bad, on what our organization is doing. I'd like to see this *Letter From The Editor* column be a forum for discussion, with dialogue ranging from my answering specific questions, or replying to negative or positive comments (*Letter to the Editor*). Think of it as a snail-mail paced chat room! I subscribe to National Geographic and The Nature Conservancy magazines and their Letter to the Editor/Forum sections are very enlightening.

One avenue of communication the Society is striving to become more active in is the public comment/environmental review process of development projects, but we could use some help. If anyone knows of any development projects going on in the state that they believe haven't been properly reviewed for state-rare or federally listed species, we'd like to hear about it. Aside from commenting on the natural resource issues at these sites, we'd also like to begin corresponding with landscape designers about incorporating native plants into the project site landscaping.



Eric Zuelke, editor

**LETTER FROM THE PRESIDENT***Continued from page 1*

European colonization and wholesale deforestation.

The Delaware Native Plant Society is in the initial stages of several exciting activities that I hope as many members as possible will participate in. It looks very promising that we will be starting, on a small scale to begin with, several native plant nurseries in the state. If all goes well, we will have a nursery at Middle Run in northern New Castle County, a second at Bombay Hook National Wildlife Refuge in the middle of the state, and for our southern members, a third nursery at the Center for the Inland Bays' James Farm Preserve, in southeastern Sussex County. Details regarding the operation of these nurseries need to be worked-out before we can start any propagation. But, I am hopeful that we can get started by next spring at the latest. The refuge manager, Paul Daly, of Bombay Hook has recommended that this nursery, a so-called "special use" activity, be approved; he is now waiting for word back from the regional office of the U.S. Fish and Wildlife Service. Mr. Jim Alderman, of the Center for the Inland Bays, is excited about the prospect of a native plant nursery at the James Farm Preserve that could be a source of much needed native plant seedlings in his reforestation efforts. And in New Castle County, member Pete Brakhage has spoken with Mr. Jon Husband of the New Castle County Parks Department about the possibility of establishing a native plant nursery on county-operated property. Mr. Husband is very receptive to the idea, but needs more information from us. I hope to meet with Mr. Husband in the very near future to discuss this matter.

If these nurseries come to fruition, as I expect they will, I will be soliciting your help to ensure their successful operation. In exchange for your volunteerism, donation of equipment, supplies or cash, you will be given the opportunity to propagate or have propagated for you native plants that you

can then plant on your property. I hope that many of you will be able to allocate some time from your busy schedules to work at these nurseries. These nurseries could be just what is needed to fulfill the ever increasing demand for native plants in Delaware.

A second initiative that the DNPS has begun is discussions regarding reforestation projects on state lands. Rick McCorkle and myself recently met with staff biologists with the Division of Fish and Wildlife, DNREC, to discuss the feasibility of undertaking demonstration reforestation projects at one or more locations on State Wildlife Areas. I feel this meeting was quite productive and hope that we will be able to undertake several reforestation projects on state wildlife areas beginning next year. Likewise, I also met with Rob Line of the Natural Areas program of the Division of Parks and Recreation, DNREC to discuss this same activity on Parks and Recreation lands. Mr. Line is already in the midst of reforestation projects on state park lands and is already looking at other potential sites; he is excited about the possibility of working with the DNPS on these additional reforestation projects. However, for this to be successful I will need your help and expertise. Anyone that would like to participate in reforestation activities please contact me. I will be looking for people to help in seed collection, cleaning and storage, propagation, seedling/sapling plantings and hand control of invasive weeds.

A third major conservation initiative that we are looking into is the need for state endangered species legislation/protection for plant species. Nearly all of Delaware's rare plants (almost 40% of the state's flora) have no regulatory protection. We are currently investigating other state's endangered and threatened plants legislation, soliciting feedback from other conservation groups, and considering how best to present this initiative (e.g., do we approach state legislators looking for someone to sponsor such a bill?, or do we discuss this first with the Secretary of DNREC?).

On a lighter note, I encourage members to attend several upcoming field trips that should be botanically and ecologically enlightening. On October 17 we are participating in a joint field trip with the Maryland Native Plant Society (see Upcoming Events in this newsletter) to Assateague National Seashore and on November 6 we will be exploring the wonders of Cape Henlopen State Park. Attend both trips and you will have a great opportunity to compare and contrast the floras and natural communities of sites that occur in similar landscapes (i.e., coastal) but are about 150 miles apart. Likewise, I would highly recommend everyone attend the 6th annual Tree Spree on Saturday, October 23. Not just to visit our display table but to have a great time celebrating the beauty and value of the "native" tree.

Warm wishes for a great autumn and I hope to see you at our future outings.



Sincerely,

Keith Clancy



NATIVE PLANT HIGHLIGHT**THE MAPLES OF DELAWARE**

As the growing season winds-down, and leaf color begins to turn to the yellows, oranges, and reds of autumn, the maple trees found in Delaware are here considered.

Of the nine species of maples native to the United States, four occur in Delaware: box-elder (*Acer negundo*), silver maple (*Acer saccharinum*), sugar maple (*Acer saccharum*), and red maple (*Acer rubrum*). Maple trees are members of the Aceraceae, the Maple Family, and all are distinguished by having fruits (samaras) attached in pairs, one opposite the other, that have long, wing-like structures that aid in their dispersal. Maple trees are also characterized by having simple, opposite leaves, with the one exception being box-elder, which has opposite leaves that are compound (made up of a number of separate leaflets).

Delaware's most common maple tree is the red maple, which can be found throughout the state in a wide variety of habitats, from well-drained to poorly drained soils. Silver maple primarily occurs within the Piedmont physiographic province of the state and is typically found growing on the floodplains of creeks and streams. Box-elder can be found in all three counties of Delaware, growing along streams and in swampy woods. Sugar maple is an uncommon tree in the state, with native populations found exclusively within the Piedmont province.

Another species of maple found in Delaware, but not native, is the Norway maple (*Acer platanoides*). This tree is frequently planted as an ornamental by homeowners and developers and is a common escape to natural areas in the state. Norway maple is a very aggressive pest which can often dominate the understory and displace native vegetation. The Delaware Native Plant Society strongly discourages the use of this species in any planting project and encourages its eradication when encountered in natural habitats.

By closely observing the fall colors this season, you may be able to distinguish between the different species of maple trees. The leaves of red maple turn brilliant shades of red early in the fall season. The leaves of sugar maple are usually a pale yellow with red to pink accents and often remain on the tree well after the leaves of red maple have fallen. The silver maple turns yellow, orange and every shade of red. To help you be on the look-out for the invasive Norway maple, look for leaves that turn from deep green to bright yellow.



William A. McAvoy, DNPS Vice-president

**PICK THE TURK'S CAP****WHERE TO THE WILDFLOWERS?**

Q. What native plants, that can be used for landscaping, are good for attracting birds? In particular, which ones are best at attracting wildlife during the fall and winter?

A. This may surprise you, but the best plants for winter are often the best plants year round. But before I give you a list of recommended plants, I will discuss what makes a plant attractive to birds. In general, birds are attracted to plants because of appearance (morphology), shelter, location, direct food, and indirect food.

Appearance includes the morphology of the tree and the color of flowers and fruit. Morphology is important because certain bird species prefer to spend their time at a particular vegetative layer [e.g., ground (herb), understory (shrub, sapling), and tree (canopy)]. Vegetation that provides privacy (dense cover) and/or open limbs (perching sites during courtship and territory defense) are also important. Although, birds do recognize colors they don't see colors exactly like humans. Many plants have evolved to attract birds.

Shelter is a crucial component for having year round bird activity and residence. If your yard doesn't have vegetative shelter, your expectations should not be too high. During the growing season, deciduous trees are satisfactory for many species of birds. However, in many cases, deciduous trees are utilized by migratory species, as summer breeding sites, while year-round residents have a greater dependency on evergreens. Dead trees are great for attracting birds as well.

Location is also very important. Birds like clumps of vegetation, not lone standing plants. In other words, one shrub will not be enough. When you plan your landscape, include areas that have fairly dense sections that have ground cover, and understory and canopy. It might take a while for this portion of your yard to develop. SSHHh, quiet! Make a quiet corner of your yard into your bird paradise. Don't plant shrubs near your AC unit and expect to attract birds. Finally, birds need a water source nearby and prefer some kind of natural windbreak.

Direct and indirect food sources can be species specific. Plants can attract birds by the food they bear and the bugs they attract. Things to remember are as follows: most year round residents have a wide ranging diet (e.g., insects, grains, and fruits). While migratory species (who often are the more spectacular looking species) have diets that are much more specific and that include fruits and/or insects more often than not. If you want to attract particular species, you will need to read-up and find out about their dietary needs. Also, when you select plants, find out if a particular species is a host for certain insects, and who eats those insects. This might take a little effort, but the literature is out there.

Now after all those tidbits, here's that list (excluding herbs — there are just too many!):

Common alder (*Alnus serrulata*) attracts chickadees, warblers, redpolls, and other small birds.

American beech (*Fagus grandifolia*) attracts wood ducks, wild

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UPCOMING EVENTS

SUNDAY, 17 OCTOBER 1999 – ASSATEAGUE NATIONAL SEASHORE BEACH TO BAY WALK. A JOINT FIELD TRIP WITH THE MD NATIVE PLANT SOCIETY. ONE WALK IS THROUGH MARITIME LOBLOLLY PINE FOREST, THE OTHER IS FROM THE BEACH TO THE BAY ON THE NORTH END OF THE ISLAND. FROM 11 AM TO 2 PM. MEET AT THE VISITORS PARKING LOT ON RT. 611. CONTACT FRANK HUDSON AT 410.641.1443 FOR MORE INFORMATION OR E-MAIL AT FK_HUDSON@NPS.GOV.

SATURDAY, 23 OCTOBER 1999 – TREE SPREE. PEOPLE ARE TALKIN' ABOUT THIS ONE! COME HAVE FUN WITH EXHIBITS, DEMONSTRATIONS, HAY RIDES, AND TREE PLANTINGS. FROM 10 AM TO 3 PM AT THE RED CLAY RESERVATION NEAR ASHLAND, DE. CALL GARY SCHWETZ AT 302.658.6262 AT THE DELAWARE CENTER FOR HORTICULTURE FOR MORE INFORMATION.

WEDNESDAY, 3 NOVEMBER AND THURSDAY, 4 NOVEMBER 1999 – INVASIVE EXOTIC PLANTS: CURRENT MANAGEMENT STRATEGIES CONFERENCE. SWARTHMORE COLLEGE, SWARTHMORE, PENNSYLVANIA. CALL 215.247.5777 FOR MORE INFORMATION OR TO REGISTER.

SATURDAY, 6 NOVEMBER 1999 – CAPE HENLOPEN STATE PARK FIELD TRIP. EXPERIENCE EXCEPTIONALLY HIGH QUALITY NATURAL COMMUNITIES INCLUDING PITCH PINE FOREST AND DUNE SHRUB, AND THE HIGHEST POINT ON THE COASTAL PLAIN BETWEEN CAPE COD AND CAPE HATTERAS. FROM 10 AM TO 3 PM. CALL KEITH CLANCY AT 302.674.5187 FOR MORE INFORMATION. RESERVATIONS REQUIRED.

SATURDAY, 6 NOVEMBER 1999 – DELMARVA FORESTRY SEMINAR: FOREST HEALTH. WORKSHOP TOPICS TO BE PRESENTED DURING THE CONCURRENT SESSIONS ARE GENERAL FORESTRY, SILVICULTURE TECHNIQUES, GPS/GIS, AND TAXES/ESTATE WITH A TREE FARM FIELD TRIP. CONTACT REBECCA MARASCO AT 302.697.4000 FOR MORE INFORMATION.

FRIDAY, 12 NOVEMBER AND SATURDAY, 13 NOVEMBER 1999 – DELMARVA COASTAL BAYS CONFERENCE III. CONFERENCE IS BEING HELD IN OCEAN CITY, MARYLAND. CONTACT CONFERENCE ORGANIZER (ASSATEAGUE COASTAL TRUST) AT 410.629.1538 FOR MORE INFORMATION OR E-MAIL THEM AT ACT@BEACHIN.NET.

EVENT HIGHLIGHT

COASTAL PLAIN POND TRIP

On Saturday, 1 August 1999 the DNPS hosted a joint field trip with the Delaware Nature Society to carolina bays in Blackbird State Forest in southwest New Castle County and Delaware's premier carolina bay, Huckleberry Pond, in northeast Sussex County. The weather was quite cooperative for the 8 participants, though that was not completely true for the plants and animals. Due to the drought the ponds were completely dry and the plants were not quite as robust or floriferous as they have been in past years. While the animals were also not as abundant, we did catch glimpses of three species of dragonflies and several leopard frogs.

The participants on this field trip were given an opportunity to explore several exemplary bays in the Blackbird State Forest region; these were characterized by a preponderance of button bush, smartweed, and manna grass. These bays were in stark contrast to the exceptionally large and diverse sedge-grass dominated bay of Huckleberry Pond,

where we observed the state-rare pink tickseed (*Coreopsis rosea*), Carolina redroot (*Lachnanthes caroliniana*), and a plethora of spikerushes, beakerushes, grasses (especially *Panic* spp.), and other assorted sedges and broadleaved herbs.

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DNPS WEBSITE

Missed an issue of The Turk's Cap Newsletter? Want to know about upcoming events? Then check out the DNPS website. Doug Janiec has been hard at work posting the latest and greatest columns, articles and events from the newsletters on our site. Check it out at www.delanet.com/~dnpswp.

PICK THE TURK'S CAP*Continued from page 6*

turkeys, grosbeaks, etc.

Black cherry (*Prunus serotina*), and American plum (*P. americana*) attract more species than can be listed here, but can be messy.

Hawthorns (*Crataegus crus-galli*), and (*C. viridis*) attract lots of birds and provide red winter berries.

American holly (*Ilex opaca*), smooth winterberry (*I. laevigata*), and winterberry (*I. verticillata*) offers fruits, good nesting sites in spring, and year-round cover (American holly).

Red mulberry (*Morus rubra*) are loved by birds, but are very messy.

Loblolly pine (*Pinus taeda*) and Virginia pine (*P. virginiana*) attract insects, provide seeds, and offer year-round shelter.

Downy serviceberry (*Amelanchier arborea*) or serviceberry (*A. canadensis*) have berries loved by birds.

Elderberry (*Sambucus canadensis*), one of my favorites, attracts insects and produces tasty fruit.

Maple leaf viburnum (*Viburnum acerifolium*), possum-haw viburnum (*V. nudum*), and arrowwood (*V. dentatum* var. *denta-*

tum) or (*V. dentatum* var. *lucidum*) offer a wide selection of fruit.

White oak (*Quercus alba*), scarlet oak (*Q. coccinea*), southern red oak (*Q. falcata*), water oak (*Q. nigra*), pin oak (*Q. palustris*), willow oak (*Q. phellos*), and red oak (*Q. rubra*) are great for bluejays. 

°°°° Doug Janiec, DNPS webmaster

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