



MONMOUTH COUNTY PARK SYSTEM

GREEN HERITAGE

The Newsletter of Monmouth County's Open Space, Parks & Recreation Agency

Vol. 43 No. 3 Fall 2009



Thompson Park Visitor Center

Project Update: Two Major Buildings to Reopen

NOW OPEN! VISITOR CENTER, THOMPSON PARK, LINCROFT.

Destroyed by a fire in February 2006, the crown jewel of Park System has been rebuilt from the ground up and is now open for visitors, programs and meetings. Staff moved back in last May, programs and meetings began in June, and over 300 people attended the building's Grand Re-Opening in July.

If you are at all familiar with the mansion, and haven't done so yet, please make sure to stop by. There are new exhibits to explore, plus staff and visitors alike have enjoyed trying to spot the differences between the original design, the renovations of early 2000s and this brand new structure—a challenge, even for those who see it every day. (BUILDING HOURS: Mon-Fri 8am-4:30pm, Sat-Sun 10am-4pm; AFTER-HOUR RESTROOM OPEN DURING PARK HOURS)

UNDER CONSTRUCTION! BAYSHORE ACTIVITY CENTER, BAYSHORE WATERFRONT PARK, PORT MONMOUTH.

Acquired in 1998, this building—the oldest in the Park System with sections dating back to the early 1700s—recently underwent comprehensive interior and exterior renovations to make it suitable for public use as an activity center; all with an eye for preserving its classic historic features. Given its waterfront setting and commanding views of the bay, the new building will now be a beautiful and comfortable site for program use.

Below left: The finished front, and new porch. Below right: One of the oldest rooms in the house, now finished. Note the refurbished mantle, view of the original brick wall to the right of the window, and the original wood beams.



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THERE'S ALWAYS SOMETHING GOING ON

Did you know? Every day, year-round, there are projects underway to improve the parks and their facilities throughout the county. From smaller, behind-the-scenes maintenance (new parking lots, trail and bridge repairs) to larger and more noticeable construction, here's a recent park-wide snapshot of just some of the projects underway.

• Trail Plans Underway at **Perrineville Lake Park**, Millstone. In addition to another mile of new trail off Agress Rd (the park's third trail), there is a plan to link this park's trails to municipal and privately owned equestrian trails in the area as well as the state's Assumpink Wildlife Management Area nearby. Visit the Park System online for more information. In the meantime... A new bridge was recently completed on the aptly-named Pine Creek Trail.



• Bridge Repair on the **Henry Hudson Trail**, Keansburg. Destroyed by a fire, the Park System recently rebuilt this bridge over Compton's Creek in the northern section of the Henry Hudson Trail.



• Repair Culverts on the Future **Union Transportation Trail**, Upper Freehold. Plenty of behind-the-scenes work will go into converting this 9-mile, former railroad right-of-way into a multi-use trail. Creating a new trail is more involved than it looks, and this type of infrastructure project illustrates that point. In this case, the culvert allows water to flow under the trail (not over it, where it would degrade the trail).



• New Stairs for Some Platform Tents at **Turkey Swamp Park**, Freehold. Park staffers recently built custom steps for better access to the platform tents at the Nomoco Activity Area.

- New Exhibits at **Huber Woods Environmental Center**, Middletown. Using the talents of staff from many park departments (historians, planners, carpenters, artists, and naturalists), the three renovated exhibit areas were designed and built "in-house"...right down to the Indian artifacts/ clothing and interactive displays.



- Renovations to **Monmouth Cove Marina**, Port Monmouth. Originally built to suit "salty, old sea-dogs," this marina now accommodates a host of recreational boat users and their families, as well as fisherman. A section of the marina services building was recently converted into new bathrooms and showers (handicap accessible)



- New Trail at **Hominy Hill Golf Course**, Colts Neck. The Park System recently began work on its second trail on golf course property with the clearing of a mile of forest on newly acquired property behind Hominy Hill.



- New Solar Panels at **Sunnyside Rec. Area**, Lincroft. As part of its ongoing green efforts the Park System recently installed its first set of solar panels at the site's new Equestrian Center. Paid for in part with a grant from the NJ Board of Public Utilities, the system now powers about 40% percent of the building's energy needs.



- Renovate Golf Center at **Howell Park Golf Course**. After years of wear and tear this old building was in desperate need of repair and improvements to

meet today's ADA standards. Golfers will be pleased with the new, more comfortable restrooms and updated design when they return next season.

- Playground Redesign: Tony's Place, **Seven Presidents Oceanfront Park**, Long Branch. The popularity of the universal access playground at Dorbrook Rec. Area inspired construction of a second,

beachfront playground to accommodate children of all abilities.



Looking For The Forest In The Trees

Have you ever made the observation while walking park trails that the character of the forest around you is distinctly different from place to place and park to park? Ecologists tell us that these variations are a result of the environmental preference; the 'niche' or 'habitat' of the forest species. (see box opposite page)

Monmouth County has particularly diverse parks because it overlaps multiple geographical regions—the Inner and Outer Coastal Plain, the Piedmont, and the Pine Barrens. This provides a unique mosaic of forest types not typically assembled elsewhere. Observing and understanding this forest variety has been an important and ongoing project for the Park System.



Left: Healthy Mixed-Oak Forest

Right: A forest overrun by the invasive species, porcelain berry. Note how the trees are choked off from light, and look as if they are covered by a blanket.



ONGOING STUDIES TRACK FOREST HEALTH

As the third largest landowner in the county, the Park System is responsible for protecting all the natural resources on this land, including the flora and fauna (plants, animals, and insects). A first step in this process is to understand what needs to be protected, its condition, when a habitat has been compromised, and to what condition it should be restored.

Several ongoing studies evaluate our forest resources to determine their composition, quality, and disturbance. The results help focus our management efforts, financial resources and manpower.

The Park System manages 10,000 acres of protected forest containing over 300 plant species.

The Park System manages approximately 10,000 acres of protected forest. Nearly 250 species of native forest plants and another 50 introduced (or non-native) species, have

This effort has also identified many populations of rare or endangered plant species, and we can now provide a comprehensive list of what plants occur at which parks. This alone is valuable because it lets us know the particular species protected by the parks.

SURVEYS DETERMINE FOREST VALUE AND COMPOSITION

Different forest types require different management techniques to protect their resources, and we are now surveying the distribution of plant species in our parks to determine what types of forests we have within our county.

At the same time the State of New Jersey is developing a vegetation classification system, and when it is complete,

we can use it to assess our own data and see if we have protected a representative of each forest type. We can also use this information to evaluate future park acquisitions to preserve the most valuable remaining forests.

Forest studies may be used to evaluate future land acquisitions, so that the most valuable remaining forests can be preserved.

WHAT'S THE SCORE? FLORISTIC INDEX EVALUATES SPECIES

There is also an established 'scoring' system for evaluating plant communities, which began with Swink and Wilhelm's 1979 Floristic Quality Assessment Index (FQAI). The principal concept of FQAI is that the quality of a natural community can be objectively evaluated by examining the degree of ecological conservatism of the plants species within that community. Each plant is given a value based on its fidelity or faithfulness to a particular habitat; it's degree of conservatism.

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'NICHE' vs. 'HABITAT'

Whereas the term 'niche' might describe a job within the ecological community, what a species needs and does to survive; the term 'habitat' describes the place where a species lives, a description of the house and the materials from which it's made.

For our region, the Bowman's Hill Wildflower Preserve in New Hope, Pennsylvania worked with many New Jersey botanists to develop an index for statewide use. More conservative species (see photo, right), those found only in specialized habitats and vulnerable to disturbance, are scored higher than generalists. A formula that combines all the scores helps determine diversity and health of the community. The higher the overall score, the higher the uniqueness and quality of the community.

MAPPING IT ALL OUT

The Park System also evaluates forest plots by overlaying them onto orthophotography (detailed aerial photos) of the park. The forest can then be evaluated in the context of park boundaries; topography; trails; streams; historic,

Foamflower (*Tiarella cordifolia*), a highly conservative species, is found in only one known location in Monmouth County at Holmdel Park. Because it is rare, this plant likely indicates that the area where it is found is in some way special, may contain other unique species, and should be protected.



current, and neighboring uses; and many other factors that may affect quality.

One valuable application of this process is that we can determine what components within the plot are the detractors or negative contributors to the value, such as impacts from invasive species. Visualizing the plots in context allows for better management of the park as a whole.

The Park System Forest Survey Method

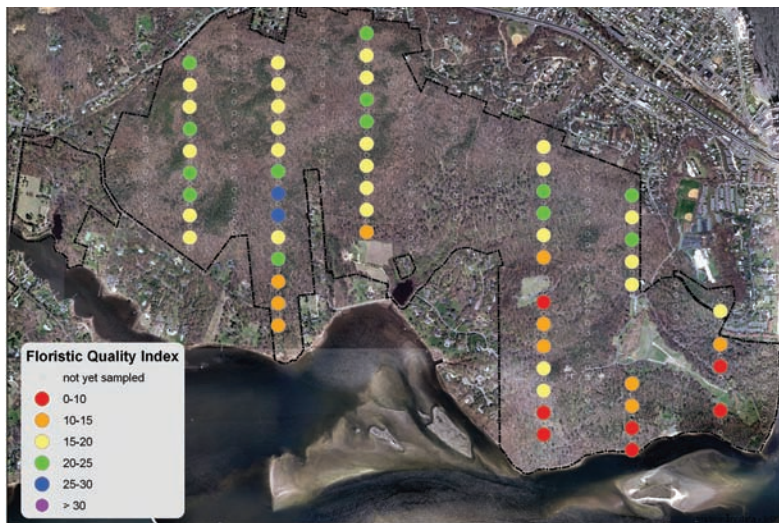
Our forest survey uses 'plots' located on the landscape and our Geographic Information System (GIS)—a powerful computer mapping technology. We stratify (slice) our parks and sample them along a straight north/south line using circular plots that measure about 60 feet (10 meters) across. Within these 'plots' we tally the percent cover of all plant species, shrubs, herbs, small trees; and quantify the size/abundance of the tree cover.

HISTORIC ANALYSIS YIELDS INTERESTING RESULTS

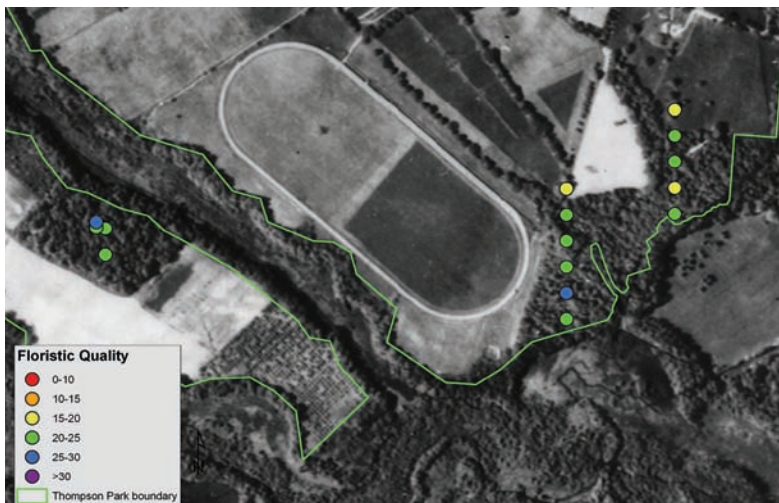
When a forest plot was laid over aerial photographs from the 1930s, it becomes apparent that today's high quality plots are consistently found in areas that were forest back at that time (and remained forest in the interim). One surprising find was that the remnant of an old growth forest at Thompson Park has retained relative high quality over time, despite being fragmented by surrounding farms and creation of the Swimming River Reservoir.

The trend holds true in other parks, such as Crosswicks Creek Greenway and Clayton Park, where continuously forested areas yield high quality values today. Extending this analysis may point us to other areas where rare or endangered species exist, and these areas may serve as models for forest restoration efforts, providing a rare glimpse of remnant communities not disturbed by agriculture or development.

For further reading on forest communities in the parks, please see the Healthy Habitats link under Natural Resources on our website: www.monmouthcountyparks.com.



This GIS analysis of Hartshorne Woods Park shows higher quality forest plots in yellow, green and blue and lower quality in orange and red.



This GIS analysis of Thompson Park shows high quality forest plots in green and blue, corresponding to the location of forests as shown in this 1930s aerial photograph.

Home Gardener



Evergreens, The Bones of The Garden

Randy McHaney, Senior Gardener

For many weeks the fall garden is full of the most glorious color—scenery that only a theatrical designer could imagine. But soon it will disappear and the landscape will become cooler, then quieter. Herbaceous plants will decline, turn brown and disappear. They will remain tucked away in their dormant state as roots or buds until warm weather calls them again next spring. And, as everything else is stripped away the bones of the garden become more noticeable.

CONIFER—ANCIENT KING OF THE EVERGREENS

The most dominant force to catch our attention during late fall and winter is the conifer—an ancient, non-flowering, cone-bearing tree that holds on to its foliage. Pines, spruces, and cedars are three of about 65 genus and 600 species. There are important exceptions that do lose their foliage—dawn redwoods, larch, and certain cypress—however, the vast majority of conifers are evergreen.

Pine, spruce and cedar are conifers that keep their leaves all winter; dawn red-woods, larch and certain cypress do not.



As other trees lose their leaves, evergreens stand out in sharp contrast.

This group of plants traces their lineage back some 300 million years. Conifers are much more ancient than plants that produce flowers, which now make up most of the earth's plant ecosystems. In ancient times, before flowering plants, conifers were the predominant trees covering the landscape. You can get a feel for this if you travel to the Pacific



This Atlantic White Cedar can tolerate wetter sites.

Northwest. The coniferous forest of the Cascade Mountains (Washington, Oregon and Northern California) gives us a glimpse of what ancient times must have looked like.

MANY BENEFITS TO PLANTING CONIFERS

In Monmouth County, conifers have become popular landscape ornaments in our gardens for several reasons. The most obvious is their ability to tolerate many different soil types. Most will grow in sandy, clay or loam situations. This toughness, along with certain drought-tolerant (xeric) qualities, makes them excellent candidates for cemetery plantings, where outstanding specimens of conifers can often be found.

Conifers are drought resistant, come in many varieties, and provide important food/shelter for wildlife.

If you have a wet site you will need to be more selective. The Atlantic White Cedar (*Chamaecyparis thyoides*), for example, is one plant that can tolerate poor drainage. For the most part, conifers need sunny open areas to thrive. But as with everything else, there are exceptions. Japanese Yew (*Taxus cuspidata* and *Taxus x media*) both tolerate shade, but they are also a favorite of deer. Another important attribute of conifers is the huge number of cultivars. Practically every genus contains a host of slow-growing or dwarf forms.

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Many have interesting and attractive color variations such as yellow hues or variegation. The uses for conifers are endless: Arborvitae make excellent hedges, Chamaecyparis cedars make lovely specimen plants, and their dwarf types are often used in rock gardens.

Conifers also create excellent habitat for wildlife including birds that feed on the small immature conifer cones. They also use the dense evergreen branches for winter protection and nest building.

ANGIOSPERMS—FLOWERING EVERGREENS

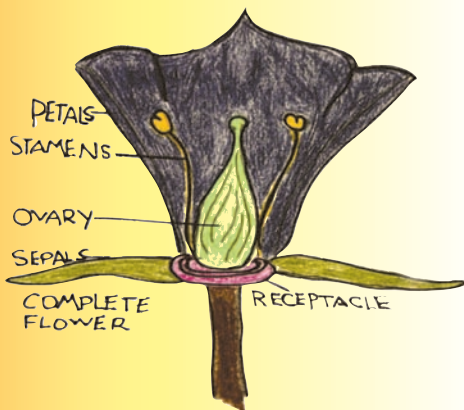
The other group of evergreen plants that fills the winter landscape is the flowering group known botanically as Angiosperms. Well-known examples include rhododendrons, hollies, southern magnolias, and yuccas.

Rhododendron, holly, southern magnolia and yucca are common flowering evergreens.

To understand the success of these species, you have to understand the flower. In general, flowers are very complicated structures.

Most have four basic parts:

1. Sepals—usually green; cover the unopened flower bud
2. Petals—colored part of the flower
3. Stamens—bear the pollen (male part)
4. Ovary—where the seed grows after fertilization (female part)



All these parts sit nicely on a receptacle, a structure that holds all the elements together. When all these parts are present, the flower is defined as complete. If either the stamen or ovary is missing, the flower is incomplete. However, having incomplete flowers is an adaptation that actually serves a purpose: it enhances cross-pollination (pollen transfer between flowers on different plants), efficient pollination, or both. It is this variation and adaptability that has made flowering plants so successful in colonizing the world's ecosystems.

The Holly is a popular evergreen with winter interest (including lovely berries) that has incomplete flowers. The male flower grows on one plant, and the female on another. This is why when you buy a holly, you are always told you will need a male pollinator. Insects bring the two flowers together by transferring the pollen from the male flower to the female flower.



CONIFER LIFE CYCLE: SPOTLIGHT ON THE PINE

Well known to New Jersey residents, pine trees feature male and female cones that begin developing in early spring. The male cone contains the pollen and grows along the branch a foot or so from the tip. When the time is right the male cone releases yellow clouds of pollen, which will hopefully find its way to the developing female cone near the tip of the branch. Most

conifers form seeds in similar ways. If pollination is successful, the seeds begin developing in the protective cone. When the cone matures, the scales open up, and the wind or animals disperse the seeds.



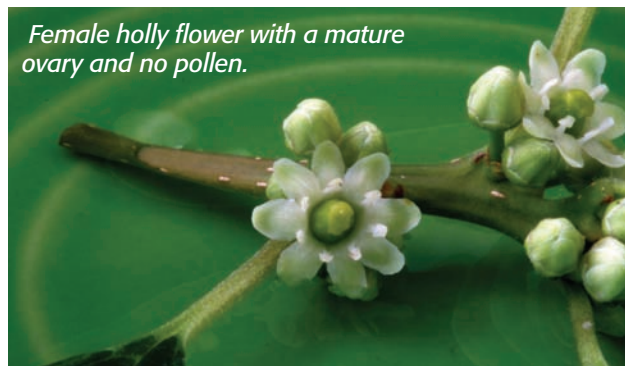
After successful pollination the ovary begins to ripen, swell, and finally the ovary cracks open. The seeds are then dispersed by wind, animals or water.

Most plants have evolved unique ways of spreading their seed around, including their appearance as a tasty and attractive food source. This helps get them get into the digestive tracts of animals. Tomatoes and apples are other examples of the mature ovary of a flowering plant.

Male holly flower with insignificant ovary and pollen (yellow granules).



Female holly flower with a mature ovary and no pollen.



Deep Cut Library: "Suprisingly Good!"

Susan Henschel, Librarian

When first-time visitors walk into our Elvin McDonald Horticultural Library at Deep Cut Gardens, their eyes typically widen in surprise. Not only are they surrounded by gardening books of every sort, but from the library window they have "the best view in the house" of the surrounding gardens and the countryside to the east.

As one of the most comprehensive horticultural libraries in the state, our library offers standard references such as Cornell University's *Hortus Third* (a one-volume plant encyclopedia) and *The Manual of Woody Landscape Plants* by Michael Dirr. There are also plant encyclopedias, field guides to trees and wildflowers and more than thirty books on roses alone.



Library at Deep Cut Gardens

This fall, our newest acquisitions (over 150 titles) will be of special interest to home gardeners.

Among them:

- *Fallscaping: Extending Your Garden Season into Autumn* by Nancy Ondra gives plant advice and design ideas for keeping the garden thriving into late fall.
- *The Organic Lawn Care Manual* by Paul Tukey offers the gardener a complete plan for growing a chemical-free lawn, doing much of the preparation in the fall season. Practical steps will help anyone start a new lawn or alter an existing one.
- Rosalind Creasy's *Recipes from the Garden* contains delicious recipes and tips for using the vegetables (and flowers) grown over the summer; illustrated with beautiful photos.
- *The Backyard Bird-Lover's Guide* by Jan Mahnken describes ways to attract, feed and observe birds in our backyards. Information goes beyond that in a typical field guide to include interesting facts and unusual behavior.

ATTENTION TEACHERS AND PARENTS!

Fall also signals a return to school, scouts and other groups. Our library offers an array of books for use by teachers and other adults working with children in garden- and nature-related projects.

Our library offers books to work with children in garden- and nature-related projects.

Books can be used to garner facts, generate ideas and encourage exploration. One such title is Brooklyn Botanic

Garden's *Gardening with Children* by Monika Hanneman. This book introduces children to the pleasures of gardening while learning such basics as composting and watering. Another recent purchase is *The ABC's of Fruits and Vegetables and Beyond* by Steve Charney. Using fun facts, poetry and suggested activities the author encourages children to learn more about foods that are often grown in their own gardens.

Library books at Deep Cut are to be used and enjoyed on-site; lending privileges are available through membership in the Friends of the Parks. The library is open year-round from 10 AM to 4 PM, Monday through Saturday. Visitors are welcome to spend time browsing amid the books, asking questions and reading to their heart's content.



Mother and child in library

IT'S TIME TO

October ✓

- You can plant grass seed until the first two weeks of this month
- Prepare new beds for spring: have soil tested for fertility and pH, then work in amendments
- Clean houseplants and acclimate them to indoor conditions
- Plant new trees and shrubs so they have time to grow some new roots before temperatures drop; mulch and water well
- Lift corms and bulbs of begonia, caladium, calla and gladiola now; lift dahlia and canna after blackened by frost
- Remove tattered/diseased foliage and discard carefully to avoid re-infestation
- This is a good time to label plants
- Plant pansies/ornamental cabbages for fall color, bulbs for next spring
- A sheet will protect the last fruits in the garden from a light frost
- Plant garlic this month about 4-6" apart in a rich sandy loam
- Water lawns, beds, shrubs and trees only if needed to ensure they go into winter well hydrated
- Apply compost or composted manure over all planted areas to improve soil, prepare for next growing season

November ✓

- Cover garden areas with mulch or leaf mold after the first frost
- Turn your compost pile after frost hits to discourage over-wintering rodents.
- Do a final clean-up, removing dead/diseased foliage from beds, leaves from lawns.
- Plant any remaining bulbs
- Clean and store tools for next spring. Store fertilizers and other materials where granulars will stay dry and liquids frost-free
- Pot amaryllis bulbs every few weeks beginning mid-month for blooms through winter

December ✓

- Apply a winter mulch of shredded oak leaves around azaleas, rhododendrons, pieris and other acid-loving plants
- Ventilate cold frames when the weather is mild
- Keep houseplants dust-free by gently spraying with tepid water
- Feed the birds, especially when the ground is snow-covered



"Bittersweet October. The mellow, messy, leaf-kicking, perfect pause between the opposing miseries of summer and winter."

Carol Bishop Hipps

CORNER

NATURE



The classic "white nose" of a bat with WNS.

Photo credit: NY Department of Environmental Conservation.

WHAT IS KILLING OUR BATS?

Ericka Bozza, Park Naturalist, HPAC

Since 2006, hundreds of thousands of bats in the Northeastern and Southern United States have been found dead or dying near the entrances of their winter hibernation sites, and scientists still haven't figured out why. The bats are usually found to be grossly underweight and dehydrated, and many have a white fungus growing on their nose, ears, wing membranes and/or forearms.

Bats at affected sites have been observed displaying abnormal behavior such as flying outside during the day in winter or clustering near the entrance of winter roost sites. Researchers have named this devastating threat White-nose Syndrome (WNS) because the white muzzles of the affected are easily spotted amongst huddled groups of hibernating bats.

WNS currently affects six insect-eating bat species:

- Big Brown Bat (*Eptesicus fuscus*)
- Little Brown Bat (*Myotis lucifugus*)
- Northern Long-eared Bat (*Myotis septentrionalis*)
- Small-footed Myotis (*Myotis leibii*)
- Tri-colored Bat (*Perimyotis subflavus*)
- Indiana Bat (*Myotis sodalis*), which is on federal and state endangered lists

THE INSIDIOUS WAY WNS WORKS

These bat species have learned to survive our harsh winters by reducing their body temperature and becoming inactive during the months when insect prey are unavailable. This hibernation period lasts 5 to 8 months, depending on the species and the severity of winter weather.

Scientists remain unsure as to why, but bats with WNS prematurely burn through the fat reserves that they require to survive this winter hibernation period. As a result, 90-100% of the bats in affected caves and mines have died before the warmer weather and insects have returned in the spring.² Of course, there is always a concern about the survival of species recognized by the government as endangered, but with such a high mortality rate, scientists are concerned about the survival of even the most common species.

With a mortality rate of 90-100% in affected caves, scientists are concerned about the survival of even the most common species.

FUNGUS IDENTIFIED, THOUGH ROLE REMAINS UNCLEAR

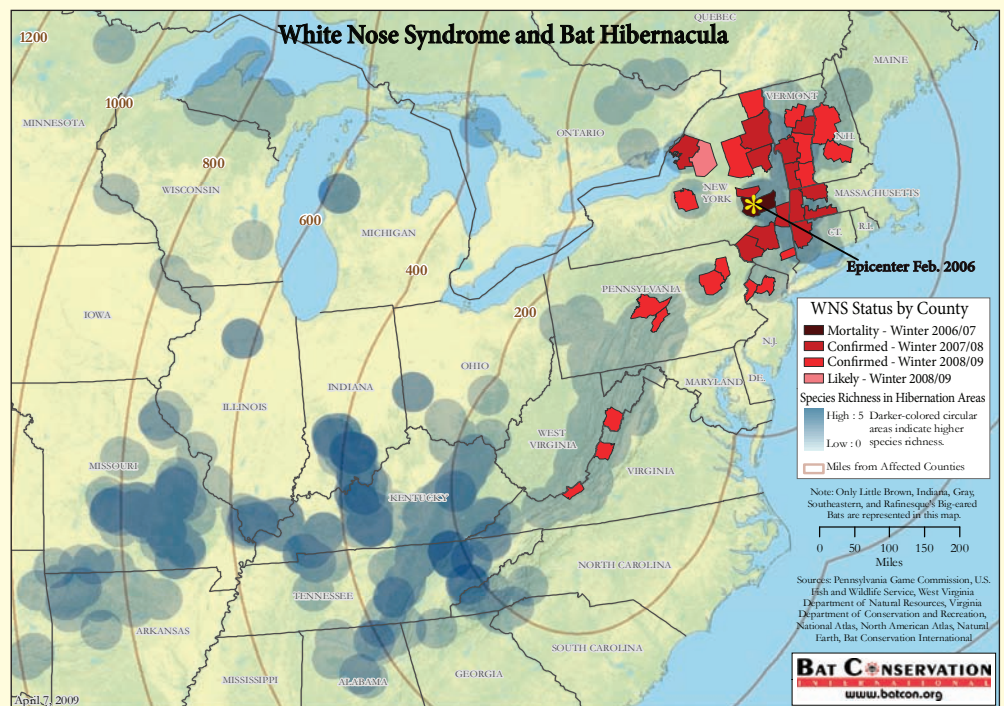
Thanks to the hard work of many researchers, the previously unknown species of fungus that has been found

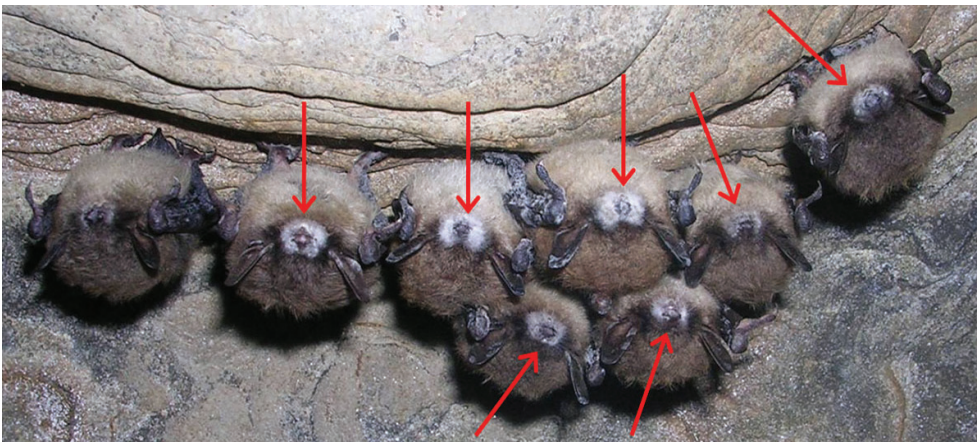
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WNS: SPREADING RAPIDLY

The most disturbing news is how quickly WNS is spreading and killing our bats. In February 2006, a caver exploring Howe's Cave near Albany, NY photographed a bat with a strange white powder on its nose and observed several dead bats. Routine cave monitoring by state wildlife biologists during the following winter revealed similar conditions in neighboring caves.

By the end of the winter of 2008-2009, WNS had spread more than 450 miles from the initial site in New York to surrounding areas. It has now been attributed to more than a million bat deaths in eight states including New York, New Jersey, Vermont, Massachusetts, Connecticut, New Hampshire, Pennsylvania, and Virginia.¹ (The unwelcome news that WNS spread into New Jersey was announced in January 2009 after it was discovered in our largest bat hibernacula, the Hibernia Mine in Rockaway Township, and other Northern NJ overwintering sites.)





Left: Researchers have named this White-nose Syndrome (WNS) because the white muzzles are easily spotted amongst huddled groups of hibernating bats. Right: This close-up shows both a lesion and the white fungus growing on the forearm of this bat.

growing on bats suffering from WNS has been identified as *Geomyces destructans*.³ Although similar fungi are commonly found in the environment, none are known to invade living tissue like this particular species.

It is described as a cold-loving fungus that is only capable of growing where temperatures are below 68° F. This fungus thrives in the exact conditions that the affected bat species require for their winter hibernacula: cooler temperatures, low light, and high humidity. Scientists are under extreme pressure to determine if this fungus is the primary cause of WNS. If so, many questions still remain unanswered. Where did it come from? How does it cause bat deaths? What is the method of transmission? How can it be stopped?

BATS ARE IMPORTANT!

Bats play a vital role in maintaining the health and balance of the ecosystems in which they live. The affected bat species are important consumers of night flying insects, many of which are agricultural and forest pests. One of the hardest hit species, the Little Brown Bat, is capable of consuming up to 1200 mosquito-sized insects during one hour in a peak feeding period.⁴ Unlike most other small mammal species, bats tend to live long lives (5-15 years on average) and reproduce very slowly, with

many species producing only one offspring each year. Therefore, bat populations have a difficult time recovering from such tragedies. Scientists are concerned that even if WNS does not cause any additional deaths, it will take many human generations for bats to recover from this unfolding tragedy.

Did You Know?

Two-thirds of NJ bat species hibernate and are therefore prime targets for WNS.

References: 1. Bat Conservation International. "Consensus Statement of the Second WNS Emergency Science Strategy Meeting Austin, Texas May 27-28, 2009." <http://www.batcon.org/pdfs/whitenose/ConsensusStatement2009.pdf> 2. United States. House of Representatives. Testimony of Marvin Moriarty, Regional Director, Northeast Region, U.S. Fish and Wildlife Service, Department of the Interior before the House Committee on Natural Resources Subcommittee on Insular Affairs, Oceans and Wildlife and the Subcommittee on National Parks, Forests, and Public Lands. Joint Oversight Hearing on White-Nose Syndrome: What's Killing Bats in the Northeast? June 4, 2009 http://resourcescommittee.house.gov/images/Documents/20090604/testimony_moriarty.pdf 3. Gargas, A., et. al. "Geomyces destructans sp. nov. associated with bat white-nose syndrome." *Mycotaxon* 108 (2009): 147-154. http://www.fws.gov/northeast/whitenose/Gargas_et_al_Mycotaxon_2009.pdf 4. Species and Profiles: *Myotis lucifugus*. Bat Conservation International. 6 July 2009. Web. <<http://www.batcon.org/index.php/all-about-bats/article-and-information/species-profiles.html>>

What Can You Do To Help? Spread The Word!

Bats are wonderful creatures that play an important part in our ecosystem. Raise awareness of this issue with your family, friends, and neighbors. Give some positive press to this often maligned creature.

Learn More!

- Visit the Huber Woods Environmental Center and explore the newly installed bat exhibit.
- Come to Family Bat Night. This program is offered many times a year in different parks. Visit www.monmouthcountyparks.com or consult

The Directory for a schedule.

- Request for a Monmouth County Park System Naturalist to speak to your school, community or scout group.

- Find & read updated information from trusted sources on the internet:

—U.S. Fish & Wildlife Service: <http://www.fws.gov/northeast/pdf/white-nosefaq.pdf>

— Bat Conservation International: <http://www.batcon.org/index.php/what-we-do/white-nose-syndrome.html>

— National Speleological Society: <http://www.caves.org/WNS/index.htm>

Make a Donation!

The following organizations have established funds for research and response activities related to White-nose Syndrome:

Bat Conservation International
PO Box 162603
Austin, TX 78716

Center for North American Bat Research and Conservation
Indiana State University
Terre Haute, IN 47809
(812) 237-2383



GREEN HERITAGE

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PRSR.T. STD.
U.S. POSTAGE
PAID
MONMOUTH CO.
PARK SYSTEM

Late Bloomers: Wildflowers of Fall



Jewelweed



New England Aster



Thistle Flower



White Wood Aster



Snakeroot