



# MONMOUTH COUNTY PARK SYSTEM GREEN HERITAGE

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

Vol. 56 No. 2 Summer 2022

## NOT-SO-SECRET Gardens In The Parks

If you love the beauty of Deep Cut Gardens, you may be surprised to know it's not the only site where you'll find colorful blooms. In fact, there are dozens of smaller gardens and specialty plantings throughout the parks. Sometimes these gardens are built (or restored) because they are part of a historic feature and other times to attract wildlife. Gardens have even been installed in stormwater basins to mitigate drainage or showcase desirable local plants. These special garden areas are designed by Park System Naturalists or Landscape Architects, and are installed and/or maintained by Park System staff as well as our Volunteer Garden Teams.

### Gardening with a Purpose at Huber Woods Park

If you want to check out a wide variety of plants and flowers with different purposes within a small area, this is the place to venture. Starting at the Environmental Center parking lot and meandering along the 0.2-mile Discovery Path, you will find a total of six – yes, six! – garden areas.

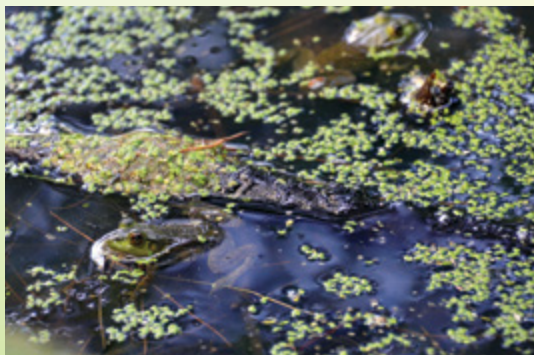


Cardinal Flower

**Bio Retention Basin** – This circular area located in the parking lot was once overrun by invasive weeds. With plenty of planning and care it was transformed into a spot songbirds now love to visit for bathing. Moisture loving plants found in this space include cardinal flower, blue flag iris, and switchgrass.

**Lenape Themed Garden** – New for this year, and to be located in a peanut stone bed along the walkway leading to the Environmental Center, this garden will be a living catalog of plants the Lenape used for food, medicine or spirituality practices, such as butterflyweed, blueberry, elderberry and horsemint. Want to learn more about the Lenape? Check out the exhibits located in the Environmental Center.

**Shade Garden** – Garden Volunteers assisted in clearing out this once weedy site, and with the help of a grant from the Hardy Plant Society/Mid-Atlantic Group, plants that thrive in shady conditions were planted, including northern spicebush, wild columbine, woodland sunflower, and wreath goldenrod. Sadly, this garden is also a favorite for local deer, so staff plan to battle this issue with additional plantings this year.



Frog Pond

**Frog Pond** – This small artificial pond is a big attraction for green frogs. Also located in a shady area, the frog pond is often planted with mayapple, Virginia bluebells, blue flag iris, and great blue lobelia.

**Monarch Garden** – Monarch butterflies are not only beautiful, but also important pollinators. Local Scout Bridey Clanton-Calnan reached out to Huber Woods Naturalists about planting a monarch-themed garden for her project. Working together, they planted milkweeds and goldenrods that are valuable for monarchs.



Huber Woods Environmental Center



Shade Garden



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Editor/Writer: Amanda Tanay  
Photographer: Maribeth Gardner  
Graphics: Michelle Scolletta  
Questions/Subscriptions:  
732-842-4000, ext. 4312;  
info@monmouthcountyparks.com

**Pollinator Garden** – The first garden at the site, and one of five pollinator gardens located throughout the Park System, this area once contained non-native and invasive plants. Today, the garden has over 20 varieties of native wildflowers, including scarlet bee balm, butterflyweed, golden Alexander, and New England aster. Its most popular visitors are the ruby-throated hummingbird, sweat bee, and swallowtail butterfly.



Huber Woods Pollinator Garden



Ironweed is a moisture loving, deer resistant plant that is loved by a variety of pollinators in late summer to early fall when its bright magenta flowers bloom.

## Utilizing Plants to Solve a Problem at Thompson Park

When flooding became an issue near the Filly Run parking lot, Park System Engineers took a natural route to solving the problem in 2008. Pin oak, red maple and swamp white oak trees, along with native plants like ironweed and goldenrod, were used in this 0.25-acre planted biofiltration basin and not only take up excess water to prevent flooding, but also provide habitat for wildlife.



Manasquan Reservoir Pollinator Garden

## Pollinator Friendliness at Manasquan Reservoir

Helping our pollinators thrive has been an important objective for our Park System Naturalists. So, when the first Park System pollinator garden was planned at the Manasquan Reservoir, they knew exactly how to approach it. With a variety of beautiful native plants, such as button bush, ironweed, sweet pepperbush and false sunflower, this garden surrounds the Environmental Center and attracts an abundance of life including honeybees, butterflies and hummingbirds.





## Monarchs on the Greens

You've likely never paid much attention to the plantings at our golf courses while readying your next shot. However, at Charleston Springs, Millstone, you'll find areas of milkweed that visiting butterflies love. Greenskeepers planted fields of this monarch butterfly favorite to assist in the course's beautiful backdrop while also supporting nature.



A monarch caterpillar feasting on the milkweed at the Freneau Woods Park pollinator garden.

## Other Sites with Pollinator-Friendly Plantings

Pollination is done by butterflies, bees, moths, beetles, birds and other animals. But do planting pollinator-friendly plants help? These garden visitors are all the proof we need as they are caught enjoying the food provided by these gorgeous and beneficial plantings.



This Eastern swallowtail is appreciating the bee balm in the wildflower fields at Thompson Park.



This bumblebee is enjoying milkweed planted at Dorbrook Recreation Area.

**We love that our visitors enjoy all the beautiful garden areas our staff have created. However, while exploring your favorite parks, be sure to leave flowers and other plantings as you find them. Our pollinators and other critters who thrive on these habitats would surely thank you!**



# Return Of The Spotted Lanternfly

Maggie Wasacz, Environmental Specialist

**T**he spotted lanternfly (*Lycorma delicatula*) is an invasive insect unintentionally introduced to the United States from Asia in 2012. Invasive species, like the spotted lanternfly, are non-native plants or animals whose introduction causes environmental harm. This colorful insect is a destructive pest that has invaded many areas of the mid-Atlantic since its first sighting in eastern Pennsylvania.

Over the last year, you may have seen fliers and articles with the slogan “See It, Stomp It” to raise awareness and help eradicate this pest as it spread to Monmouth County. But what else can we do to stop the destruction these insects create? And why should we?

## Spotted Lanternfly Life Cycle & the Damage They Cause

Spotted lanternflies emerge from their eggs in late April and are present until December. The adult stage, prevalent from July to December, has grey and black wings with black spots that reveal red underwings when in flight. Adults lay egg masses that appear as one-inch, white or brown oval-shaped raised spots on trees or other vertical surfaces.



Spotted lanternfly nymph stages - early instars (right) and late instars (left). (Public domain photo)



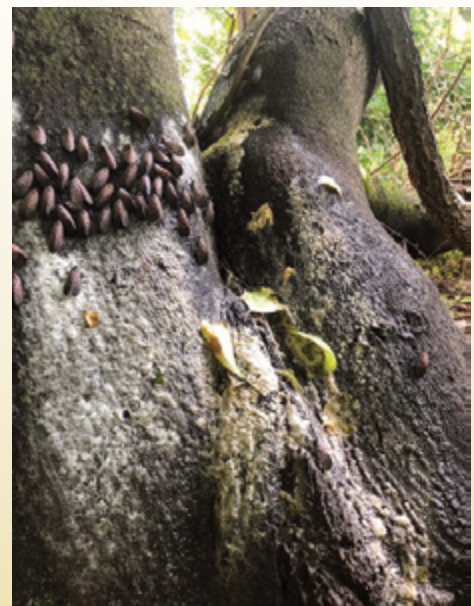
Adult spotted lanternfly with open wings (Photo by Flickr user Picasa - Creative commons license BY-NC-SA 2.0)

A phloem-feeding insect, the spotted lanternfly has mouthparts that can enter the woody bark of trees and suck out the nutrient-rich sap. With the overabundance of this pest, the severe pressure can weaken trees and cause damage which can appear as leaf wilting, yellowing, bark wounds, or, if severe enough, death of the tree altogether. Additionally, when feeding they leave behind a sugary substance called honeydew that encourages the growth of sooty mold, a fungal species that can damage the tree even further. Sooty mold can appear unsightly on the ground near the attacked tree and become a nuisance on areas such as patios or sidewalks. The spotted lanternfly's preferred tree is the tree-of-heaven (*Ailanthus altissima*), although more than 70 other plants can serve as hosts for the pest including native trees like black walnut, maple, sycamore and birch.

Not only can the spotted lanternfly harm trees in forests and urban landscapes, it also has the potential to cause economic losses to our agricultural industries. They feed on economically important crops such as grapes, blueberries, fruit trees, and lumber trees, with the potential to cause billions of dollars of economic losses nationwide.



An adult spotted lanternfly on the bark of a tree-of-heaven.



Notice the residue on this tree. Called honeydew, this sugary substance is left behind as spotted lanternflies feed.



## Current Management Strategies

Managing the spotted lanternfly means protecting home landscapes, agricultural industries, and the natural resources of our public park lands. There are several methods we can utilize:

- **Physical:** Physical management involves the “See It, Stomp It” approach of manually killing the insects when possible, including egg masses. These methods can also include circle traps and sticky bands, both of which work by exploiting the insects’ tendency to crawl up tree trunks. Circle traps funnel the insects into a plastic container, while sticky bands trap them as they travel over the adhesive surface.
- **Chemical:** This method involves the application of pesticides directly to the insects or into the trees the insects utilize for food.
- **Monitoring and Quarantine:** Monitoring the spread of the spotted lanternfly through the state and surrounding region gives researchers insight into the insects’ behavior and can lead to better preparedness. State regulated quarantines aim to prevent the spread of the insect to new areas.

When the spotted lanternfly was discovered in Monmouth County in 2021, the Park System quickly took action. Park staff were in contact with county and state officials, Rutgers University, and Penn State University early on to develop a management plan. Next, educational information was

distributed throughout the parks to spread awareness to our visitors. Circle traps on trees were installed at seven different parks to help slow the spread, and pesticide applications were made in highly infested areas to remove the insects. Finally, monitoring of park areas took place to help inform management decisions.



Circle Trap



Pesticide Application

## What Can You Do to Help?

While the Park System has put tremendous effort into managing spotted lanternfly populations, the most effective way to prevent damage by this species is through the joint efforts of public and private landowners. Homeowners can help to reduce populations by inspecting their property for the following:

- **Spotted Lanternfly Nymphs or Adults:** If you see a few spotted lanternflies, they should be swatted or stomped out. Additionally, circle traps can be purchased or homemade and installed on yard landscape trees. Larger numbers of the pest may be best managed with a registered pesticide application. Remember to only use pesticides registered by the EPA and to follow all label guidelines and restrictions. Report the presence of the pest at 1-888-422-3359 or online at [extension.psu.edu/spotted-lanternfly](https://extension.psu.edu/spotted-lanternfly).

- **Spotted Lanternfly Egg Masses:** Inspecting any vertical surfaces for spotted lanternfly masses can help reduce the amount of the pest that will be present at your home the following year. Inspect trees and fences for oval shaped white to brown egg masses, approximately one-inch or less in size. If located, removal can be done by scraping them off with a putty knife or a plastic card into a container of rubbing alcohol or hand sanitizer to kill them. Do not scrape them to the ground, as they will still have the ability to hatch.



Spotted lanternfly egg mass

- **Tree-of-heaven:** This noxious invasive species invades the disturbed areas of our park lands and outcompetes native tree species for resources. Tree-of-heaven can be identified by its compound leaf shape, bark that looks like a cantaloupe rind, and leaves that smell like rotten peanut butter when crushed. Removal of these trees will reduce the most popular food source of the spotted lanternfly.



Tree-of-Heaven (*Ailanthus altissima*). Photo from USDA-NRCS Plants Database.

Finally, it is important to prevent the spread by inspecting vehicles, landscaping materials, and other equipment before leaving an area with a known spotted lanternfly invasion. Check vehicle bumpers and wheel wells for egg masses and individual insects and remove them before traveling. And do not move firewood from one location to another, as the spotted lanternfly and other common insect pests can “hitchhike” this way as well.

With this information, we can all do our part to lessen the impacts of the spotted lanternfly and protect our natural resources. For more information, visit <https://njaes.rutgers.edu/spotted-lanternfly/>.

- Special thanks to Park System Assistant Superintendent Matt Ruding for providing detailed background information and photos.

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# Deep Cut Gardens Home Gardener

152 Red Hill Road  
Middletown, NJ 07748

GS Parkway Exit 114, to Red Hill Road  
732-671-6050

## BASIL: From Cultural Significance To Diverse Usages

Basil is a unique herb that has earned a spot in our cultural and gastronomical worlds, paralleling time and geographical locations. But did you know it is even more diverse than that?

Basil (*Ocimum basilicum*), often referred to as the “king of the herbs” or “herbe royale” if we were in France, delights the senses like no other. Its presence is a staple in summer garden beds and on the dinner table. Salads, pizza, sauces and soups would be incomplete without it.

This annual, herbaceous plant prefers warmth, full sun, and well-drained soil. Most gardeners know the Italian sweet basil flavor well for its use in cooking (it's an essential ingredient of pesto!). Yet, there are other types of basil with flavors such as lemon, cinnamon and anise. The flavored versions are utilized in a variety of ethnic dishes across the globe, from Mexico to Thailand. Plus, many varieties are great ornamental additions, thriving in anything from flower beds and containers to outdoor living spaces and busy cityscapes. Some have purple leaves, stems or flowers, and others have an attractive globe shape. Some smell like lemon, and others like licorice. And all of them attract and feed pollinators.



*Basil is incorporated within various locations at Deep Cut Gardens around other herbs as well as alongside vegetables and flowers.*

At Deep Cut Gardens, we embrace the diversity of basil, and visitors are welcome to experience its part in our garden's edible landscape. The park is open every day from sunrise to sunset and if you are interested in learning more about basil, gardening and pesto, be sure to check out the Summer Parks & Programs Guide for class offerings.

## Basil Throughout Various Cultures

The genus *Ocimum* (*Lamiaceae*) contains between 50-150 species of herbs and shrubs from the tropical regions of Asia, Africa, and Central and South America. These plants have square stems, fragrant opposite leaves, and whorled flowers on spiked inflorescences. The basil you commonly know is one of them.

The botany of these herbs and shrubs is thoroughly reported, along with traditional uses and cultivation techniques. Historical records reveal the powerful fragrance of basil has had many applications beyond the garden and the kitchen, including as a cultural and religious instrument. Sweet basil has symbolized mourning in Ancient Greece and love in Ancient Rome, which is the basis for its current devotion to love and courtship in Italy. In some cultures, a basil bouquet buried with the dead is believed to offer protection from evil in the next world. In Serbia, basil and its pleasant perfume symbolize the benediction of the Holy Spirit. In Spain, it is used in religious fests and processions. In the Holy Land, the plant is also used during the baptism ceremony where water is sprinkled using a bunch of basil. And in India, this sacred herb is dedicated to the gods Vishnu and Krishna.

***Sweet basil was well known during the Ancient Greek and Roman civilizations, supposedly brought by Alexander the Great (356–232 B.C.E.) to Greece, diffused by the Arabs with the expansion of this culture since the 7th century C.E. and to other parts of Europe by Charlemagne.***

Several species of basil, especially tulsi (*Ocimum sanctum*), are regarded as the most sacred plants in the Hindu religion, and therefore basil (tulsi) is commonly found in Hindu houses throughout India. The leaves are used for various ceremonies (including births and weddings) and sacred rituals, as well as in funerals. The explanation is that “the wind that carries the aroma of tulsi spreads purity wherever it blows”.



Despite the different geographical and political boundaries, basil's distinct and powerful fragrance emerges as a common denominator in the culture of civilizations around the world. The striking parallels of its use and association with love and marriage and the holy connection between our world and the gods are undeniable. Similarly, basil bridges the past with the present as an integral part of our foodscape and traditional dishes.

## Medicinal Uses

Used since Hippocrates (c. 460–c. 375 B.C.E.), basil has well-known medicinal properties. A member of the mint family, basil is often recommended for digestive complaints. Herbalists recommend it for stomach cramps, vomiting and constipation. Basil has also been described as having sedative qualities, thus in some cases it is recommended for nervous headaches and anxiety. For tea lovers, basil offers an array of fresh flavors and healing properties.

## Growing Basil at Home

Basil is an easy herb to grow from seeds. At Deep Cut Gardens, we start our seeds indoors and transplant seedlings into pots to harden. When night temperatures consistently remain above 60°F, the seedlings are planted into garden beds. Basil makes a perfect companion plant to tomatoes, especially those that are indeterminant as it provides shade to the roots, keeping in moisture and acts as a natural pest repellent.

The basic needs of basil are fairly simple: it loves warm weather; rich, well-drained soil; and plenty of water. If you grow basil in a container or raised bed, frequent feeding is necessary

(every other week); and if your basil plants are in the garden, you can feed them with organic fertilizer once a month. Remember to mulch after placing plants in the ground to assist in moisture retention.



Basil Seedlings

## How To Read Plant Names

Next time you are in the local garden center or shopping from a garden seed catalog, here is how to decipher daunting plant names. We'll use sweet Genovese basil for this example:

Genus name (like a last name) – *Ocimum*

Species name (like a first name) – *basilicum*

Variety name (like a nickname) – Genovese

Full name – *Ocimum basilicum* "Genovese"

## Basil Types

Both Mother Nature and current market demands have created a wide range of basil varieties. There are many leaf colors and shades, such as purple, green, variegated, chartreuse and even dark opal. There are plants selected for their pink flowers (wild magic basil), others that grow in small balls for perfect topiaries (red ball basil, Pluto and Aristotle), and there are plants that don't flower at all, but provide an endless supply of green leaves for your favorite pesto – "pesto perpetuo basil".

## Common Types of Basil

- Sweet Basil – The classic clove-scented basil that is perfect for pesto: Basilico Greco, Fine Green, Green Ruffles, Mammoth, Napoletano, Summerlong, and Sweet Genovese.
- Scented Basil – Distinguished by an aroma described by their name, these basil plants can be used in cooking and in bouquets of fresh flowers or planted along garden paths: Cinnamon, Lemon, Lemon Drop, Lime, Holy Basil, Siam Queen, Sweet Dani Lemon, and Thai.
- Ornamental Basil – These are robust plants often used for garden borders, cut flowers and cooking: Cardinal, Opal Basil, Purple Ruffle, Red Rubin, and Serrata.

Basil offers rich possibilities for adventurous gardeners and cooks. Here are a few samples of our experiences for you to consider in your own garden:

- *Ocimum citriodorum* "Lemon". We love the pale green foliage and strong lemony smell of this basil. The plants grew compact and bushy in our Children's Garden last summer. We added them to our iced tea and lemonade and also utilized it for making potpourri and hydrosols.
- *Ocimum basilicum* "Purple Ruffles". This showy basil grew as a vigorous border in the All-America Display Garden where visitors admired its purple colors. This is a handsome companion for pink petunias and looks elegant tucked between silver-blue sprays of catmint. We used cuttings of this basil for floral arrangements.
- *Ocimum basilicum* "Cinnamon". With distinctly veined, pointed green leaves and light lavender-colored flowers, this basil's aroma is clean, spicy and closely resembles cinnamon. We used it in teas and potpourris.



Continues next page...



## Various Uses of Basil

Last autumn, Deep Cut Gardens offered a series of classes on harvesting and using garden herbs such as basil. Here is a short list of uses other than making your favorite pesto:

- Use fresh leaves of mild/sweet basil as a substitute for lettuce on a sandwich or in a salad (Basil Napolitano).
- Make tea by steeping fresh leaves in hot water.
- Salad greens – Red Rubin Basil and Persian Basil.
- Use the flowers to decorate various salads and desserts.
- Dry plants for winter seasoning.
- Make potpourri.
- Use stems for cut flowers in a vase.
- Basil makes great flavored vinegars and oils.
- Bake pound cakes and sweet breads flavored by lemon or cinnamon basil.
- Small strips of fresh cinnamon, lemon and/or lime basil provide lift to a summer fruit salad.
- For pasta sauces and other recipes, use small leaf basil as they retain their flavor better and can tolerate long cooking heat.
- Cinnamon basil is great for making bath soaks and soaps.



*Basil has many uses from an ingredient in your favorite salad to using it in homemade soaps.*



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# The Story Behind Our Sargent's Weeping Hemlocks

(*Tsuga canadensis* 'sargentii')

Horticulturalist Kate B. Lepis, Ph.D.

There are plenty of botanical wonders to be enjoyed at Deep Cut Gardens, but the Sargent's weeping hemlocks that grace the rockery garden draw more comments from our visitors than any other. This variety has been described as “a ghost, gracefully sweeping across the landscape” and equated to “a green waterfall.”<sup>1</sup> Graceful is an adjective repeatedly used to describe these trees.



*Sargent's Weeping Hemlock in Winter*

In the horticultural world, people search the planet or spend years breeding plants in the hopes of discovering a novel plant form. Surprisingly, our lovely weeping hemlocks are not the offspring of something from a far-off land or bred by the hands of man. These trees represent a naturally occurring mutation of our native Eastern hemlock (*Tsuga canadensis*) and are likely the result of a single tree from upstate New York.<sup>2</sup>



*Sargent's hemlock is low and spreading with multiple trunks twisting in different directions. The standard Eastern hemlock is pyramidal with a single trunk reaching 100 feet in height. (Photo by D.J. Stang: Wikimedia<sup>3</sup>)*



# The Origin of Sargent's Weeping Hemlock

The namesake of these trees was Henry Winthrop Sargent, a prominent landscape architect in the late 1800s from Beacon, NY. Although he was the one credited for discovering the unique hemlock, he was not the first to recognize its merit. The original tree sat on a rocky hillside along the Taconic Parkway in Hopewell, NY.<sup>2</sup>

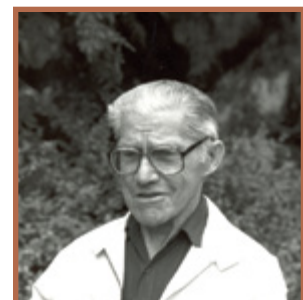
*Eva Scofield, standing with the original weeping hemlock, 1938. Her great grandfather, Jefferson Horton, shared pieces of his tree leading to the variety's popularity in early 20th century landscapes.<sup>2</sup> (Photo usage granted by Arnold Arboretum Archives)*



Around 1857, the farmer who owned the land gave a nurseryman and neighbor of Sargent, John Burrow, permission to collect pieces of the tree which he planted on his property in nearby Fishkill.<sup>2</sup> Evidence suggests the weeping hemlock cultivated by Sargent at his estate was a propagule received from Burrow. Some argue the variety should have been named Burrow's weeping hemlock. Whether Sargent made the discovery or not, he was the individual who enthusiastically shared cuttings with others which lead to the first commercial sale of the trees in 1874. Unfortunately for Burrow's nursery, they were a year too late to be the first to sell this form of tree. It piques the imagination to think of a beautiful variety like the Sargent's weeping hemlock originating from a random mutation in the seed of a wild tree.

## Sargent's Weeping Hemlocks Come to Deep Cut

When Vito Genovese owned Deep Cut (mid-1930s) he commissioned the construction of the peanut stone walls, rockery garden with cascading ponds, and rose parterre. The original landscape design was the vision of Theodore Stoudt and, as part of that vision,



*Theodore Stoudt at Deep Cut Gardens, 1991.*

eight Sargent's weeping hemlocks were planted.

Staff of Monmouth County Park System interviewed Stoudt in 1991 and he was impressed with the size of the hemlocks and mentioned that Lovett's Nursery of Little Silver propagated them.



*Cover of Lovett's 1941 catalog. (Photo made available by Biodiversity Heritage Library)*

To imagine the weeping hemlocks of Deep Cut only three feet wide provides inspiration to those who are patient enough to plant trees. Unfortunately, one tree died about 20 years ago when it crumpled under the weight of heavy snow. The warming climate, soil compaction from foot traffic, and invasive insects like the hemlock woolly adelgid threaten the health of the other hemlocks.



*Three stumps are all that remain of the fallen hemlock.*



*These white fuzzy masses at the base of the needles reveal hemlock woolly adelgid (Adelges tsugae).*



Our Sargent's weeping hemlocks are big, old and special. They are not only a part of the rich history of Deep Cut, but the early history of landscape architecture in the U.S. For these reasons we ask that people refrain from climbing or sitting on their limbs.



*Vito Genovese's estate, 1935. Eight of the shrubs on the hill are weeping hemlocks.*

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3. Wikimedia photos. Creative Commons License Agreement. <https://creativecommons.org/publicdomain/zero/1.0/>



# What Tree Is That?

## Tree ID In Our Parks

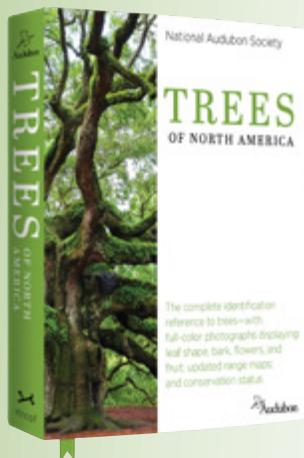
Christopher Lanza, Principal Park Naturalist

Trees and shrubs are the largest and most readily apparent component of a terrestrial (land-based) ecosystem. When visiting our northern parks like Huber Woods, Holmdel, Tatum, and Hartshorne Woods, you may encounter the stately beech with its smooth, gray bark (too often defaced by people's initials). You may also notice New Jersey's state tree, the northern red oak, from the flat gray lines running up and down its trunk called "ski trails."

In the southern parks like Shark River, Manasquan Reservoir, and Turkey Swamp, trees associated with the pine barrens become more common. The long-lived and massive white oak, chestnut oak, scarlet oak, and black oak are seen in association with the sturdy pitch pine. The pitch pine is noted for its fire survivability and can be identified best by counting the needles, bundled into groups of three. Every pine species has a different number of needles.

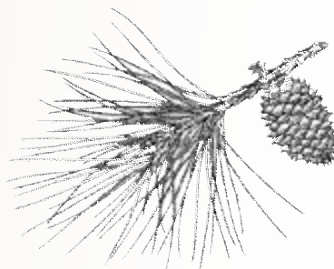
Small details like the number of needles or the shape of a leaf can help with identifying an unknown tree species, but it isn't always that straight forward. There are a few tips that a budding dendrologist (dendrology is the science of trees) should remember to avoid confusion.

**Tip One:** Find a field guide you're comfortable with and know how to use it. Field guides use different



methods to assist with identification, but most use some form of key. One common key is called a dichotomous key and uses questions to lead users to an identification, or at least gets them closer to the final identification.

**Tip Two:** Remember trees can be broadly grouped into three leaf shapes: needle-like, broad with an edge, or scale/awl shaped.



Pine



Oak



Cedar

(Courtesy of Rutgers School of Environmental and Biological Sciences)

Most of our species will be broad leaved, which can include simple leaves like in the oaks or compound leaves (with multiple leaflets) as found in the hickories. Several species will have needles, but only three will have the scale-awl leaf shape: eastern redcedar (*Juniperus virginiana*), Atlantic white-cedar (*Chamaecyparis thyoides*), and arborvitae (*Thuja occidentalis*), which is rare in the wild, but common in landscaping.

With these three trees excluded, you'd now determine if your unknown tree has needles or broad-edged leaves. As mentioned previously, if the tree has needles and they are in a bundle, indicating a pine, you would count the number of needles per bundle to assist in determining the species of pine. If the tree had single needles, it could be a spruce or fir, so you'd need to use identification methods beyond just the leaves.

**Tip Three:** The bark of a tree is a great way to determine its identity due to its year around visibility. The age of the tree can cause the appearance to vary, so this should be considered. Some bark is perfectly unique, like the sycamore with its sheet-like exfoliating bark, or the gray birch with its white and gray bark, while others still are more subdued and may look like another tree.



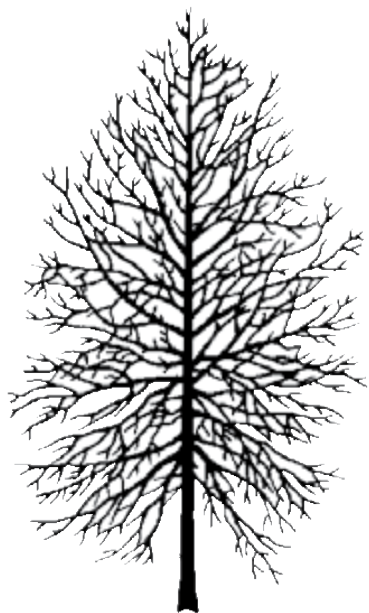
American Sycamore



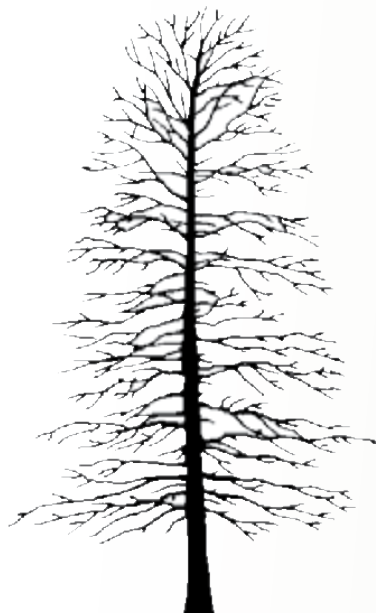
Gray Birch



**Tip Four:** During winter, a tree's shape and branching can be an excellent way to narrow down its identity. Certain species have unique branching, like the black gum with branches coming off the trunk at a 45-degree angle, or the pin oak with upper branches pointing up and the lower branches pointing down. Some tree guides will use tree silhouettes, although these drawings are idealized and trees in the wild will have more variation.



*Pin Oak Silhouette*



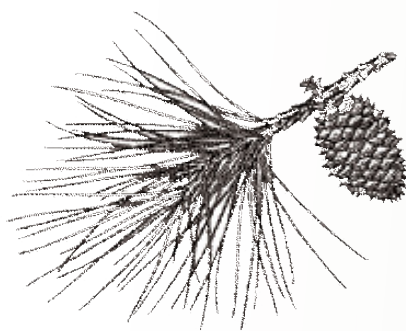
*Black Gum Silhouette*

*(From Natural Resources Canada, Canadian Forest Service)*

**Tip Five:** The conifers (pines, spruces and cedars) have cones rather than fruits found in most deciduous broad-leaved trees, and the differences in cones can be used to identify the specific type of tree you've come across.



*Pitch Pine Cone*



*White Pine*

*(Courtesy of Rutgers School of Environmental and Biological Sciences)*

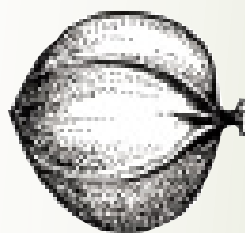
**Tip Six:** Tree fruits – a fleshy body surrounding a seed – come in many varieties, from the acorns of the oak to the pods of black locust or the winged samaras of the maples. The fruit of a tree, when in season, can be an important way of narrowing down the list of suspects. However, the seasonality of fruiting means the window to use them in identification is limited.



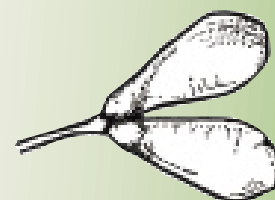
*American Sycamore*



*Tulip Poplar*



*Bitternut Hickory*



*Red Maple*

*(Courtesy of Rutgers School of Environmental and Biological Sciences)*

**Tip Seven:** Where a tree or any plant is found depends greatly on the kind of soil it is planted in: wet to dry, sandy to loamy, and a multitude of other soil characteristics. For example, the chestnut oak is found primarily in dry and nutrient poor soils while the red maple can handle wet and swampy conditions and is a major component of freshwater swamps in New Jersey. However, knowing the exact soil type is not required, but you should be able to determine if you're in a lowland, upland, or transitional area.

Hopefully this article has provided a good base and some useful tips for your journey into the world of dendrology. Trees are the foundation for any terrestrial ecosystem and provide wildlife and humans so many benefits such as food, wood, habitat, aquifer protection, and just the pleasure of walking under these towering giants, often the oldest organisms we regularly encounter. So, the next time you're walking a tree lined path in the parks, try to become better acquainted with our largest neighbors.

For detailed maps showing the forest types in each of your Monmouth County Park System parks, visit the Natural Resources/Forest Communities section of our website at [www.MonmouthCountyParks.com](http://www.MonmouthCountyParks.com).





# GREEN HERITAGE

805 Newman Springs Road, Lincroft, NJ 07738-1695

Volume 56, No. 2 Summer 2022

G22063 5/22



## SPOTTED LANTERNFLY:

How this invasive species is affecting our local trees and ways we can all help to manage their raising populations.

### ***In This Issue:***

Not-So-Secret Gardens in the Parks,  
Return of the Spotted Lanternfly,  
The Many Origins and Uses of Basil,  
Identifying Trees and more.

