



## The Visual Poetry of WINTER

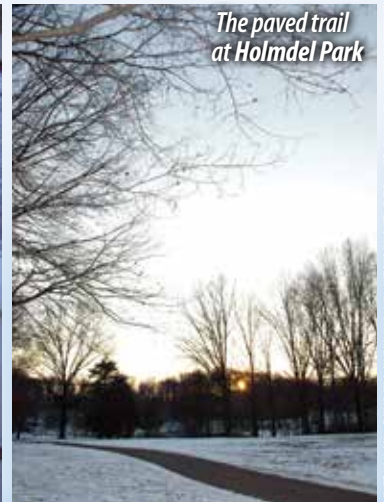
As the temperature falls and days shorten, the cold and ice slows us down—freezing even the trees and shrubs into place. There are far fewer people (and animals) around to make noise, so the parks also grow very quiet. And then, when it snows, the landscape transforms into a white palette against which the ordinary scenery stands out—a time when it is much easier to notice details. Unless you are among the more stalwart cold weather enthusiasts, such as these park photographers, you may not stay outside long enough to notice the special gifts of the winter landscape. So we are presenting them here instead (and, hopefully you are reading while sitting in a warm room)...

### The Winter Sky, Aglow

The sun struggles to pierce the cloudy winter skies, creating this beautiful effect.



The mill at Historic Walnford



The paved trail at Holmdel Park



Horse pastures at Sunnyside Recreation Area



Water's edge at the Manasquan Reservoir

### Buds & Branches in Relief

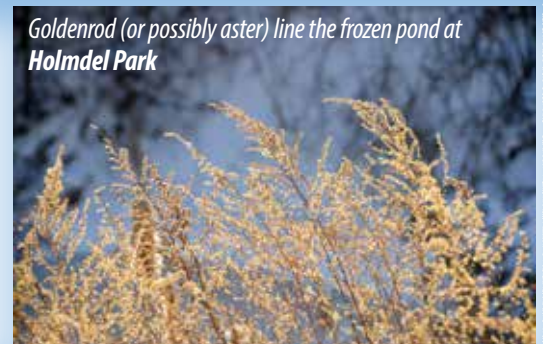
Winter 'survivors' stand out in the landscape.



Snow covered branches dip over the Manasquan River near Howell Park Golf Course.



Stalks of native hibiscus seedpods (swamp mallow) in Thompson Park.



Goldenrod (or possibly aster) line the frozen pond at Holmdel Park



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*A lone tree in a field near the Longbridge Annex and a woodland path at Thompson Park.*

**White-Out**

*The background disappears into a misty white haze during a snowstorm.*



**Picture Perfect**

*A blanket of snow on the ground adds dimension to the landscape.*



*An old barn at Thompson Park.*



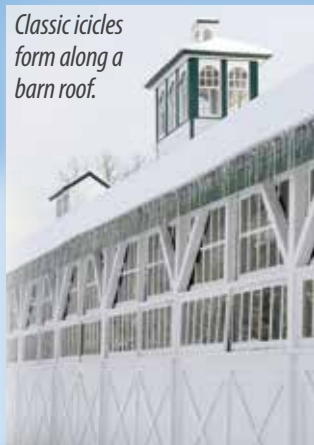
*A sleigh ride at Longstreet Farm*

**Ice Capades**

*Water can do some strange things when it gets cold enough outside.*



*Ice covered grass*



*Classic icicles form along a barn roof.*



*A sign post and branch along the water's edge*

**Winter Warmth**

*Mosses and lichens, known as bryophytes, are more cold resistant than other plants. And that's not all, there are even flowers that bloom in winter.*



*Can you make out the Pixie Cup (also known as Goblet) Lichen growing with the Star Moss in this patch of snow?*



*Spiky emerging sporophytes of moss poke through the snow.*



*Snowdrops can be seen in late winter patches of snow and mud*

IT'S



# WinterFest



Saturday, January 10, 1:30-5:30 p.m.  
Thompson Park, Lincroft

It's a day dedicated to cold weather family fun! Snow or no, there will be a host of outdoor activities for all to enjoy. Then, warm up by the outdoor fireplace with music and a hot drink!  
*Cross-country Ski and Snowshoe Demos - Ice Sculptures – Decorative Lighting  
Outdoor Cooking Demos – Winter Sports Vendors – Living History Farm Displays, and More!*

**Free Admission – Free Parking**

Call 732-842-4000, ext. 4236 for more information

## POST-SANDY BEACH UPDATE

It's been two years since Superstorm Sandy, and just over three years since Hurricane Irene. Each caused significant damage to your park properties and it's taken some time to clear away all the debris and make the necessary repairs to infrastructure. Along the coast, buildings, docks, bulkheads, piers, and seawalls have been fixed or replaced at Bayshore Waterfront Park, Fisherman's Cove Conservation Area, Seven Presidents Oceanfront Park, and the Monmouth Cove Marina (which also underwent dredging). But the biggest "repair"—if you can call it that—is the massive and ongoing beach replenishment effort by the Federal Government through the Army Corp of Engineers (ACOE).

NJ has an extensive amount of shoreline, more than 129 miles along the ocean and another 83 miles along Raritan and Delaware Bay, and much of it needed help. At our two beach sites alone—Seven Presidents Oceanfront Park and Bayshore Waterfront Park—the Corps pumped more than 1 million tons of new, filtered sand onto the beaches, and then bulldozed it all into place. This effort more than doubled the width of our beaches and in doing so, created a more stable buffer of protection for our buildings and property—as well as that of our neighbors.



In February 2014, **Seven Presidents** received 409,860 tons (253,000 cubic yards) of new sand, increasing the width of the beach from about 180 to 410 feet. These photos show the same jetty at Kiernan beach, before and after replenishment.



A



B



C

In July 2014, **Bayshore Waterfront Park** received 631,800 tons (390,000 cubic yards) of new sand, increasing the width of the beach from about 20 to 90 feet (not including the new dunes). Photo A: Note the line between the older sand (right) and the incoming sand (left, darker grey color because it is wet.) B: The finished beach. C: By September, the wider beaches attracted swimmers, sunbathers, dog walkers and kayakers.



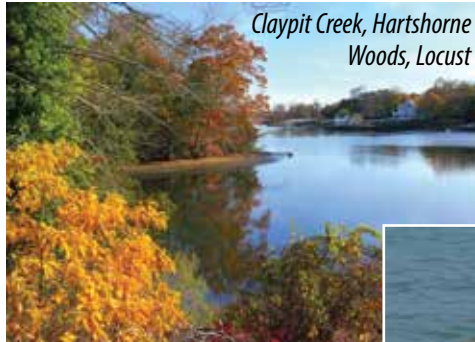
## PLANNING FOR THE FUTURE, WHAT'S NEXT?

Last issue, we announced that the Park System and Board of Recreation Commissioners were drafting a new Open Space Plan for the county in 2015. We also reviewed the details of the current plan, adopted in 2006. This issue, we discuss some of the proposed revisions.

*Open space protects beautiful scenic vistas, precious natural resources, and land where people can recreate and relax.*



*Sunrise at Mount Mitchill Scenic Overlook, Atlantic Highlands*



*Claypit Creek, Hartshorne Woods, Locust*



*The elegant Great Blue Heron can be seen almost any day of the week during the summer months at one of 17 park sites across the county, including Claypit Creek.*



*A meadow trail at Tatum Park.*



*Holmdel Park has a cross country running course that is used by thousands of high school competitors each season, as well as local recreational runners.*

Our review of the 2006 Open Space Plan indicates the purpose of the plan should remain the same—to set acquisition priorities, to communicate those priorities to the public, and to comply with the statutory requirements for the collection of open space trust fund money. The goal of the plan however, may be revised to include new thinking about the Park System's role in preserving open space.

### Expanding Goals to Include Water Resource Protection

Preserving open space near water can protect water body quality and the yield and sustainability drinking water supply, and mitigate flood hazards. In particular, protecting the water supply can help avert costs of drinking water treatment and minimize flood damage.

With all the associated costs of emergency services, flood reduction and storm water management engineering projects, as well as damages to tourism and commercial fishing, flood mitigation can save residents the heartache of recovery and save the state hundreds of millions of dollars each year. It may be time to specifically reference these benefits in the goal of the plan.

### Goal of the Existing Monmouth County Open Space Plan (2006)

To permanently preserve public land of county significance to support future regional conservation and recreation needs throughout the county. This land should form an integrated system of open space that is sufficiently diverse and comprehensive to protect the significant natural and man-made landscapes that have defined Monmouth County in past generations and to provide a wide range of resource-based recreation opportunities for current and future generations.



*Acquired land protecting the Swimming River in Tinton Falls.*

## Refining Methods to Calculate How Much Open Space is Needed

One method used to estimate the amount of open space needed for public recreation in NJ is the **Balanced Land Use Concept**, as determined by The New Jersey Statewide Comprehensive Outdoor Recreation Plan (NJSCORP). The open space recommendation of 7% for the county obtained through this method is based on NJ's developed, developable and undeveloped land resources and the need to accommodate other land uses such as transportation, commerce and housing.

Monmouth County's current Open Space Plan of 2006 analyzed county land 'in aggregate' and did not differentiate between developed, developable and undeveloped areas. Advances in digital mapping data should allow us to do a more refined analysis.

A industry method used to calculate the amount of open space needed is the **acreage per population**. The current county standard of 12 acres/1,000 people, used by the Park System since 1970, was published by the National Recreation and Parks Association (NRPA) in Recreation, Park and Open Space Standards and Guidelines. NRPA no longer considers this "one size fits all" approach of a fixed "acres per population" multiplier a best practice for open space planning.



*Comparative Benchmarking may help synchronize land preservation goals with our unique needs (traffic, population density and limited available space).*



Instead, there's a new method called **Comparative Benchmarking** that compares an individual park system to similar agencies using 'benchmarks' such as area served, population, and number of employees. The Park System will take this system into consideration when developing new goals for the 2015 Open Space Plan.

### Comparative Benchmarking

NRPA has developed the Parks and Recreation Operating Ratio and GIS (PRORAGISTM) system, a tool to collect and analyze data about parks and recreation agencies across the country. It allows users to compare themselves to departments that they identify as similar in geography, climate, size, or number of total employees. Users complete a survey that captures data about their agency and its responsibilities, and are then able to analyze their data and compare themselves to individual agencies or aggregated groups of agencies.

## Open Space Priorities: Conservation, Recreation and Community

In the past, land acquisitions were required to have both conservation and recreation value. In the new plan, the Park System might consider some properties only for their conservation purposes and not require a recreation potential if the property can provide multiple conservation benefits, such as high habitat value and ground water recharge potential.



*Community Resilience: This aerial view of Bayshore Waterfront Park shows how protected acres of marshland (tan area) and maritime forest (bottom left) can act as a buffer against rising sea levels and storm surges.*

Natural areas may also be considered if they assist in community resiliency. In the aftermath of Superstorm Sandy, recognizing the impact of sea level rise, the Park System is interested in helping to protect and enhance coastal habitats. Restoring large sections of coastal dunes and maritime forests, as well as tidelands and wetlands areas, will help buffer the impacts of increased storm surges and absorb stormwater runoff from increasingly severe storm events.

Moving forward, park efforts will continue to include cooperative acquisitions with municipalities and non-profit organizations in underserved areas. The new plan will also explore acquisitions in highly developed areas, perhaps even finding ways to participate in the development process to ensure park and recreation resources are included.

### Greenways, Networks and Trail Connections

The 2006 Open Space Plan called for greenways to help protect high value streams, preserve future transportation corridors and contribute to a county-wide trail network. The 2015 plan will look for ways to work with municipal partners to identify and develop a county-wide trail network over the

next 10 years. The plan will also look for ways to partner with local governments, County Engineering Department and others on a county bicycle and pedestrian access plan for all the county parks.



## THE SHARPEST TOOL IN THE SHED

Diane Allen, Park Horticulturalist

For gardeners, winter is a time for reflection, planning, ordering, starting seeds and, if not done already, cleaning and sharpening our gardening tools. Our mind, however, with its knowledge base and resourcefulness, is perhaps our most important tool. So let's sharpen that up a bit, too.

### Common Sense Pest Management

Many pest problems in the home landscape are the result of plant stress caused by environmental factors such as poor soil conditions, sunlight, and/or air circulation. These make plants more susceptible to attack by insects and disease. Overuse of pesticides can also cause increased pest resistance and destruction of natural predators/parasites. Even improper fertilization can render our plants more susceptible to attack.



*The green lacewing adult, with its gossamer wings and golden eyes, feeds on nectar and pollen. Its alligator-like larvae, however, are voracious predators of many garden pests like mealybugs, mites, whiteflies, aphids and leafhoppers. Source: [www.borogreen.org](http://www.borogreen.org)*

No wonder one of the speakers at a recent conference stated that the homeowner may well be the primary pest. Ouch! Fortunately, following an Integrated Pest Management (IPM) approach can go a long way towards keeping us clear of falling into that category.

Not a single control method, IPM is based on knowledge, monitoring, decision-making and intervention when needed, using control measures that have the least impact on non-target organisms.

### Tools of the IPM Trade

IPM programs use a variety of tools for greater effectiveness against pests:

- **Cultural controls** – practices that reduce pest establishment, reproduction, dispersal and survival, e.g. changing irrigation practices
- **Biological controls** – use of natural enemies like predators, parasites, and pathogens.
- **Mechanical and physical controls** – discourage the pest or kill it directly. Mulch for weed suppression or place slug traps and cutworm collars (a paper/plastic barrier around your plant stem to deter the nocturnal moth larvae).
- **Chemical control** – pesticides, whether organic or synthetic, are used only when needed and in combination with other approaches for effective, long-term control. These are selected and applied to be effective, yet safe for other organisms and the environment.

Regular monitoring can catch problems early, while they are still minor. Make pest control decisions according to which pests are actually present. Also make sure to preserve any naturally-occurring predators like ladybeetles, green lacewings (pictured) and hoverflies.

### Unintended Consequences With Pesticides

According to recent peer-reviewed research: neonicotinoids, a fairly new class of insecticides (which include seed treatments, foliar sprays, soil drenches and granules) can actually increase mite populations. Since mites are arachnids, not insects, they are not killed by these products. Yet, with no means of excreting the product, the substance accumulates within the mite, which then becomes toxic to its natural predators. In addition, it has been found that mites lay approximately 20% more eggs on neonicotinoid-treated plants (cause as yet unknown).

## Heed Your Weeds

Before you get out your favorite weeding tool and kneeling pad, take stock of what you see. A healthy crop of certain weeds may be a clue to conditions you may want to remedy, or take advantage of by choosing your plantings accordingly.

- Dock, nutsedge, foxtail, rushes and sedges thrive in a wet soil. If this is due to an irrigation problem or downspout drainage, you may want to correct it. However, if it is a naturally occurring situation, it may be best to leave 'as is' – wetlands are a precious resource – and choose appropriate plantings (such as those for a rain garden).
- Thistles, mullein, and purslane indicate dry soil. There are many desirable plants suitable for dry soils, in either sun or shade.
- Shepherd's purse, mullein and black medic indicate lean soil (low fertility), while dead nettle, dandelion and clover indicate fertile soil.
- Acidic soil encourages sorrel, crabgrass, annual bluegrass, mullein, and plantain. Chickweed, dandelion and wild mustard prefer a neutral soil. Alkaline soil, not likely to be a naturally occurring condition here on the east coast, is favored by poppy and sagebrush.
- Annual bluegrass, knotweed, mouse-ear chickweed, goosegrass, and quack grass will thrive in compacted soil.
- Garlic mustard, ground ivy, night shade, and poison ivy can be found in shady areas.



*Mullein is an indicator of dry, infertile soil, but also makes a fine perch for a passing bluebird.*



*Dandelions can be a nuisance if you like your lawn to be uniformly green, but they indicate a fertile soil with a neutral pH, and their deep roots may even help open compacted soil.*



*Knotweed, a resilient invasive plant, can indicate compacted soil. This big batch—seen flowering in October—can be found in Big Brook Park, Marlboro.*

Serious conditions may require a more aggressive approach, but a top-dressing of compost can go a long way to improving all types of soils, improving drainage or water retention as needed, increasing fertility, buffering pH, and giving a real boost to the soil's biological activity.

Weeds are often opportunistic, moving into disturbed or troubled soils, possibly healing them. With their strong, deep tap roots, plants like comfrey, dock and dandelion are able to open compacted soil and bring minerals up from deep below. Low-growing and shallow-rooted weeds like purslane and ground ivy can stabilize soil with their root system while clover is well-known for its ability to enrich the soil with nitrogen. These plants might even be considered nature's band-aid.

*A member of the borage family, comfrey had medicinal uses in days gone by. The flowers are beloved by bees and other beneficial insects. The long tap root mines minerals from deep in the soil; pull unwanted shoots to enrich and accelerate your compost.*





# INCOMING! Keep an Eye on These Emerging Garden Issues

**Emerald Ash Borer (EAB).** This small, metallic green beetle, first spotted in Michigan in 2002, has now been reported in Somerset County, NJ. Although the adults nibble harmlessly on ash leaves, the eggs they lay in the bark crevices hatch into larvae that burrow into the tree's living tissue to feed. To date the infestation has killed tens of millions of ash trees in 23 states and 2 Canadian provinces. Recently, the White fringetree (*Chionanthus virginicus*), a small tree native to eastern U.S., has also been confirmed as a potential new host.

The insect is often present for several years before it is detected, but you can be on the lookout for signs and symptoms on ash species:

- **Bark split with larval galleries beneath**
- **D-shaped adult exit holes**
- **Unusual sprouts on the trunk**
- **Die-off at the crown**
- **Heavy woodpecker activity**

Main natural enemies of the EAB are parasitoid wasps. The USDA is currently mass-rearing three non-native, stingless wasp species collected from China, the EAB's place of origin. Believed to have entered North America in infested wooden shipping crates, this tiny but destructive beetle can be spread by transporting ash trees from nurseries and by moving infested ash wood, such as logs and firewood.

**Boxwood Blight.** First identified in England in the mid-1990's, the disease spread throughout Europe by 2000 and was first seen in the U.S. in 2011 in a North Carolina nursery. Currently, the disease has been reported in at least nine states, including NJ. Specific to boxwood, and its cousins pachysandra and sarcococca (sweet box), its origin is unknown.

**This highly aggressive fungal pathogen infects healthy plants and spreads rapidly, especially in warm, humid weather.**

It can persist in the soil for a year or more. Fortunately, spores do not travel long distances in the air, but rather travel in rain splash, wind-driven rain, and irrigation water, as well as on infested plants, contaminated tools, equipment and clothing. Therefore, infections are likely to be localized.

The fungus (*Calonectria pseudonaviculata*, or *C. buxicola*) usually attacks new growth first. Initial symptoms are light brown spots that enlarge, often in concentric circles, until the entire leaf turns tan and drops to the ground, often in such quantity that the plant appears to be "bleeding" leaves. White spore growth may be seen, especially on the underside of the leaves. Cankers on the stems, like a black Sharpie mark, are an indication of advanced disease.

Exclusion is the best management strategy. Purchase only certified stock and segregate for at least 90 days. Avoid overhead irrigation, provide good air circulation and sun, prune in dry weather, sterilize tools and clean up debris. Fungicides can decrease the number of spores on infected plants, and may be effective in prevention; guidelines are in development. Call the Rutgers Cooperative Extension 732-303-7614 for advice if you suspect disease and double-bag any specimens (don't compost).

References/Further Reading:

Invasive Emerald Ash Borer Detected in NJ. Rutgers Cooperative Extension Plant & Pest Advisory. Available at: <http://plant-pest-advisory.rutgers.edu/invasive-emerald-ash-borer-detected-in-new-jersey/>. Accessed October 15, 2014.

Boxwood, Now You See Them, Soon You Won't! Rutgers Cooperative Extension Plant & Pest Advisory. Available at: <http://plant-pest-advisory.rutgers.edu/boxwood-blight-confirmed-in-new-jersey/>. Accessed October 15, 2014.



*The Emerald Ash Borer, shown next to split bark with larval galleries. Source: Eric Day, Virginia Tech, [www.pubs.ext.vt.edu/29042904-12902904-1290.html](http://www.pubs.ext.vt.edu/29042904-12902904-1290.html).*



*This common landscape tree,*

*shown here at Historic Walnford, has distinctive leaf pattern, usually 7-9 leaves side by side with a single leaf on tip, around a central stalk.*



*Boxwood blight could spread like wildfire through a dense, hedged planting such as seen in Deep Cut's Rose Parterre.*



*Initial symptom of boxwood blight—light brown spots. Source: Sabrina Tirpak, Rutgers Cooperative Extension, Plant Diagnostic Lab (PDL)*



## It's Time To ...

### January ✓

- Check for winter mulches and plants displaced by the weather and replace as necessary.
- Gently remove snow from evergreens to prevent damage.
- Remember the birds – fresh water is essential; seeds and suet will provide nourishment as natural food supplies dwindle.
- Start a garden journal; it will prove to be an invaluable asset.
- Increase humidity around your houseplants by setting plants on pebble trays or grouping them together.
- Plan for the coming growing season – browse the catalogs, narrow your wish list, sketch plans, make your seed list.
- Test leftover seed for viability by placing several between moist paper towels or coffee filters and keep warm and moist.
- **Get ready for spring: Clean & oil your garden tools now to add years to their life; check your garden shelves and properly dispose of any old chemicals.**



### February ✓

- **Deep Cut's display greenhouse is open year round, filled with orchids, succulents and houseplants. Peak orchid flowering season is mid February-March.**
- Turn the soil in your vegetable and annual beds now to expose insect eggs to foraging birds and the ravages of winter.
- Dust your houseplants, and stay on the lookout for insects. Feed any that are actively blooming or showing new growth.
- Force branches of flowering trees or shrubs like forsythia, cherry, apple or quince.
- Insect & disease control is important for fruit trees – pesticide recommendations and spray schedules are available from the Rutgers Cooperative Extension Service 732-303-7614 or online at [www.njaes.rutgers.edu/garden](http://www.njaes.rutgers.edu/garden).
- On a mild day, begin pruning trees & shrubs, starting with any branches that have been damaged.
- Pick up any twigs and other debris from winter storms, watch for and pull any early weeds – henbit, chickweed and shepherd's purse can come up early.
- When the snow has melted, sow an early crop of spinach.



### March ✓

- Add well-rotted manure or compost to your garden beds, if not done in the fall.
- Fertilize trees & shrubs, if not already done, after soil temperatures have reached 40° F, but before new growth begins. Apply dormant oil spray on a calm day above 40°.
- Repot and fertilize your houseplants as needed.
- Indoors, start seeds for broccoli, cabbage, cauliflower, eggplant, lettuce, parsley, peppers and tomatoes.
- Weather is uncertain, so be cautious about uncovering beds. Proceed gradually, removing leaves and winter mulch in layers rather than all at once.
- Don't work the soil until it will form a ball that crumbles when pressed with your thumb.
- If not done in the fall, get a pH test and apply lime if needed.
- Divide and transplant perennials as needed, fertilize established ones when new growth appears, pot up extras to bring to the Deep Cut Spring Perennial Swap on April 27.
- This is a good time to take note of any areas of poor drainage.
- Outdoors, direct-sow seeds for cool crops like peas, beets, Swiss chard, lettuce, and seeds of cold-tolerant annuals.
- **Pull out and clean pots and bird baths: scrub with a brush then soak in a 10% bleach solution for 15 minutes, then rinse thoroughly.**
- Consider making or purchasing a rain barrel to catch those "April Showers."





# CORNER

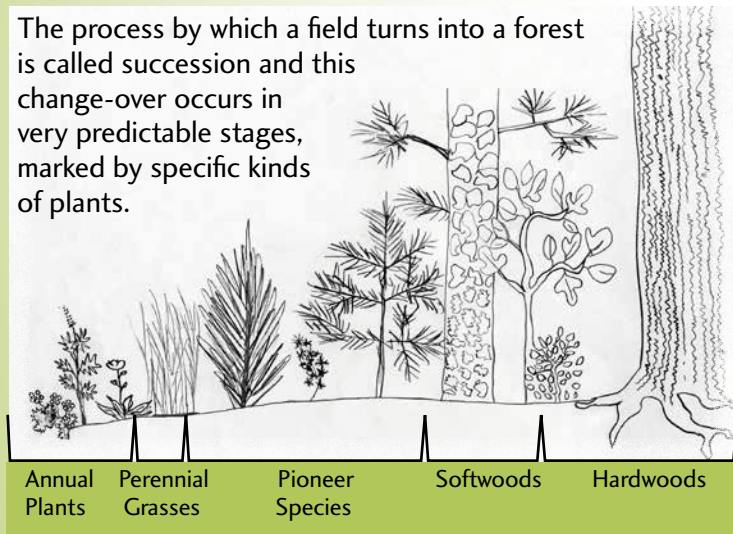
## NATURE

Today's Field  
is Tomorrow's  
Forest

Ann Lang, Park System Naturalist

In the natural world, diversity leads to a stable environment. To promote diversity in the parks, the Park System maintains a variety of ecological habitats: fields, forests, meadows, marshland, etc. However, over time an unused field or meadow will turn into forest if it is left alone long enough. Staffers mow the fields at least once a year to prevent this from happening.

The process by which a field turns into a forest is called succession and this change-over occurs in very predictable stages, marked by specific kinds of plants.



### Stages of Succession

- The first plants to appear in abandoned land or land that has been cleared by flood or fire are annual herbs, grasses, weeds and wildflowers. During the first years after a disturbance, these annual plants will predominate.



Annual grasses and wildflowers are the first plants to reappear after a field is mowed or otherwise disturbed.

- Within five years, annuals give way to perennial plants and shrubs. These perennials grow stronger after a few seasons and will 'out compete' the annuals for space, light and nutrients. **Asters and goldenrods** are late-blooming, sun loving perennials common early in succession. Older fields will also have **milkweed and boneset**.



Goldenrod, boneset and other perennials and woody shrubs colonize this older field.

- The first trees to appear among the herbaceous plants are called '**pioneer species.**' They will form dense stands that thin out over time. Red cedars are among the first trees to appear in an old field (pictured). After about ten years, there may be **Red maple, Sweet gum, Pitch pine, dogwoods and sumac trees.** Both Red cedar and sumac trees provide berries for wildlife. These are an important food source in late winter when tastier berries have been consumed.



- Pioneer species are then replaced by faster growing trees that form a canopy, blocking light and causing smaller trees to die. Over the next 20-50 years **oaks, Yellow poplars (pictured) and hickories** grow tall and shade the lower growing vegetation. As the forest matures and the canopy closes out the light the forest floor transitions from late blooming, sun-loving species to early blooming, shade tolerant varieties.



- Eventually, the forest will reach a state of maturity—sometimes called a climax, century or old growth forest. Tree species are stable enough to reproduce themselves, and the composition remains relatively constant over time (pictured).



## Mature Forest Provides Wildlife Habitat

A mature forest has layers that provide different habitats for wildlife: the forest floor, shrub layer, understory, and tree canopy. Mice, salamanders and many insects live in the leaf litter of the forest floor. Birds take shelter in the shrubs and bushes, eating berries this layer provides. Gray squirrels are found at all levels of the forest, from the floor to the canopy. In the canopy, birds such as the insectivorous Red eyed vireo can be found.



Pileated Woodpecker

Mature trees provide wildlife with fruit and nuts that are not found in earlier stages of succession. And, older forests feature large, mature and dead trees that provide shelter for many mammals and birds.



Raccoon

## Succession in a Monmouth County Park

Geology, soil conditions, hydrology, climate as well as seed source (native seeds and those 'imported' via wildlife) all help determine what plant species are present. **Turkey Swamp Park in Freehold** for example is located in the sandy, southern part of the county near the Pine Barrens. A park visitor would see pitch pine, oaks and beech trees line the trails with young beech trees and blueberry bushes making up the understory.



Note the large, thick pitch pine tree to the left; smaller oak and beech to the right.

Pitch pine is a pioneer species that uses disturbance to its advantage. But as a pine/oak forest matures, pine seedlings are no longer able to grow; they do not get the light they require. If left undisturbed over time, pine trees will decline in number and oaks will become more abundant.



Pine trees (with no lower branches) compete for light in the canopy.

## The Impact of Invasive Species

Succession takes place predictably over time, unless something interferes to alter the pace, such as the introduction of invasive plant species. The vines of common invasives such as Eurasian bittersweet and Japanese honeysuckle smother shrubs and emerging trees, starving them of sunlight. The dense growth of Russian olive and Multiflora rose covers the ground, and prevents tree seedlings from growing.

Succession can be managed to limit the effects of invasive species, as it is within **Thompson Park in Lincroft**. Originally a farm, this land was mostly open fields; now it holds various stages of succession and many newer forests.



Forest succession was managed at Thompson Park by removing of dozens of invasive Norway maple trees.



This map of Thompson Park from the 1930s shows where the fields and forests were. Note the line of trees along what was then a tributary to the Swimming River, today the Reservoir (the large 'cut-in', center of map) and to the right of the oval track loop. These form the old growth portions of the forest today.

The landscape is always telling a story. The next time you are out on the hiking trails in a county park, look at the differences in the forests and fields. Consider not just where you are, but when. What did this land look like twenty or one hundred years ago? How is it changing, and what will it look like in the future?

### References

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# GREEN HERITAGE

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## FROSTY!

*In this issue... Winter Photography,  
More on the Open Space Plan  
Revisions, Gardening 'Tools' for  
Pest Management and a Primer  
on Forest Succession*

*This friendly snowman looks  
on as visitors frolic in Holmdel Park,  
a great site for winter sledding  
and ice skating.*



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