



FEELING ADVENTUROUS?

Try out these new activities in the parks

If you, your friends and/or family are interested in 'sampling' a new outdoor activity or two, there are plenty of opportunities to do so. Here are just some of the most popular features in the parks...



Dorbrook 500



Archery



Roving Naturalist Sam Skinner

- **The Roving Naturalist—FREE!** Have you ever wished a Park System Naturalist would magically appear to answer your questions about nature? Now one just might! Naturalists visit various parks to take visitors on impromptu discovery walks—for a schedule of appearances, follow instructions in the box below.

- **Dorbrook 500:** This Cozy Coupe and tricycle race for little competitors, named for the park where it is held each March, is super-fun to watch.
- **Drop-in Outdoor Programs:** Archery, zip lining, rock climbing, kayaking and seining activities are held at Thompson, Holmdel, Hartshorne Woods and Bayshore Waterfront Parks. Some free, some have a fee.
- **Try-It Equipment Rentals:** If you always wanted to try a canoe and were looking for a no-strings-attached opportunity, weekend rentals are now offered select weekends in Thompson Park on a first come, first served basis. This park also offers ski/snow shoe rentals (winter, when there is snow).
- **Campfire Programs (Not just for campers!):** Held each Saturday at Turkey Swamp Park during the summer and open to the general public, these activities get you into the woods for a family friendly activity.
- **Visit our Equestrian Center at Sunnyside:** Tour the barn and facilities to learn about wild mustangs, a variety of small horses and Shetland Ponies and the regular size breeds used in our therapeutic riding program.
- **Kayak the Claypit Creek section** of Hartshorne Woods Park (shown) and the Popamora Point section of the Henry Hudson Trail, two newer sites where you can launch a kayak into the Navesink River and Sandy Hook Bay, respectively.



Turkey Swamp Park



Claypit Creek



Sunnyside Equestrian Center

For a complete listing of upcoming events, activities and drop-in programs like these visit "View Upcoming Events" at www.monmouthcountyparks.com.

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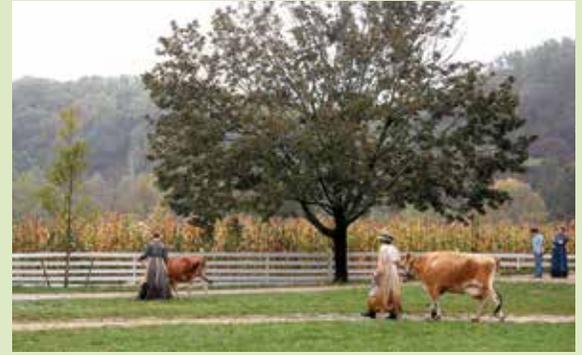
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THE EXPERIENCE OF HISTORY AT LONGSTREET FARM

Whether preparing food on a wood-fired cookstove, or plowing the fields with a team of mules, the interpretive staff at Longstreet Farm strive for authenticity in everything they do. They stay faithful to historic methods of the 1890s right down to their period costumes, tools and machinery, creating an atmosphere where it truly feels as if time stands still.

The architecture is plain, the atmosphere is quiet, and depending on where you stand, the site can be dusty and smelly. But, that's exactly as it should be—this is what a real working farm from the 1890s would look, sound and smell like...especially with the animals. Longstreet Farm keeps mules and horses, dairy cows, hogs, sheep and chickens—an endless source of discovery for the farm's many young visitors.



The cows are led to pasture.



Percheron draft horses cart a wagon load of hay.



How hard is it to steer this plow through a field?



Where does wool come from? What does it feel like?



Children learn through their natural curiosity about the animals.

TEACHABLE MOMENTS...

A living history farm helps us understand our present through our past. While people once worked very hard just to have food, clothing, and household necessities, today these items are easily purchased at the local store. It is easy to take them for granted and difficult to explain their origin. With basic farm activities on display, parents, grandparents and teachers have many opportunities for instruction about the source of our food and clothing at Longstreet Farm.

The Working Animals at Longstreet Farm

The animals stay on site year-round, and are raised just as they were 100 years ago—to meet the labor, food and material needs of the farm; although they do receive modern veterinary care. As staff aptly demonstrate at programs, camps and events ongoing throughout the year, the work performed by the animals, and the food and fiber they provide, were critical to the survival of the residents.



The sheep in winter.

Today, the animals are well cared for to secure their good health and intended use. When they can no longer meet the educational goals of the farm, they are replaced with animals that can. Farm staff will work with local farmers who may prepare the animals for market, or with individuals or institutions that may have other uses for them.

Did You Know?

- Dairy cows are naturally thinner than meat cows.
- Longstreet keeps period-appropriate Jersey cows, which can produce 4-5 gallons of milk after a calf is born, quickly fading down to an average of 2-3 gallons per day. (Cows must have a calf to produce milk.) By comparison, Holstein dairy cows (the large black and white variety most people are used to seeing) can produce 12-13 gallons per day.



The cows are milked each day at 3pm.

- Though famous for being ‘stubborn,’ mules are actually easier to work with than horses. They handle the heat better and have a smaller hoof (and are therefore less likely to crush the crops). They also tend to be healthier, and some would say they are smarter.
- Each year, the mules and horses help plow, plant, cultivate and harvest four 1/2 to 1-acre fields (corn, potato, wheat and one fallow/at rest) and a large vegetable garden.

- The site’s Southdown breed of sheep is known to be good for both meat and wool; it is also adaptable to a diverse climate and has excellent longevity.
- Sheep can hold still for a fair amount of time while being shorn for their wool; because their fight/flight response is ‘inactivated’ when they are taken off their feet. (The same is NOT true for other animals such as llama and alpaca, which must be restrained.)
- Concerning the site’s Plymouth Rock breed of chickens, a suggested male to female ratio is 1-2 roosters for about 40 hens. Hens produce eggs for only about 2 years.



Sheep shearing.



- Mixed breed hogs are used for their meat and lard, as well as ‘bristles’ for paint, hair and tooth brushes.

A hog with its offspring helps illustrate the continuity of life and breeding.

Thanksgiving Day at Longstreet Farm

After milking the cows, churning the butter, and pre-heating the wood-burning cookstove, farm staff prepare all the fixins’ using old-fashioned ingredients and utensils. Some of the biggest challenges they have noted are the small size of the oven (you can’t cook anything else with the turkey!) and the lack of warm running water (you can’t clean up easily as you go). Visitors are welcome to ask questions as they observe cooking techniques used by past generations. The kitchen will be open 10am to 4pm Thanksgiving Day for the ultimate turn-of-the-century holiday demonstration.



PRESERVING & PLANNING FOR CLEAN WATER

Summer is just about over, and if you are like many in Monmouth County, you probably spent some time in a pool, paddling a river or running through sprinklers with family and friends. Of course, we are also fortunate to have access to some of the finest beaches in the world. Our quality of life depends on access to clean water, but not just for recreation and bathing.



Clean bathing water. The Park System's Seven Presidents Oceanfront Park in Long Branch.



Clean drinking water. Another Monmouth County park, the Manasquan Reservoir in Howell, is a drinking water source for local residents.

Clean water is critical for drinking, growing food, and to our local economy through the fisheries and tourism industry.

Clean water is critical to our health and quality of life.

Clean water is something we absolutely expect when we turn on a faucet or take a dip in the ocean.

Clean Water, a Priority for Americans

Thankfully, we appreciate the critical role that water plays in our lives. A recent national poll by the American Planning Association shows that 62% of Americans feel water quality should be a top priority for local planning efforts. When respondents were asked to rank the importance of issues in terms of local government spending, water quality ranked third (68%), right behind education (71%) and job creation (68%).¹

Who Watches Out For Our Water?

Clean water is a priority for planners at all levels of government. At the municipal level, planners help write ordinances to ensure that development occurs in areas with adequate infrastructure and carrying capacity. Planners at the county level craft county-wide waste water management plans for sewer service areas. At the regional level, planning bodies such as the NJ Highlands Council safeguard the drinking water for 5 million residents of the state. Planners at the state level/NJDEP create regulations to protect water supplies and control pollution.

Protecting Land to Protect Water Saves Money

NJ has a State Strategic Plan to coordinate land use and preservation activities at all levels of government. This plan highlights the importance of water quality protection to the quality of life and the economic future of the State. The most notable economic benefits of the state's preservation program are ecosystem services such as drinking water protection, flood hazard mitigation and water body quality protection.²

Ecosystem services can save NJ hundreds of millions of dollars each year by averting the costs of drinking water treatment; flood damage and emergency services; flood reduction and storm water management engineering projects; and damages to tourism and commercial fishing.³



In western Monmouth County, Historic Walnford, located right on Crosswicks Creek in Upper Freehold, experienced serious flooding after the deluge from Hurricane Irene.



In south-central Monmouth County, this bridge over the Manasquan River at Howell Park Golf Course also flooded after Irene.

HOW DOES PROTECTED LAND PROTECT OUR WATER?

- **Natural land allows rain water to recharge aquifers** (underground water supplies). Woods and grasslands allow rainwater to slowly flow across natural surfaces and percolate into ground water. Compare that to impervious surfaces on developed land (pavement, concrete, etc.) where rain water runs directly into storm drains and detention basins, then into streams and rivers faster, with heavier sediment loads and more pollutants.
- **Natural land filters rain water runoff.** Woods, grasslands and marshes stabilize the root systems and soils that can absorb and filter out toxins. In contrast, runoff that travels over parking lots and roadways accumulates litter, road salt and motor oil and as it travels over farm fields/suburban lawns it can accumulate fertilizers, pesticides and topsoil—depositing all of these things into ground and surface waters.



Marshland, pictured here at Shark River Park, filters contaminants from rainwater.

- **Natural land holds vegetation on steep slopes** and maintains existing grades. Development often changes the grade of the land and clearing removes natural vegetation on steeper slopes. This creates increased runoff that can result in dangerous erosion, removing topsoil and increasing silt and sediment in surface waters.
- **Natural land helps maintain natural stream channels.** Increased flow from upstream development coupled with loss of natural stream bank vegetation and stream bank ‘hardening’ (construction of bulkheads and stone riprap) creates much faster stream flows that scour stream channels and carries silt/sediments offshore.
- **Natural land helps preserve undeveloped floodplains.** This can increase flood water storage capacity and minimize impacts to downstream areas from flooding.
- **Natural land creates shade and helps lower water temperatures.** This is especially true of woodlands next to surface waters. Lower water temperatures increase available oxygen and help support aquatic ecosystems. A healthy and balanced biotic composition of streams and lakes help maintain a healthy ecosystem.

Balancing Water Quality & Development

From 2002 to 2007, the state’s land development rate averaged over 16,000 acres of urbanization each year, a 7% increase in acres developed per year compared with the rate from 1995 to 2002. New Jersey consumed 0.76 acres (33,311 sq. ft.) for each person added to the population.⁴

Most of the state’s development (57%) was for residential housing.⁴ Forested land, agricultural land and wetlands were impacted the most by large lot, single family home development.



Wetlands like these surrounding Bayshore Water-front Park in Port Monmouth, are among the lands most impacted by development. Those stunning birds are egrets.

Given these development trends, Monmouth County made water quality protection a priority in its 2006 Open Space Plan, in part to help ensure a sustainable water supply for the county’s growing population. Read it online at: www.monmouthcountyparks.com “About Us.”

How Do the County Parks Protect Water Quality?

Preservation—specifically through public acquisition of open space—protects natural resources that cannot be protected by other means. It also ensures public access so that residents can enjoy the land. Today, Monmouth County has permanently preserved more than 15,000 acres, with parks and open space properties found in each of the County’s seven major watersheds.

The Park System will continue strategic efforts to protect lands that enhance our local water quality, while also relying on help from ‘Mother Nature’ to keep the water running through our streams and out of our faucets as clean and clear as possible.



Ownership is not the end of the line, public land must be managed. Park volunteers, who come out regularly to help clean up our beaches, are a critical part of this effort.

References:

- 1 Planning In America: Perceptions And Priorities 2012, American Planning Association <http://www.planning.org/policy/economicrecovery/pdf/planninginamerica.pdf>
- 2 NJ Draft State Strategic Plan <http://www.nj.gov/state/planning/publications/192-draft-final-ssp.pdf>
- 3 The Economic Benefits of Protecting Healthy Watersheds, April 2012. US EPA. http://water.epa.gov/polwaste/nps/watershed/ecoben_factsheet.cfm
- 4 “Changing Landscapes in the Garden State: Urban Growth and Open Space Loss 1986 – 2007” (Hasse / Lathrop). <http://gis.rowan.edu/projects/luc/>

AUTUMN—A 'BERRY' Good Time to Plant Shrubs

Diane Allen, Staff Horticulturalist



Wild Blueberry and Huckleberry make up the red layer of this autumn forest at the Manasquan Reservoir.

Cooler air temperatures, warm soil, and prospects of increased rainfall make autumn an ideal time to plant or renovate your lawn and gardens. End-of-summer sales on woody plants and perennials further sweeten the deal. If shrubs or ground cover are on your list, consider a few that are native to our region, easy to grow, and will provide food value as well as ornamental value – blueberries, cranberries and huckleberries. These true American fruits are best planted in the fall, from September into November.

What a Berry Needs

Requiring an acid soil, they can easily be incorporated into plantings of azaleas, rhododendrons, mountain laurel, pieris, hydrangea, primrose, camellias, heaths and



Site your blueberry bush next to hydrangea, or other acid-loving plants. The blue hydrangea color indicates the soil has a low pH.

heathers. A soil test for pH is advisable, as all require a soil pH below 6 (blueberries will thrive in a pH of 4.5-5.5). Use sulfur or aluminum sulfate to adjust as necessary and maintain with rotted leaves, pine needles or fertilizers formulated for azaleas and rhododendrons.

Cultivation usually does more harm than good around these shallow-rooted plants, so mulch well with pine needles or leaf mulch to control weeds and stimulate root growth. Once the plants are established, yearly pruning will help maintain their shape and best productivity.

Most berry species flower in May/June; grow in moist, well-drained, acidic soil; like to be surrounded by organic matter and prefer full sun.

Honeybees, as well as bumble bees and other native bees, greatly benefit pollination. You can encourage these hard-working allies by growing a variety of bee-friendly flowers that bloom throughout the seasons, providing nesting sites and reducing or eliminating the use of pesticides, especially insecticides.

Blueberries & You: Perfect Together



Blueberry "star"

Alternatively called whortleberry from the Anglo-Saxon and Bilberry from the Danish, the Native Americans called them star berries, after the star on the blossom end of the berry, and believed they had been sent by the Great Spirit to help sustain the people during a time of famine.

BLUEBERRY TIP

More than one cultivar should be planted for best yield. In most cases, 2-3 plants will provide many quarts of berries.

The development of blueberries as a commercial crop began as recently as the 20th century right here in New Jersey when Elizabeth White of Whitesbog set out to select and breed the most desirable wild varieties of our native blueberry, *Vaccinium corymbosum*. Others followed suit and now there are dozens of varieties bred for qualities such as size, flavor, color, yield, date of ripening and disease resistance.



Blueberry in flower.



Blueberry fruit, up close. Note the changing colors as the fruit ripens.

All provide a succession of interest through the seasons, with their small, white-to-pinkish flowers in May and June, followed by the blue-black berries in July and August and striking red fall foliage. All will produce best in full sun, but some varieties will also produce well in part shade.

- **Highbush blueberry.** *Vaccinium corymbosum* is the state fruit of New Jersey and is the species best suited to our environment. There are 61 varieties of this species alone. An upright shrub with a rounded, dense form, especially when grown in full sun, it is as handsome in the ornamental border as along the border of a vegetable garden. Winter stems may vary from yellow-green to deep red, depending on cultivar. Native to swampy soils, highbush blueberry prefers a moist, acid, well-drained soil high in organic matter, but is adaptable to sandy locations. Shrubs can reach 6-12' high and 8-12' wide and are winter hardy in zones 3-8.



Highbush or cultivated blueberry at the Manasquan Reservoir

- **Lowbush blueberry.** Rarely found in true cultivation, *Vaccinium angustifolium* is usually grown as a managed wild crop and is a major component of Maine blueberry production. Perfect to edge a walkway or terraced wall, this species forms a low, spreading shrub with foliage that turns brilliant red in winter. The lustrous dark green foliage often begins to change to its fall coloring in late summer, a striking contrast to the last of the berries. This species thrives in poor, acidic, dry soils, in full sun or partial shade, but does best in the cooler climate of New England.

Not Just a Bog Bush: Cranberry as Groundcover

An excellent and unusual landscape plant, *Vaccinium macrocarpon* grows only 4-12" high, spreading slowly to form a low, dense, evergreen ground cover. The small (1/4-1/3" long) elliptic leaves are a lustrous dark green in summer, turning reddish purple in fall and winter, with new spring growth often bronzy. The inconspicuous pinkish flowers borne May into July give way to the tart red fruits that mature in September and October.



Cranberry in flower.



Cranberry fruit; a ground cover, note how low to the ground it is.

Contrary to common belief, cranberries are not limited to bogs. Growers simply use the technique of flooding the bogs or fields for ease of harvest and to protect the plants from winter frost. Like blueberries, they require a very acidic soil high in organic matter preferably in full sun, but will tolerate light shade. When purchasing plants, remember that one-year cuttings will take 3-4 years to fruit. Three to four year old plants will be more costly, but should be ready to flower and fruit in the first season.



Cranberry, up close.

Cranberries are self-pollinating, so two varieties are not needed. It is imperative to keep the roots cool and moist, but not saturated, during the growing season; mulch well with pine needles or leaves just as the ground freezes to protect from winter drying and frost. Pruning should be done annually starting the third year. In spring, just before new growth begins, comb the long runners with a garden rake and cut the longest to encourage the formation of the fruit-bearing uprights.

- ***Vaccinium macrocarpon* 'Holden'.** This variety tolerates dry conditions. Collected from the wild in Ohio, it has become established as an attractive groundcover. Hardy in zones 5-8, 'Holden' produces deep red fruits on plants that are only 10-12" high and 4-5' wide.

Continues, next page

Almost as Fun to Grow, As to Say...Huckleberries

There are 40 species of huckleberry, all native to North America. Able to resprout from underground runners, this shrub adapts to fire-prone habitats, and four are found in the NJ Pinelands: *Gaylussacia brachycera* (box huckleberry), *G. baccata* (black huckleberry), *G. frondosa* (blue huckleberry or dangleberry) and *G. dumosa* (grouseberry).

- Of the four, **box huckleberry**, resembling the boxwood after which it is named, is probably the most attractive for home landscaping purposes, while the **black huckleberry** has the tastiest, sweet-tart fruits. Box huckleberry, a low-growing evergreen shrub, has lustrous dark green foliage that turns deep bronze to reddish purple in winter.

Huckleberry has a mounding habit 6-18" high, it slowly spreads by underground rootstocks to form a dense colony. Flowers appear in May and June, followed by dark blue or black fruits. NOTE: Berries and leaves can be almost indistinguishable from a blueberry.

Huckleberry requires a well-drained soil and will produce best in full sun, where the leaves often develop a reddish cast. Naturally occurring in mixed forests, however, it will also grow well in partial to full shade, making it a perfect groundcover within or at the edge of a woodland garden or beneath pines and rhododendrons.



Huckleberry flower (above) & fruit below.



Inside, huckleberries have large, hard seeds while blueberries have tiny, soft ones.

What is a Sugar Plum, Anyway? (HINT: Not really a plum)

As the harvest comes in, we look ahead to the coming holidays and attendant traditions. Clement C. Moore's beloved poem "Twas the Night Before Christmas" has children tucked cozily in their beds "...while visions of sugar plums danced in their heads."

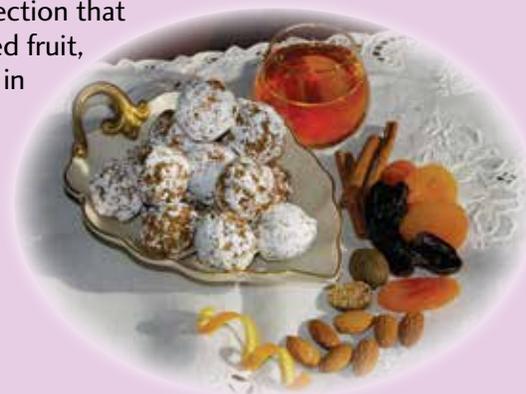
But what is a sugar plum? Research turned up several answers, from a sugar-coated coriander to a particularly sweet plum cultivar named "Sugar Plum." But the most fitting seems to be a confection that originated in Turkey and was popular during the Victorian Era. Made of dried fruit, honey and spices, they will keep for up to one month in a sealed container in the refrigerator.

2 cups whole almonds	1/2 tsp. freshly grated nutmeg
1/4 cup honey	1 cup finely chopped apricots
2 tsp. grated orange zest	1 cup finely chopped pitted dates
1 1/2 tsp. ground cinnamon	1/2 cup confectioners' sugar
1/2 tsp. ground allspice	

1. Arrange almonds in a single layer on a baking sheet and toast in a 400-degree oven for 10 minutes. Set aside to cool, then finely chop.
2. Combine well in a medium bowl the honey, orange zest, cinnamon, allspice and nutmeg. Add the almonds, apricots and dates and mix well.
3. Pinch off rounded teaspoon-sized pieces of the mixture and roll into balls. (You will have to rinse your hands often, as the mixture is very sticky.) Roll the balls in sugar, then place in layers between sheets of waxed or parchment paper in an airtight container and refrigerate. These are best after several days, when the flavors have had time to blend and develop.

Reference: www.saveur.com

Most dried fruits and different spices can be added to or substituted for those listed in the above traditional recipe. The following adjustments are for a confection based upon our native fruits: Substitute dried cranberries and dried blueberries for the apricots and dates. Add a pinch of ground clove. Since the cranberries and blueberries are not as moist as the apricots and dates, add about 1 1/2 cups of the almonds and mix, gradually adding more almonds until the right consistency is reached. If the mixture is a little dry, add a spoonful more honey.



It's Time To ...



October ✓

- Plant grass seed until mid-month. Apply low-nitrogen lawn fertilizer if not done this fall.
- Prepare new beds for spring planting: have soil tested for fertility and pH, then work in amendments according to recommendations.
- If houseplants are still outdoors, place them in partial shade to acclimate them indoors; clean thoroughly first.
- Plant new trees and shrubs now so they can develop some new roots before soil temperatures drop; mulch and water well.
- Lift corms and bulbs of begonia, caladium, calla and gladiola; lift dahlia and canna after blackened by frost.
- Clean up gardens and discard foliage of any disease-prone perennials, leaving some disease-free specimens that provide winter interest and seeds for the birds.
- This is a good time to be sure plants are labeled.
- Plant pansies/ornamental cabbages for fall color, bulbs for next spring.
- Poly-spun frost cloth or a sheet will protect the last fruits in the garden from a light frost.
- Plant garlic cloves 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 beds to improve soil and plant vigor next season.



Plant garlic in October

November ✓

- Apply mulch or leaf mold to gardens after the first hard frost.
- Turn your compost pile after frost hits to deter over-wintering rodents.
- Do a final clean-up of beds and lawns. Set aside interesting pods and such to incorporate in seasonal décor.
- Plant any remaining bulbs.
- Clean and store tools until 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 the 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 and fertilize at half-strength until active growth resumes.
- Feed the birds, especially when the ground is snow-covered.



The White-throated Sparrow, a ground-feeder, will appreciate seeds in winter.

CORNER

NATURE COLLECTED OBSERVATIONS FOLLOWING OUR MILD WINTER & EARLY SPRING

Janet Ryan, Park Naturalist

Weather-wise it's been quite a year. The US experienced its fourth warmest winter on record since 1895, and NJ had its 3rd warmest according to the National Oceanographic and Atmospheric Administration (NOAA).¹ On one hand this meant lower heating costs and snow plowing expenses, but many outdoor winter sports suffered. There were fewer opportunities for ice-skating and ice-fishing, sledding, cross-country skiing and snow-shoeing (unlike last year, which was a snow-sport enthusiasts dream).

While NJ may not be known for its maple syrup production, our neighboring states to the north are, and production affects prices for all of us. Many traditional producers experienced a change in their 'tapping' season and reduced output. Here's why: In order for sap to flow from maple trees, below-freezing nights must be followed by warm days and these conditions usually occur in late February or early March. But this year, the warm weather decreased the conditions for optimal sap flow and for those who started tapping around their normal time, shortened the season. Once budding occurs on the trees, the flavor of the syrup is "off" and that ends tapping-season.^{2,3}



The Park System uses special mats for cross country ski instruction when there is no snow.



The first bud of this distinct 'tassled' flower on the sugar maple signals the end of maple tapping season. Credit:www.illinoiswildflowers.info

A Winter to Remember for Golfers

For the first time in its decades-long history, the county began opening its golf courses in early February. Usually, all the courses except Bel-Aire close from late December through mid-March. And with the unexpected re-openings, players received some off-season discounts as well.

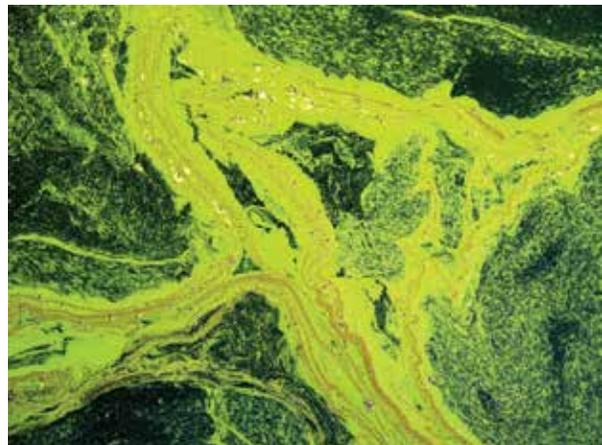


Golf staff (pictured here in February) were able to water sod from a winter construction project.

Warm weather this winter also helped golf staff complete more projects, such as being able to lay sod all winter. But it also meant that any turf maintenance activities normally triggered by warmer soil temperatures, such as crab grass treatment, had to be tackled earlier.

Pollen, Plants & Insects...Especially Butterflies

Then, spring came—early. Allergy-sufferers can attest to that. Early flower species blossomed 3-4 weeks ahead of schedule,⁴ pollen was released sooner and the amounts released were at very high levels.^{5,6,7}



Yellow tree pollen gets onto everything in the spring and makes beautiful patterns on park waters.

There were also observable changes in the insect-world due to the early spring. Local residents may have noticed the abundance of Red Admiral butterflies around May 4; they seemed to be everywhere. Wildlife experts call this cyclical population boom "irrupting" which means a "sudden appearance" or "burst" of something.⁸ For this species of butterfly, there are records of this happening in the past.



Red Admirals "irrupted" in May this past year.

Monmouth County Park System Naturalist, Sam Skinner observes:

"Most Red Admirals will usually migrate south just before winter and then return in the spring. However, some adults will try to over winter in the hollows of trees or under logs. The cold temperatures usually kill these individuals. This past winter it appears that temperatures were not low enough for a long enough period of time, so that many of the Red Admirals survived. The result was the very large and early flight of the beauties throughout Monmouth County."

Sam also adds there were impressive numbers of Question Mark butterflies, "During April and May, it was virtually impossible to take a step in a field without seeing several of these butterflies in flight."



Question Mark butterflies were abundant in April and May.



A rare sighting! Park staff noticed a Zebra Swallowtail for the first time at Deep Cut Gardens on July 3. This species normally isn't seen north of Maryland.

Folks out and about enjoying the spring, probably noticed the early mosquitoes and ticks. During summer, dragonflies were abundant (a good thing, since they feed on mosquitos.)

Snapshot of the Bayshore: Plant & Animal Cycles Affected

Along the Bayshore, Naturalist Joe Reynolds noticed many changes in plant and animal activity.

"There was an abundance of seaweed earlier than normal this year. On average, large mats arrive sometime after July 4. This year I saw large mats of seaweed along the coast of the Raritan Bay and Sandy Hook Bay in June."

More seaweed is generally brought about because of more nutrients in the water, and Joe wonders if perhaps more people are fertilizing their lawns and gardens earlier? The most common seaweed he observed was sea lettuce. The downside of having too much seaweed in the water, according to Joe, is lower oxygen levels. As seaweed decomposes, bacteria will devour and lower oxygen levels.

Joe also noted that coastal plants, such as beach plums, flowered at least two weeks earlier than average. Earlier flowering plants will throw off pollination activities of insects such as bees and butterflies which, in turn, will throw off the feeding habits of seed-and insect-eating birds.



Beach Plum bloomed early this year.



Beach Plum flower, close-up.

Coastal birds that rely on fish for their diet were also impacted by early arrivals.

"Herring, an important part of the local estuarine food web, arrived earlier from the ocean into the bay to spawn upstream. This year the large schools of herring were reported early to mid-March. Normally they arrive in late March to early April."

When fish come in to the bay early, it disturbs the feeding rituals of Northern Gannets and Ospreys. These birds had to look for other sources of food. "It seemed to me," said Joe, "that migrating gannets seemed more dependent on Sand Lance (sometimes called sand eels) in early April than on herring."

All in all, a seasonal change in temperature obviously changes many things around us—from plants, to fish and birds, to our own seasonal activities.

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KAYAK THE NAVESINK FROM CLAYPIT CREEK

One of many new programs to introduce visitors to the great outdoors, right in our own backyard or neighborhood. Detail inside, p. 1.



Claypit Creek section of Hartshorne Woods Park, Middletown.



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