



SPRING ROUND-UP

On the Map: New County Parks in Development

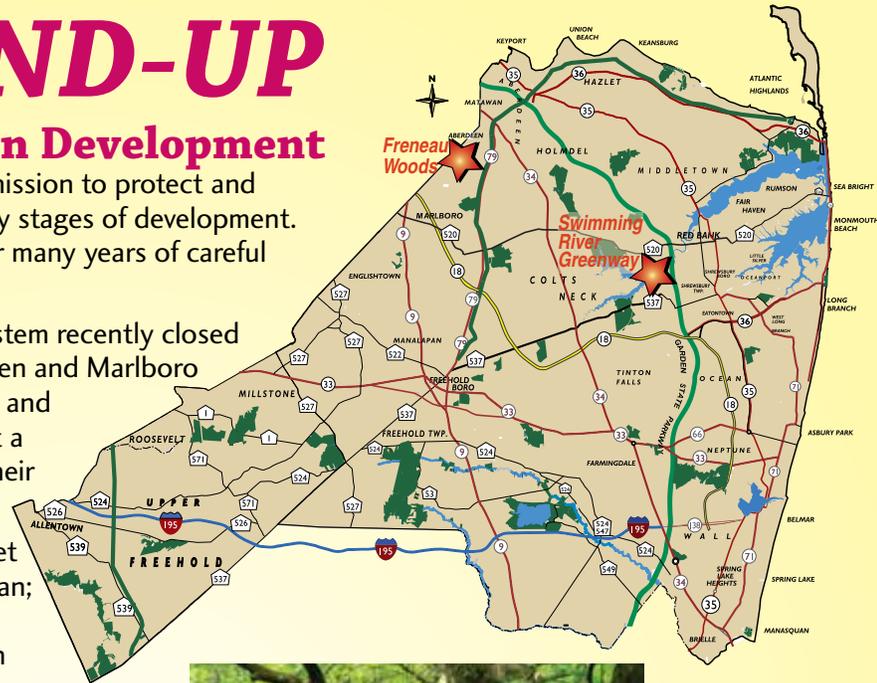
Land acquisition and park growth are at the core of our mission to protect and preserve open space. These two new parks are in the early stages of development. This process of initial land acquisition usually occurs after many years of careful planning and negotiation.

- **Freneau Woods Park (Aberdeen, 2014).** The Park System recently closed on its first 33-acre parcel for Freneau Woods in Aberdeen and Marlboro along the County's densely populated northern border, and plans are underway for expansion. This park will protect a unique collection of woodlands and waterways—and their resident wildlife (bull frog, pictured).

The park is named for Philip Freneau (1752-1832), "Poet of the American Revolution." Freneau grew up in Matawan; graduated Princeton University in 1771 with future president James Madison and many others who went on to great distinction; and was friends with Thomas Jefferson. A writer, naturalist, patriot, debater, sea captain, prisoner of war, and abolitionist (later in life), Freneau was best known for his inspirational poetry and influential political articles of the American Revolution.

References: www.phillipfreneau.com; Freneau Biography in Poets and Poetry in America. Available at www.enotes.com/topics/philip-freneau; Leitch, Alexander. A Princeton Companion (1978). Available at: www.etweb.princeton.edu/CampusWWW/Companion/Freneau_phillip.html; www.en.wikipedia.org/wiki/Philip_Freneau.

- **Swimming River Greenway (Tinton Falls, 2012-13).** This greenway was established with the acquisition of two small parcels (5.5 acres total) on Swimming River Road, across from the dam. In addition to protecting a critical local water resource, the greenway will eventually provide boat access to the Swimming River for fishing, canoes and kayaks. Additional parcels are planned along the river, which originates in Tinton Falls and runs downstream to Red Bank, where it empties into the Navesink River.



Freneau Woods



Swimming River Greenway



Notable Park Additions

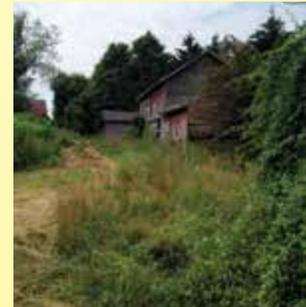
Especially large or strategically located, these new parcels were recently added to established park properties, mostly in western Monmouth County.



Parking lot access for the first 1.5 miles of a planned 9-mile trail network through Crosswicks Creek Park.

- **Crosswicks Creek Park (Upper Freehold, 2012).** This park recently received 400+ new acres (plus another few hundred acres of adjacent farmland was preserved) in one of the largest, multi-agency land deals in state history. In addition to protecting Crosswicks Creek, the acquisition allows development of an extensive trail network through the nearly 1,800+ acre property—over 9 proposed miles (5 separate trails) in all. The 1.5-mile County's End trail in the southern section of the park is already open.

Many acquisitions in western Monmouth County are scenic former farms with old barns, outbuildings and sheds in addition to acres of fields and woodlands.



- **Perrineville Lake Park (Millstone, 2012-14).** One of the Park System's fastest growing parks (1,000 acres in just over 15 years), Perrineville recently expanded by another 200 acres. These acquisitions helped fill in missing parcels and expand the park's eastern boundary.

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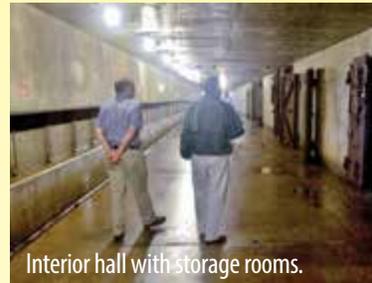
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What's Old is Re-Newed

When acquiring new property, the Park System also acquires any old buildings and structures that are on that land. Most of the time these are demolished (too expensive to repair/maintain). But when they have value for park use or historic merit, they are preserved with careful restoration, often done in phases.

- **Phase II (Interior) Battery Lewis at Hartshorne Woods-Rocky Point (Middletown, 2013-14).** After repairing the exterior concrete canopy in 2013, the interior is undergoing restoration to eventually open its gunpowder transport hallways and storage rooms to the public. This large casement is also being prepared to house a 120-ton, 68-foot gun (that fired 16" diameter projectiles) from the USS New Jersey, similar to the original WWII gun used to protect NY harbor.
- **Phase II (Interior) Holland Activity Center a Tatum Park (Middletown, 2013-14).** The first phase of repairs to this beautiful old farmhouse focused on exterior, roof and foundation. Phase II focused on the interior, restrooms, kitchen and new walkways.



Interior hall with storage rooms.



Gun Casement.



The former 16" gun was removed after WWII, cut up onsite and sold as scrap.



From Here to There: New Paths & Walkways



- **Fort Monmouth (2014, Tinton Falls).** The front entrance (left) received plantings by the door, a new brick walkway and benches.
- **Pine Brook Golf Course (2012-13, Manalapan).** This 18-hole executive golf course received new walkways and plantings around the Golf Center (right), and the formerly gravel cart paths on the back nine were paved.
- **Holmdel Shelter Building (2014, Holmdel).** This high traffic area was repaired and improved. From the parking lot, visitors now have pathways (left) with a sightline to the building and the trail, grass and pond beyond.



New Events & Races

- More than 130 participants raced to save the day in the Park System's first **Superhero Fun Run** (1 mile) held at Dorbrook Recreation Area last May. Friendly, fun and noncompetitive obstacles will have the whole family working together again on Saturday, May 30, 9 a.m.



The Pool Opens at Fort Monmouth

Last summer, this 3,500 square foot pool in Tinton Falls opened primarily for program use and lessons. This summer, there will also be 'Open Swim' on select dates.



- Last year, dozens of high school students spent the day learning about recycling, sustainability and pollution at the **Environmental Summit** held at Fort Monmouth. This year's event—with more interactive presentations, experiments, and a field trip—will be held on Saturday, April 18 from 10 a.m. to 4 p.m. at the Manasquan Reservoir Environmental Center.



- The Park System held its first ever **Sk8 Jam** on the beach in Long Branch at Seven Presidents Oceanfront Park. Kids of all ages competed to show off their skills, have fun and win a variety of great prizes, as family and friends looked on.



- This summer festival at Historic Walnford, launched in 2013, features local, tasty **Sweet Corn** cooked on site and a ton of activities. It's now an idyllic way to spend an August day.



For more information about Monmouth County's 43 parks & golf courses, plus the more than 6,000 programs, lessons and events offered each year, visit www.monmouthcountyparks.com.

- It was a blistery cold day for **WinterFest**, but almost 2,000 area residents still bundled up and came out to Thompson Park to try cross-country skiing, ice skating and sample a variety of winter treats and crafts.



Spotlight on Golf

- **FootGolf at Bel-Aire GC.** It's soccer on the golf course! Players kick the ball into a special 21" cup, and like golf, the lowest score wins. Open year-round (weather permitting), and for all ages, the 9-hole course takes just over an hour to play.

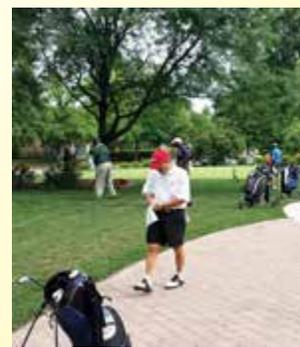
Monmouth County Freeholders Gary Rich and Thomas Arnone helped launch FootGolf at the Bel-Aire Golf Course Open House last summer.



- **New Golf Tourneys.** These new tournaments were offered...

- * Held on the longest day of the year in June, the **Summer Solstice Tournament (Charleston Springs)** began at sunrise and challenged golfers to literally play all day long—the winner played 56 straight rounds!

- * The **Three-Club Tournament (Pinebrook)** held in July was a "great equalizer" in terms of equipment; every golfer had to play with just 3 clubs (instead of the usual 14), pictured right.



- * The **Jersey Devil Tournament (Charleston Springs)** was the Park System's clever take-off on what many know as the "6-6-6," held in late October, of course. Golf teams each played six holes in three formats (playing from the best drive, switching balls mid-play, etc.).



- * January 2015 kicked off with the first ever **Polar Bear Golf Tournament (Shark River)**. Nearly 80 golfers took on the elements in this cold weather competition. Although it was a clear, sunny day with little wind, the frozen ground and unpredictable bounce and roll of the ball made for a challenge, pictured left.

- **SNAG® (Starting New at Golf).** Learning to play golf just got much easier. This new system features larger and lighter clubs, Velcro balls and a target, and simplified rules to streamline the learning process for children as young as five.



COMPLETING THE UNION TRANSPORTATION TRAIL (UTT)

Following the tremendous success of the Henry Hudson Trail (HHT) in the Bayshore region, the Park System wanted to create another trail of this kind for residents in the western ‘panhandle’ of the county. In the late 1990s, park staff secured a permanent easement for a nearly 8.6 mile former railroad right-of-way in Upper Freehold, and the first part of Monmouth County’s second ‘Rails-to-Trails’ project opened about a decade later.

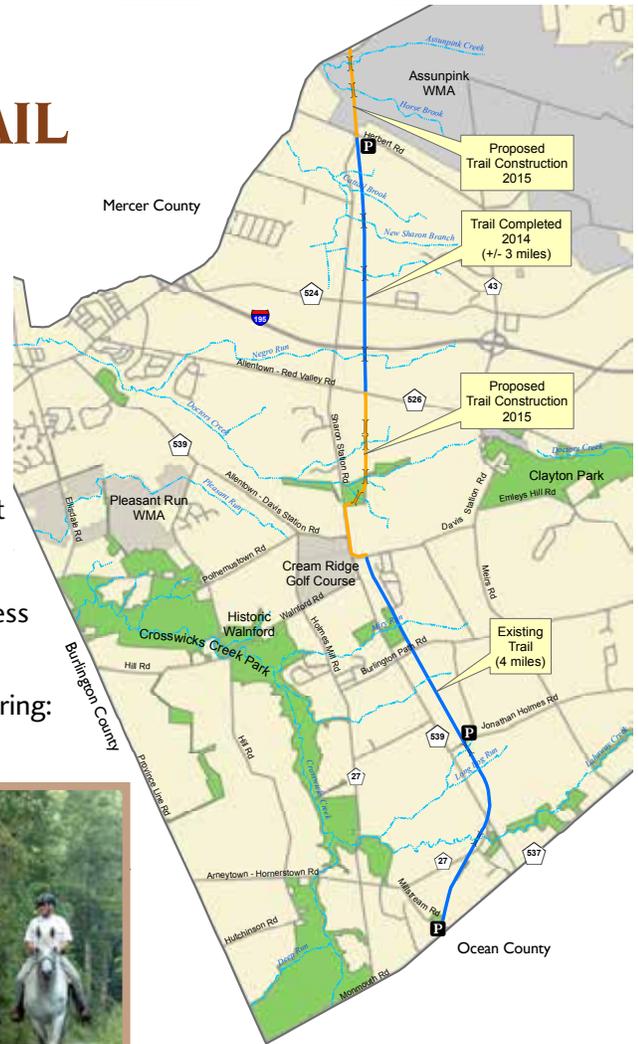
The project began with a few critical clean-ups and bridge repairs. The first four miles opened in two stages, in 2010 and 2012 (lower blue section on map), beginning in the south at the dividing line between Monmouth and Ocean County, just off Rt. 537, near Lahaway Creek. It was an instant success with walkers, joggers, bicyclists and horseback riders.

In 2014, another 3-mile section of trail was completed (also in blue), featuring:

- a rehabilitated wooden railroad trestle bridge,
- passage through an existing tunnel below Interstate 195,
- two pre-fabricated steel bridges, and
- the trail’s 3rd parking lot on Herbert Rd.

In addition to Park System trail extensions and improvements, Upper Freehold Township has created a trail linkage to the UTT from its municipal building to increase public access.

The final few sections of the UTT (orange sections on map) are slated for completion this year. The completed trail will run 8.6 miles from the Ocean County border in the south to the Mercer County border in the north (where it terminates at the state’s Assunpink Wildlife Management Area).



The UTT opened in 2010.



The UTT has steel bridges (above) and wooden trestle bridges (with classic crossbeam structures beneath, see opposite page).



Passage under the I-195 tunnel, before and after.

UTT STATS

Hours:	7 a.m.-dusk, 365 days a year
Surface Type:	Stone Dust
Length:	8.6 miles (completed total)
Parking Lots:	3
Width:	10 feet
# Street Crossings:	10 (3 with solar pedestrian signals)
# Bridges:	11 (3 wooden trestle, 11 metal)



The new 560' spur connecting the Upper Freehold Municipal Building to the UTT was added in 2014.

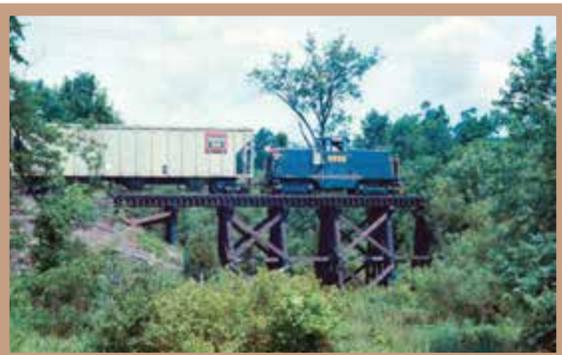
UTT: A Former Railroad

The Union Transportation Trail is an important part of local history. Investors first established this line as the Pemberton and Hightstown Railroad (P&HRR) in 1864 to connect the area's dairy farms to larger railroad junctions in Pemberton (Burlington County) and Hightstown (Mercer County). The railroad began operating in 1868, traveling through Hornerstown, Cream Ridge, Davis Station, Imlaystown Station (now Nelsonville) and Sharon Station (known locally as "Hay Press") in Upper Freehold Township.



A Union Transportation locomotive on the tracks in New Egypt, 1933. Photo appearing on the Pemberton & Hightstown RR page at www.jerseyrails.com/pemberton_hightstown.htm courtesy of W. R. Osborne & William McBride.

The Union Transportation Company acquired the line in 1888, and it prospered for many years until the construction of the New Jersey Turnpike in the 1950s cut it off from Hightstown. Passenger service ceased in 1931, but freight service continued on sections of the line until 1977. The right-of-way was acquired by Jersey Central Power & Light, and in 1998 the Park System obtained a permanent easement from JCP&L to convert the railroad right-of-way for trail use.



This trestle bridge over the Lahaway Creek repaired in 2010 looks much the same today (right). Historic photo (above) by Richard Markse.



Converting Rail to Trail: The Final Steps

Thanks to the Board of Chosen Freeholders, who re-allocated Open Space Trust funding for new capital improvement projects such as this trail, the UTT can now be completed. The final stages (orange) of trail construction during 2015 will occur in two parts.

- The larger mid-section from Davis Station Rd. to Rt. 526 (Trenton-Lakewood Rd.) will be completed first.
- A small section at the north end of the trail, Rt. 539 to Herbert Rd., will be completed second, with a third parking lot at Herbert Rd. for access.



Situated in rural western Monmouth County, fields and farmland make up much of the trailside scenery.

To the County Borders, and Beyond

Looking to the future, it is our hope that the UTT does not stop at the county borders. The railroad right-of-way continues both north and south for many miles into surrounding counties. Park System staffers have had preliminary discussions with planners in both Ocean and Mercer County, as well as state and local officials, so the trail may continue into the adjacent counties.

One of the most difficult hurdles in continuing the UTT to the south is the crossing of Rt. 537.* Numerous State and Federal transportation improvement grants are being investigated to help fund a possible below-grade crossing (underground tunnel) to continue the trail into New Egypt, Wrightstown and beyond.

* In general, crossing busy highways has been a challenge for both the UTT and HHT here in Monmouth County. More than 20 years after it opened, sections of the HHT remain closed due to issues with crossing the Parkway in Aberdeen and Rt. 520/Newman Springs Rd in Manalapan.

Coming in 2015...

COUNTY RESIDENTS CAN PARTICIPATE IN OPEN SPACE PLANNING

In the last two issues, we have covered in great detail what's next for the new Open Space Plan. If you would like to have your voice heard in the development of the new plan, be sure to check our website this spring and summer for notices on the public input process. The Park System will schedule meetings with Municipal Officials and the general public to discuss the new plan. There will also be opportunities to participate online, via the Park System blog and social media. The more voices heard, the better the plan.

www.monmouthcountyparks.com

THE INCREDIBLE IRIS

Diane Allen, Park Horticulturalist

The iris family is difficult to surpass when it comes to color, versatility, ease of culture and pest and disease resistance. Tall bearded irises, blooming late May to early June, are perhaps the most commonly grown in our gardens. But other species in their genus can add beauty to the garden from early spring through summer, and, with the addition of remontant (reblooming) irises, well into October.

The iris is a top choice for color, versatility, ease of culture, disease resistance, and "seasonality" (blooming in spring, summer and fall).

The genus iris contains about 300 species, native to a wide range of habitats in the temperate regions of the northern hemisphere. With so many to choose from, you can find irises suitable for any type of garden from naturalized to formal:

- mixed borders
- water gardens
- dedicated beds
- containers
- rock gardens

Rhizomatous or Bulbous, You Decide

Within the genus there are rhizomatous and bulbous irises. Among the bulbous irises we find *reticulata*, *juno* and *xiphium*, which includes the English, Spanish and Dutch iris, the latter commonly seen as a cut flower.



The bulbous Dutch iris makes in excellent cut flower.

The rhizomatous irises grow horizontally at or below the soil level from a rhizome, or modified stem. Within this category are the beardless varieties, such as the Siberian and Louisiana irises, and the bearded varieties, such as the well-known tall bearded iris. Bearded irises range from the early blooming miniatures up to 8" in height to the tall 27" varieties, last to bloom.

All irises do best with a minimum 6 hours unobstructed sunlight, but most will do quite well in part sun, 4-6 hours of sunlight. A few irises, like the crested and blue flag, are more tolerant of light shade.

Most irises prefer a well-drained, neutral to slightly acidic and somewhat lean soil. There are some exceptions:

- Showy, bearded irises perform best with a fertile soil, but avoid high-nitrogen fertilizers.
- Crested iris prefer a humus-rich soil.
- Japanese iris, and our native Louisiana and blue flag irises thrive in moist garden soil, at water's edge. (The latter two will grow well in standing water with rhizomes fully submerged, so are excellent choices for a rain garden.)



The fragrant iris germanica 'Immortality' is one of the most reliable reblooming irises. This photo was taken in November.



The iris bloom has three upright petals called "standards"; the three outer petal-like sepals are called "falls", as they droop down and away from the rest of the flower.



Purple dwarf German bearded irises are lovely and velvety. These white dwarf bearded irises complement early spring flowers, sitting nicely next to pink phlox ground cover and daffodil.



Bearded (circle) peach iris "Beverly Sils"

Dividing & Caring for Irises

Rhizomatous irises generally require division every three to five years. This is best done after the bloom cycle.

1. Lift and separate the rhizomes; leave some root and one or two leaf “fans” on each section.
2. Examine closely and discard any rhizomes or sections that have no white feeding roots. Also look for iris borer, the larval form of a moth, and discard any affected rhizomes.
3. Replant single rhizomes 8-18” inches apart, placing so that the rhizome is just visible at soil surface and roots are no more than 1” deep.
4. At planting, amend soil with 1 tablespoon of fertilizer, adding drainage material if soil is heavy.

Each spring, place a thin layer of compost around the base of the plants, leaving the rhizome exposed. Mulch applied around the root zone, as long as it is kept away from the stem and rhizome, will help prevent frost heaving in winter.

Siberian irises require division less often, and should be divided in early spring just as growth emerges, or after bloom. Simply cut the fibrous mass of roots into 3-4 wedges and replant each clump in the desired location.



Iris sibirica (Siberian iris) 'Butter and Sugar' blooming in summer.



Although most irises prefer well-drained soil, some will thrive beside or even in the water.

Iris Pests and Diseases

Although a number of common garden pests and diseases may affect irises, properly sited they will rarely have any problems. The most common, when they do occur are bacterial rot and iris borer.

The iris borer is the larval stage of a moth, and is easily controlled with watchfulness and hygiene. In April-May, larvae emerge from eggs in the soil, crawl up the iris leaves and tunnel inside, down to the rhizome. By late July-August, the 1-2” larvae reach the rhizome and feed on it, making it susceptible to soft rot. When ready to pupate, they move into the top 2” of soil. Adults are active in August, mating and laying eggs on dead iris leaves and other plant debris, where they overwinter.

Therefore, removal of old iris foliage and other plant debris before April 1 will greatly reduce the likelihood of infestation.

Removing old foliage and other plant debris before April 1 will reduce the likelihood of infestation.

During spring, if there are signs of borers tunneling through the leaves, pinch them down (using your fingers) inside the leaf to kill the larvae. Although there are pesticides available, this simple and environmentally sound measure should prove effective.

Inspect rhizomes for rot and trim away damaged or rotted areas. Dip undamaged portions in a solution of 1 part household chlorine bleach to 9 parts water to disinfect.

More Interesting Iris Facts

Iris means rainbow, and in the language of flowers symbolizes eloquence. It is the flower of the Greek goddess Iris, the goddess of the rainbow and messenger of the gods and of love. One of her duties was to lead the souls of departed women to the Elysian Fields. Hence, the custom in ancient Greece of planting purple iris on the graves of women.

From ancient times, iris was a symbol of power and majesty. It was the inspiration for the fleur-de-lis symbol that for centuries has represented French royalty. Ancient Egyptians placed irises on the brow of the sphinx and on the scepter of their kings, the three leaves of its blossoms symbolizing faith, wisdom and courage. Irises are members of the iridaceae family, which also include the crocus, freesia and gladiolus.



More stunning iris species. The 'furry' yellow beard is easy to spot on the bicolor purple/white flowers.

MY 'TOP 10' FAVORITE* GARDEN PLANTS:

Diane Allen, Deep Cut Horticulturist

Staff at Deep Cut Gardens are often asked about their favorite flowers, and I have to admit, my standard answer—“whichever will be the next to bloom!”—though true, might be too easy. Recently, the question was posed again by Deep Cut’s former Assistant Superintendent and my former boss. He wanted to know my “Top 10” garden plants, the ones I wouldn’t want to be without. So, after lengthy consideration, here they are (ornamentals only)...

- 1. Snowdrops (*galanthus*)** – They bloom in January. Need I say more?
- 2. Iris (*iris sp.*)** – From charming minis to stately tall bearded varieties, something to suit any garden.
- 3. Perennial Candytuft (*iberis sempervirens*)** – Well-behaved, slowly spreading ever green foliage, white spring flowers, adaptable and pest/disease resistant.
- 4. Rose (*rosa sp.*)** – Because every garden should have at least one.
- 5. Aster (*aster novae-angliae*)** – Adaptable and trouble-free U.S. native that provides vibrant color and crucial nectar late in the season.
- 6. Heuchera** – Commonly known as coral bells, this native is widely adaptable and available in a rainbow of foliage colors.
- 7. Variegated Solomon’s Seal (*polygonatum odoratum ‘Variegatum’*)** – Very adaptable, fragrant cousin of our native species; thrives even in dry shade, where the streaked white margins lend brightness even when not in bloom.
- 8. Coreopsis (*coreopsis verticillata*)** – Undemanding native plant attractive to butterflies and tiny beneficial insects but not deer. Available in shades of yellow from cream to golden. You can promote rebloom by shearing spent flowers.
- 9. Native Honeysuckle (*lonicera sempervirens*)** – Also called trumpet or coral honeysuckle. Clusters of flowers are produced all summer long, in sun or shade, attracting birds, hummingbirds and butterflies.
- 10. Milkweed (*asclepias sp.*)** – The obligate (necessary) host plant for the monarch caterpillars and sustenance for wide variety of beneficial insects.



In future issues we will present the favorites of some other Deep Cut staff. If you wish, please share your favorites on the Deep Cut Gardens facebook page, accessible through the Deep Cut Gardens page of the Park System’s website (monmouthcountyparks.com) OR directly at: www.facebook.com/DeepCutGardens.

**This list, like the gardener, may evolve over time.*

Spring Events at Deep Cut Gardens



The Great Spring Perennial Plant Swap

Saturday, April 25: Plant intake 8-10 a.m., Swap 10 a.m.-2 p.m.

Bring perennial plants in 1-quart, 1-gallon or 2-gallon sized containers and exchange them for perennials of the same size. You may also exchange extra vegetable and herb seedlings. No ornamental annuals, please.

Earth Day Celebration

Sunday, April 26: 11 a.m.-5 p.m.

The flowers are back in bloom. Discover the park’s floral beauty, hidden places and native plants. Find out how to become an earth-friendly gardener and ways to compost.

National Public Gardens Day

Friday, May 8: 2-8 p.m.

Free activities for all ages. Join a guided tour or explore the gardens on your own, gardening/landscape advice, earth-friendly garden tips, container gardening demo, and scavenger hunt.



Plant Swap

It's TIME To ...

April ✓

- Work compost and manure into beds as soon as soil is friable. If you aren't composting, **check out the Home Composting Demonstration Site** and Horticultural Library at Deep Cut to learn more.
- Watch for weeds and pull them as they appear.
- Prune roses when the buds begin to swell. Cut back almost to ground level ornamental grasses, red twig dogwoods and blue mist shrub.
- Before plants get too large, divide those that are crowding their neighbors and set out supports where needed.
- Set out hardy annuals such as pansies, violas and alyssum. Harden off plants started indoors or under cover.
- When applying granular fertilizer, make sure it does not touch plant foliage, it will burn.
- Overseed lawn; prepare poor spots by loosening soil. If using pre-emergent weed-killer, use early this month.
- Check out Deep Cut Gardens Perennial Plant Swap on Saturday, April 25.



May ✓

- Prune spring-flowering shrubs as soon as flowering is finished.
- Leave bulb foliage alone until it dies - green foliage is making food for next year's bloom.
- Chemical controls will be ineffective against grubs now; wait until mid-July or August.
- Wait until the soil warms to transplant tomatoes and peppers.
- **Transplant well-hydrated seedlings on a cloudy day or provide temporary shade.** Pinching off flowers and buds now will encourage a stronger root system.
- Remove any finished cool weather crops to make room for warm season vegetables.
- Direct sow seeds outdoors for basil, beans and other warm-weather plants.
- Mulch plants to conserve moisture, stabilize soil temperature and reduce weeds.
- Acclimate houseplants to outdoor conditions and keep them in light shade.



June ✓

- Continue to plant warm-weather flowers, vegetables and herbs. Water thoroughly before and after transplanting and mulch well with organic mulch.
- Check squash vines for borers and remove any you find.
- Keep after plants that need staking, such as tomatoes, cucumbers, tall annuals, dahlias and lilies.
- Save the date for the Deep Cut Gardens Open House, Sunday, June 7, 10 a.m.-3 p.m.
- **June 16-22 is Pollinator Week.** Are your gardens and landscape pollinator-friendly?



Open House

Sunday, June 7: 10 a.m.-3 p.m.

A day of horticultural delights for the family – free guided tours, lectures, demonstrations (container gardening, pictured), activities for children, gardening advice, and more.

Daylily Day

Saturday, June 27: 10 a.m.-2 p.m.

Presented by the Monmouth County Park System and the Garden State Daylily Growers. Free Horticultural advice, displays, and garden design ideas.

Volunteer Drop-in Days

Wednesdays and Saturdays, April 8 – October 28, 9 a.m.-12 p.m.

Stop in to assist in the park on these dates and times. New volunteers always welcome. Call 732-671-6050 for information.

2016 Photography Exhibit: "Weather or Not"

Entries accepted: October 23-November 20, 2015. Photo Drop-Off Dates: December 18, 19 & 28, 2015

Opening Reception: Saturday, January 2, 2016, 1-3 p.m. Exhibit Open Daily: 10 a.m.-4 p.m., January 3-31, 2016



Open House demonstration

CORNER

NATURE

FINDING A CURIOUS "PURSE" ON THE BEACH



Sunset at the Bayshore

Joan Capriotti, Park System Naturalist

Imagine a beautiful day walking along the beach: the warm sand, gentle breezes, and waves lapping at your toes as you examine the variety of treasures the sea has left at your feet. Surf clams, moon shells, whelks and the truly odd mermaid's purse are just some of the ocean artifacts you will find.

Mermaid's Purse: Treasure or Property of the Devil?

Would you include these small black, plastic-like pods with the pointy tendrils among your beach treasures, or just pass them by as some sort of debris? Looking as they do, you've got to wonder how such an ugly beach-find is named for such beautiful creature. You can also appreciate how they got their other name, devil's purse. Dark in color, leathery and rectangular in shape with two hollow curved 'horns' on each end, it's easy to imagine them as the property of the devil.



Mermaid's purses lying in the sand

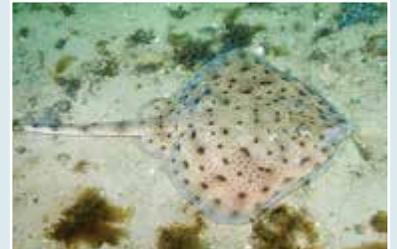
The odd appearance has given rise to a lot of stories. One legend has it that if you pick up a mermaid's purse, you will be cursed for life. Another gives a reason for why they are called mermaids purse in the first place...

Once upon a time in a magical place under the sea, all the young mermaids picked up treasures and carried them in little black purses. These magical bags could hold all sorts of valuable mermaid items. Alas! a huge storm hit and all the mermaids had to drop their purses to flee the storm. When the purses washed ashore, they had dried out and broken in the storm. They all had holes in them and the magical treasure was gone, never to be found again. The story goes that if you find a mermaid's purse that rattles, the magic is still inside and you will have good luck as long as you keep the purse. But, if you try to open the purse the magic escapes, and your good luck will leave.



The Treasure Inside: A Baby Skate

Whatever you name them—mermaid or devil—these purses are actually the protective covering for the eggs of a skate or ray. A skate is a type of fish related to a shark. Like sharks, skates have cartilage instead of bones and many rows of teeth. But that's where the similarities end, skates have a broad, flat body (more like a flounder, actually), with two flat side fins or wings.



Skates are bottom dwellers. Little Skate.

On their top or dorsal side, they have scattered bony scales. Some have spines running down the middle of their dorsal side for protection. Skates also have a long thick tail without a barb, and their mouth is on the bottom of their body.



Skates can live 50 years or more, grow up to 5 feet in length and weigh up to 40 pounds. Clearnose Skate.

Skates are gentle creatures. While they have rows of teeth in their upper jaw these are not big, sharp ones used for biting, as with sharks. Instead, the skate's teeth are more flattened and used for crushing the shells of invertebrates they eat, such as clams and small crustaceans, called copepods.



Skate tail spines.



Ventral (bottom) surface of a skate, showing the mouth.

Skates mate year round and produce fertilized eggs. After mating they lay a single fertilized egg in a protective case, which we have come to know as the purse.

Skates mate and lay eggs year-round, so you can always find their egg cases washed up on the beach.

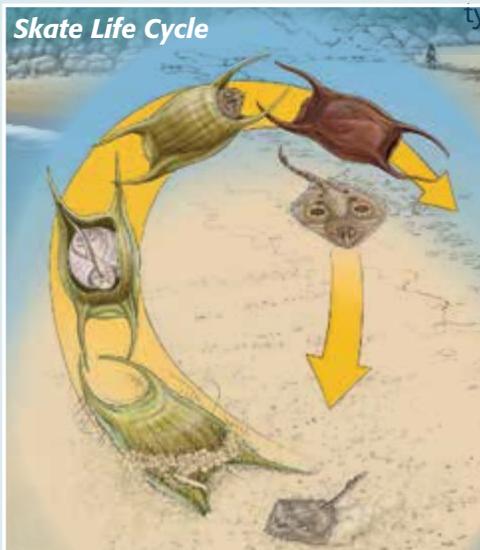
They usually produce two egg cases at a time. By the time you find one on the beach, it is dried out and brittle with a hole on the side where the young skate has hatched out. If it rattle's when you shake it, there's a dried up skate egg still inside!

Egg Case Development & Anatomy

The skate usually chooses a sandy or muddy bottom to lay the eggs. The egg case has filaments that enable it to attach to the ocean bottom or seaweed. This gives the developing young some protection, since the parents don't hang around for protection or feeding. Many developing skates become tasty morsels for predators. Still enough survive to ensure a large skate population off the New Jersey coast.

The "purse" or egg case is actually the perfect environment for the developing skate during its first 6 months of life. When first laid, the case is yellow or amber in color, and very flexible. It turns only black much later after it dries hardens.

Inside the case, the skate embryo is surrounded by a yolk sac and albumin similar to that of a bird's egg. The skate has the all the nourishment it needs inside the egg until it reaches maturity. The embryo stays in the case developing and growing larger with its fins folded across body (photo, top right). It really is mother nature's magic!



Source: Great Eggcase Hunt. www.sharktrust.org/en/GEH_resources

The skate emerges from the egg with its belly still swollen with food from the yolk. The fully developed skate hatches out of the case through a slit at the end with the longer pair of horns. The young emerge fully formed but only 4" long.



Skate emerging from its casing.

Photo courtesy of: Dr. Steven Campana, Bedford Institute of Oceanography, Canada.

Where Do NJ Skates Live?

Skates usually do not undertake large migrations, but move seasonally in response to changes in water temperature, generally closer to the Jersey shore in summer and early fall and further offshore during winter and spring. The winter skate makes its appearance in the colder winter months. Warm weather skate species found off the New Jersey coast include:

- Clearnose
- Barndoor
- Smooth
- Rosette
- Thorny
- Little

Skates as a Food & Conservation

Fish, turtles, sharks and mammals—including humans—eat skate. Winter skates are caught for their wing meat (pectoral fins) while little skates are caught to be used for lobster bait. While species such as clearnose and rosette are caught and discarded as by-catch, the population numbers for others such as thorny, barndoor and smooth are so low that they are considered overfished. Thorny skate harvesting is prohibited.

An egg case with a living organism inside is so special, you have to wonder what a mermaid could possibly carry in her purse that would be as precious.

References: Peterson Field Guide, Atlantic Coast Fishes, 1986. Carleton Ray, C.Richard Robins, John Douglass (illustrator); www.flmnh.ufl.edu/fish/gallery/Descript/LittleSkate/LittleSkate.html; www.fishwatch.gov/seafood_profiles/species/skate/species_pages/winter_skate.htm; www.nefsc.noaa.gov/sos/spsyn/op/skate/; www.flmnh.ufl.edu/fish/education/questions/raybasics.html; www.marinebiodiversity.ca/skatesandrays/reproductive%20cycles/skate%20development.html; www.skye.co.uk/heritage-myth-legend.php; www.elasmo-research.org



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SPRING, GLORIOUS SPRING!

NJ Native Blue Flag Iris



The beautiful iris can take us from spring, into summer and beyond (with some reblooming varieties), see the Home Gardener, pp 6-7

In this issue...A review of new parks & facilities, completing the UTT, a parade of irises, and the mermaid's purse.



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