



MONMOUTH COUNTY PARK SYSTEM GREEN HERITAGE

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

Vol. 58 No. 1 Spring 2024

REDISCOVERING WELLNESS: The Multifaceted Benefits Of Visiting Your Parks

Zack Karvelas, Assistant Public Information Officer

In our fast-paced world, where the demands of daily life can often be overwhelming, the importance of leisure, parks and recreation cannot be overstated. Beyond providing a break from the routine, engaging in leisure activities offers a myriad of intrinsic and extrinsic benefits that contribute to our overall well-being. This article explores the dual nature of these benefits and aims to shed light on the enriching aspects of our local parks and recreation opportunities and how they uniquely contribute to the psychomotor, affective and cognitive domains of human behavior.

Parks and recreation play a pivotal role in enhancing the overall quality of life. Beyond serving as picturesque green spaces, these areas are hubs of physical, mental and social development. The intrinsic benefits, such as stress reduction, personal growth and improved mental health, intertwine with the extrinsic advantages, including economic impact, community building and environmental sustainability. Learning about and embracing the full scale of these benefits is fundamental for individuals, communities and society as a whole. As we prioritize and invest in these spaces, we not only cultivate healthier and happier individuals but also contribute to the well-being and prosperity of our communities.



Surrounding yourself in nature has proven to show improvements in cognitive function and memory. Even just a 20-minute stroll through the woods or around one of our trails can improve your concentration and help people with depression and anxiety. Concerned about your heart health? How about blood circulation, cholesterol or your blood pressure? Short walks and visits to parks all help improve those functions! A rapidly growing therapeutic treatment called ecotherapy, which involves participating in outdoor activities and immersing yourself in nature, has been shown to improve psychological and physiological health. That is essentially what we offer in a large variety of different ways through our programs, camps, facilities and natural scenic areas.

When breaking down the ways in which people's thoughts and behaviors are studied, there are three main domains of psychological learning that stand out:

1. Psychomotor (manipulation and coordination of physical skills and abilities)
2. Affective (interests, appreciations, attitudes and values)
3. Cognitive (intellectual skills and abilities)

Continues next page...

Board of County Commissioners

Thomas A. Arnone, Director
Ross F. Licitra, Deputy Director,
Liaison to the Parks
Nick DiRocco
Susan M. Kiley
Erik Anderson

Board of Recreation Commissioners

Kevin Mandeville, Chair
Anthony Fiore, Vice Chair
Michael G. Harmon
Thomas E. Hennessy, Jr.
David W. Horsnall
Patricia M. Butch
Thomas W. Adcock
Lori Ann Davidson
Brian Foster

Andrew J. Spears, Park System Director

Green Heritage Staff

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



Psychomotor Learning

- **Enhanced Physical Dexterity:** Participation in recreational activities, such as sports, hiking or dance, refines and strengthens psychomotor skills. The manipulation and coordination of physical abilities contribute to improved agility, balance and overall physical ability.
- **Motor Skill Development:** Leisurely activities often involve fine and gross motor skills, from the delicate movements required for arts and crafts to the vigorous physical exertion in sports. These activities promote the development and refinement of both types of motor skills.
- **Kinesthetic Learning:** Parks and recreation areas provide a dynamic environment for kinesthetic learning, allowing individuals to learn and acquire skills through hands-on experiences. Whether it's rock climbing, cycling, or water sports like kayaking, the psychomotor domain is thoroughly engaged.



Affective Learning

- **Cultivation of Positive Attitudes & Mindset:** Recreation activities, especially those enjoyed in natural settings, contribute to the development of positive attitudes. Time spent in parks fosters appreciation for the environment while promoting a positive outlook towards nature and its conservation, which is a large part of the Park System's mission.
- **Building Emotional Resilience:** Facing challenges and overcoming obstacles during recreational and leisure activities contributes to the development of emotional resilience. Whether tackling a difficult trail or mastering a new skill, these experiences can help create a sense of accomplishment and emotional strength.
- **Strengthening Interpersonal Connections:** Shared experiences contribute significantly to the affective domain by strengthening interpersonal relationships. Whether through sports, fitness, hiking, group programs or family outings in the parks, these activities nurture a sense of connection and camaraderie.



Cognitive Learning

- **Stimulating Intellectual Curiosity:** Exploring historic sites, attending educational events or engaging in intellectually stimulating hobbies promotes a thirst for knowledge and a commitment to continued learning.
- **Problem-Solving and Decision-Making:** Recreational activities frequently present challenges that require problem-solving and decision-making skills. Whether it's navigating a hiking trail, strategizing in a sport or playing mahjong, these experiences enhance cognitive abilities.
- **Creative Expression:** Artistic and creative recreation opportunities such as painting, drawing, writing, theatre or ceramics, provide an outlet for cognitive expression. Engaging in these activities stimulates imagination and improves cognitive flexibility.



Where in the Monmouth County Park System can you find and take advantage of recreation and leisure activities and reap all the aforementioned benefits?

To date, there are over 18,000 acres of county park land, in which 147 miles of trails can be found to walk, hike, bike or run on!

Looking for fitness programs? Want to improve your cooking? Maybe some pottery? Do you have kids whom you're trying to help discover their interests and skills? We've got you covered. We offer over 5,000 different programs throughout our 43 different county park areas. From athletic fields to ball courts, campgrounds to environmental centers, playgrounds and pools to picnic rentals and the Creative Arts Center – we have it all! You can find more information about all our parks and recreation opportunities on our website or sign up to receive our seasonal Parks & Programs Guide which has a complete list of all our park offerings.

The Monmouth County Park System is committed to improving the quality of life of the citizens of Monmouth County and beyond by providing open space, park and recreation areas, facilities, programs and services of the highest quality and to furnishing these recreational and educational opportunities in the most effective, efficient and economical manner possible.



Utilizing your local park system is more than a leisurely activity, it's an investment in your overall well-being. From physical fitness and mental rejuvenation to community building and environmental sustainability and education, local parks provide a rich offering of benefits. So, lace up your sneakers, pack a lunch, or simply find a quiet bench, the Park System awaits, ready to enhance your life in more ways than you can imagine.

References: Armstrong, P. (2010). Bloom's Taxonomy. Vanderbilt University Center for Teaching. Retrieved December 20, 2023, from <https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/>.
Andreev, I. (2023, June 17). Cognitive learning theory: Benefits, strategies and examples. Valamis. <https://www.valamis.com/hub/cognitive-learning>
UC Davis Health. (2023, May 3). 3 ways getting outside into nature helps improve your health. <https://health.ucdavis.edu/blog/cultivating-health/3-ways-getting-outside-into-nature-helps-improve-your-health/2023/05#:~:text=Nature%20can%20help%20decrease%20your,and%20improved%20concentration%20and%20attention>
Learning, L. (n.d.). Domains in Psychology. <https://courses.lumenlearning.com/suny-hvcc-psychology-1/chapter/outcome-contemporary-fields-in-psychology/>
Weir, K. (2020, April 1). Nurtured by nature. Monitor on Psychology. <https://www.apa.org/monitor/2020/04/nurtured-nature>

IMPROVEMENT PROJECTS IN THE PARKS

Gail Hunton, Chief, Acquisition & Design Dept.

The Monmouth County Park System is responsible for maintaining 18,229 acres of permanently protected land, including 478 structures, over 147 miles of trails and some of Monmouth County's finest natural and historic resources. Each year the Park System undertakes a variety of capital improvement projects in the parks. Improvements expand recreational opportunities, upgrade facilities and infrastructure, repair and restore historic sites and enhance park landscapes through plantings and vegetation management. Below are a few of the capital park improvement projects completed or underway in 2024.

Swimming River Park

A new county park has been created along the Swimming River on the border of Middletown and Red Bank. The park provides scenic river views along with expanded public access to the river for fishing, crabbing and wildlife observation. The 11-acre property, formerly known as Chris' Landing, functioned as a private boating facility since the 1960s and was acquired in 2015 with assistance from Monmouth Conservation Foundation. Environmental investigation disclosed the presence of dredge materials, historic fill and asphalt millings on the property, necessitating extensive environmental permitting and remediation. The first phase of construction, completed in May 2023, included site remediation, new boat ramp and bulkheading, sidewalks, a perimeter path and parking. Already enjoyed by many visitors, the new park will continue to be enhanced by additional plantings and features in the coming years.



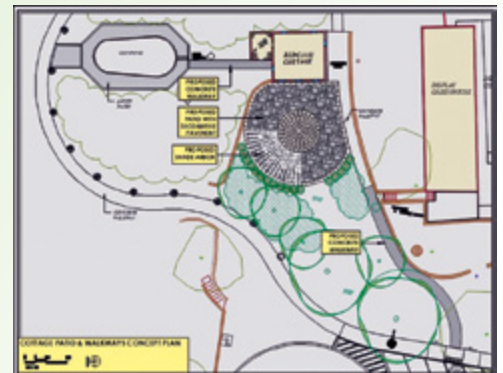
Swimming River Park



A memorial seating area in Swimming River Park, funded by the Monmouth Conservation Foundation, was dedicated in December 2023 in honor of their long-time President Judith Stanley Coleman.

Deep Cut Gardens Program Cottage and Gazebo

Prominently located in the center of the park, the one-time Gardener's Cottage is the only remaining structure from the 1930s Genovese era. With relocation of park maintenance functions to the new maintenance facility, the Gardener's Cottage is being adapted for public use. The nearly complete work includes exterior and interior renovations, with space for public programs and the park's dedicated volunteer corps. A gazebo is also being constructed adjacent to the parking lot to provide park information and a covered shelter with seating.



A bluestone patio at the ground level will expand the use of the indoor ground level program space.

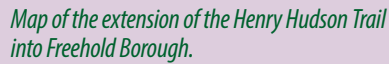


Construction in progress at the Deep Cut Program Cottage.

Henry Hudson Trail, Connection between Big Brook Park and State Highway 79

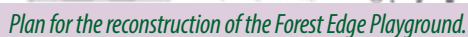
Construction plans were completed in 2023 to close the 1.6-mile gap in the Henry Hudson Trail between County Route 520 and State Highway 79. Starting at the existing trailhead in Big Brook Park, the trail extension will follow the former railroad right-of-way with a steel pedestrian bridge across County Route 520 and continue north to the intersection of State Hwy 79 at Wyncrest Road. Once across State Highway 79, the existing trail continues on to Matawan. The project is currently in NJDEP permitting and scheduled for construction in 2024.

The Park System's 2019 acquisition of a 19-acre property in downtown Freehold provided an opportunity to extend the Henry Hudson Trail into the county seat. The trail follows a former rail line and will extend 2,200 linear feet from its current terminus at Route 537 to the Freehold Hub Site. Construction in progress includes clearing of overgrowth and debris, grading, installation of trail base and surfacing, a steel pedestrian bridge over Center Street and landscape restoration. The complete in spring 2024. F of recreational facilities at



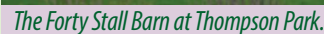
Monmouth County's 9/11 Memorial is situated on the coastal bluffs above the Sandy Hook Bay with a commanding view of the New York City skyline. Built in 2004 to honor Monmouth County residents lost in the September 11th attacks, the Memorial includes a 42-foot diameter central granite plaza with a limestone eagle sculpture on a polished granite base. For ADA accessibility compliance, safety and aesthetics, the settled concrete slabs and cracked and heaved granite tiles were replaced in 2023. The completed project has restored the beauty and accessibility of the plaza.

Several of the Park System's major playgrounds are now over 20 years old and require replacement. First up is the heavily used Forest Edge Playground, a well-loved, centrally located playscape nestled along the wood's edge in Holmdel Park. Designs for the playground reconstruction were completed in 2023 and the work will soon be under construction. The project will update the play equipment, surfacing and site furnishings while creating new opportunities for play. During construction, extra care must be taken to protect the mature trees surrounding and within the playscape.



Maintaining preserved lands in sound ecological health is necessary for ongoing land stewardship. In 2023, the Park System's ecologists, working with ranger staff, volunteers and outside contractors, completed invasive species removal and restoration of native habitat in several parks. In an area of Hartshorne Woods Park, for example, previously overrun with invasive porcelain berry, multiflora rose and tree-of-heaven, phase two of a habitat restoration was completed. Following mechanical and chemical removal of the vines, a contract was awarded to remove downed trees and woody debris, prepping the area for drill seeding to restore native grassland. Other areas of work included Huber Woods Park, Fisherman's Cove Conservation Area and Weltz Conservation Area.

Built c. 1880 as a training stable for Brookdale Farm, the 40 Stall Barn is the most prominent of Thompson Park's historic barns and one of the finest stables erected in the golden age of thoroughbred racing in New Jersey. The timber-framed barn measures 296 feet by 64 feet, with 40 intact box stalls and an enclosed perimeter walkway. The construction contract to restore the building is now underway. When finished, the barn will be open to the public for self-guided tours and exhibits focusing on the famous horses once raised and trained here as well as the horsemen and renowned trainers who worked at Brookdale Farm.



This 165-acre sod farm on Route 33 in Freehold Township was acquired in 1998 to protect DeBois Creek, which drains to the Manasquan Reservoir, and to preserve the centrally located site for future recreation opportunities. In 2023, after discussing regional recreation needs with the Board of Recreation Commissioners, Park System staff created a concept plan for development of recreational facilities on the site that includes multi-sport fields with lighting, parking, a perimeter walking path and support facilities. An engineering design services contract will be awarded in early 2024 to develop phased construction plans. Stay tuned for news about the exciting prospect of another recreation area to serve the people of Monmouth County.

Deep Cut Gardens Home Gardener

152 Red Hill Road
Middletown, NJ 07748

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

DESERT DYNASTIES

Kate B. Lepis, Ph.D., Horticulturist

Even young children recognize that cactus is synonymous with desert. It is amazing how cacti are born with the tools needed to allow them to not only survive but thrive in one of the harshest environments on the planet - "...a place where water is severely limiting to life most of the time."¹ Deserts receive less than 10 inches of rain annually with most of that falling within a single season. Here in New Jersey, we enjoy precipitation rates that average 30-50 inches per year. The adaptations that allow members of the cactus family (*Cactaceae*) to thrive are tens of millions of years in the making.² Their evolutionary mastery is the cornerstone of American arid and semi-arid ecosystems, allowing other life to flourish in regions, that at first glance, seem barren.

Cacti have evolved adaptations that maximize water absorption and storage, as well as minimize water loss. Some of these traits help differentiate cacti from other desert dwellers.

Succulent stems (sometimes leaves): Most cacti have succulent stems that store a large volume of water. Many cacti stems have ribs or tubercles that allow expansion and contraction as they store and use water without damaging tissue.

Unlike most plants, the primary photosynthetic organ for cacti is the green stem, not leaves. All plants breathe with pores they actively open and close called stomata. The average plant has most of its stomata on the underside of leaves. Cacti evolved to have their stomata positioned deep in the valleys of the ridges and tubercles on the stem to prevent water loss. As plants breathe in CO₂ for photosynthesis, they invariably lose water out of the open pores. This placement protects stomata from the sun and wind that would otherwise strip away valuable water molecules.

Stomata that only open at night: Plants that grow in ecosystems where water is not so limited keep their stomata open all day, taking in CO₂ as they photosynthesize. If desert plants did this their stomata would be open when solar radiation and temperatures were highest and lose critical water stores. Cacti and other succulents evolved a metabolic process that allows the plant to keep their stomata closed during the day even when actively photosynthesizing. These arid loving plants only open their stomata and "breathe" at night. They accumulate and store nocturnal CO₂, funnel it into photosynthesis when the sun is shining, and prevent significant water loss.

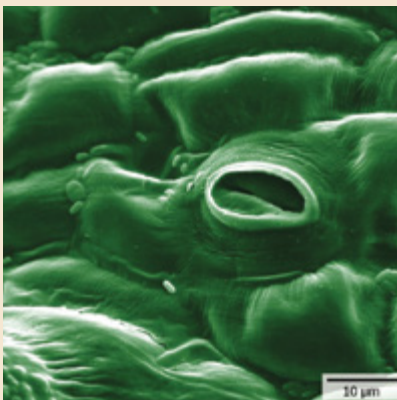
Spines instead of leaves: Except in the case of more primitive cacti (that have true leaves), most have leaves that have been reduced to spines. Eliminating the many leaves that would otherwise be there greatly reduces the surface area that evaporates water away from the plant. Unique to cacti are areoles, structures from which clusters of spines emerge. Areoles are analogous to the nodes (or growth points) on regular stems.



Balloon cactus (*Parodia magnifica*) with ridge/valley folds in the stem.



Nipple cactus (*Mammillaria orcutii*) covered in tubercles.



Scanning electron microscopy of a leaf stoma³.



Eve's pin cactus (*Austrocylindropuntia subulata*) is an example of a cactus with true leaves emerging from areoles with short tufts of spines.

Replacing true leaves with spines helps to deter hungry (and very thirsty) herbivores, but also functions in slowing down wind currents that travel across the stem surface and shading the stem from the sun, both reducing water loss even more. Spines can also function in water collection. As water vapor condenses out of the air and onto the spines their orientation channels the precious water down to the roots.

Cactus flowers are some of the showiest on the planet and come in an array of colors and sizes. They are composed of many showy tepals (sepals and petals that look the same), many stamens, and a branched pistil in the center.



Weberocereus bradei



Old lady cactus (Mammillaria hahniana)



Golden rat-tail cactus (Cliostocactus winterei)



Thanksgiving cactus (Schlumbergera truncate)

Jungle Cacti

Not all cacti live in deserts. There are several hundred species that live as epiphytes (air plants) or lithophytes (on bare rock/crevices) in Central and South American rainforests⁴. Even though they live in ecosystems with ample water (79-157 inches/year)⁵, their microclimates are relatively dry with excess water draining away immediately. The Christmas and Thanksgiving cacti are very well-known examples.



Cactus orchid (Disocactus ackermanii) example of jungle cactus.



Fishbone cactus (Selenicereus anthonyanus) example of jungle cactus.

When growing at home, jungle cacti should be treated more like epiphytic orchids or bromeliads than a cactus. Placement in a bright location, but with protection from direct summer sun is best. Using a soil mix that is half potting soil half orchid bark works well.

Other Dynasties

In the deserts of Africa another plant family reigns supreme – the Spurge Family (*Euphorbiaceae*). The most well-known member of this worldwide family is the poinsettia (*Euphorbia pulcherrima*).

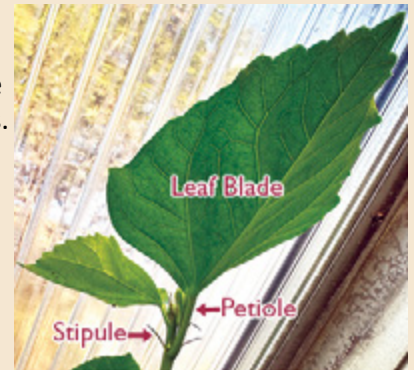
People often mistake some euphorbias for cacti because they have green, columnar stems that bare spines. Each family independently evolved similar looking adaptations to solve similar environmental challenges (limited water), but looking the same is a coincidence.



Cacti Euphorbia comparison

If you take a closer look, it is quite easy to tell the difference between cacti and euphorbias. Where cacti have clusters of spines emerging from areoles, euphorbias have pairs of spines (look like bull's horns) evenly spaced along the ridges of their stems.

If they are displaying leaves, these will emerge from between the spines. With cacti, the spines are modified leaves. Euphorbia's spines are modified stipules – tiny leaf-like structures at the base of the petiole of new leaves. In many plants they soon fall off or harden into spines.



Hibiscus leaves with stipules at the base of the petiole.



Additionally, when you cut euphorbia stems, they release a milky sap or latex that can be irritating to the skin. Cacti lack this; their sap is clear. Many euphorbias display true leaves that are deciduous during the dry season; most cacti lack these.

African Milk Tree (Euphorbia trigona) with true leaves and a pair of stipular spines at the base of each leaf.

The flowers of the two families are also very different. The very showy cactus flower with both male and female parts contrasts greatly with the small, often inconspicuous, male or female euphorbia flowers. Like species in the aster family, what looks like a single tiny euphorbia flower is actually a cluster of flowers. Many, like poinsettia, have colorful bracts (modified leaves) surrounding the tiny blooms.



Crown of thorns (Euphorbia milli) flowers



African milk barrel (Euphorbia horrida) flowers



Viguier's spurge (Euphorbia vigueri) flowers

Other Succulents

The term succulent describes any plant with fleshy organs specialized to store water. This adaptation helps plants to be temporarily independent of the water supply in their environment, evolving independently many times, resulting in at least 33 plant families with species that can be categorized as succulent⁶. As exemplified in cacti and euphorbias, stems can be succulent. Other plants rely on succulent roots or leaves. Root succulents have swollen tuber-like roots, protected from drying sun and wind within the soil while their annual stems and leaves die back during the dry season. Plants that rely on succulent leaves tend to have the smallest water stores and require a bit more water. They are arguably the most popular of desert houseplants.



Leaf succulent diversity

Caring for the Desert Dwellers

Proper lighting and watering are the cornerstone to any healthy plant. If specimens can be identified to species, then the native habitat can be determined and mimicked as much as possible. Not all deserts are the same. Most who have trouble with cacti and succulents either do not provide enough light and/or too much water. The following are some general guidelines to healthy succulents.

Light

Most desert plants prefer the brightest location you can provide, but there are exceptions. For instance, the balloon cactus likes bright conditions, but prefers protection from the blazing summer sun. The leaf succulents *Gasteria*, *Haworthia* and *Hoya* also like it bright, but prefer semi-shade in summer.

Moisture

Most come from ecosystems with wet seasons when they are actively growing and dry seasons when dormant. Especially if you want to trick your plant into flowering, it would be wise to recognize these life phases and adjust watering schedules accordingly. During the spring and summer months when plants are actively growing, they should be watered freely, but allow the soil to dry out between watering. As the days shorten in autumn, watering frequency should be gradually reduced to allow the plant to enter the resting phase. From December to February many want to be kept cool and dry, but not to the point of shriveling. Cooler temperatures may be harder to achieve in the home but should be the goal. In March, watering can be slowly increased so that by mid spring you're freely watering again. Fertilizing should only be used when plants are actively growing.

Soil

The soil mix must drain freely. Some cactus growers use mineral based soil (crushed granite, gravel, etc.) that completely lacks organic matter found in peat-based potting mixes⁴. You can buy ready-made cactus potting soil or make your own by mixing standard potting soil with coarse sand and gravel. For cacti and cactus-like euphorbias, the ratios of sand and gravel should be higher than for leaf succulents. Any sand or gravel that is used should be coarse to ensure good drainage.

References

- ¹Arizona-Sonoma Desert Museum. https://www.desertmuseum.org/books/nhsd_biomes.php
- ²Guerrero, PC., et. al., 2019. Phylogenetic Relationships & Evolutionary Trends in the Cactus Family. *Journal of Heredity*: 4-21.
- ³https://en.wikipedia.org/wiki/Wikipedia:Text_of_the_Creative_Commons_Attribution-ShareAlike_4.0_International_License
- ⁴Andersohn, G. 1983. *Cacti and Succulents*. EP Publishing Limited, Wakefield, UK
- ⁵Raven, P. et al., 1999. *Biology of Plants* 6th ed., W.H. Freeman & Co., NY, NY
- ⁶Sajeva, M. & M. Costanzo. 1998. *Succulents, The Illustrated Dictionary*. Timber Press, Portland, OR

CHERRY TREE AND MOUNT VESUVIUS

Tanya Dinova, Horticulturist & Park Ranger

Dear reader, today I am reminiscing about the past year and there are two stories I think you will find interesting, charming and informative. Each one illustrates the important contribution a garden offers to wildlife in more ways than the obvious.



If I had to choose one single tree to grow, it would be a cherry tree. Let me tell you why. There is an old cherry tree (*Prunus avium*) here at Deep Cut Gardens. It grows amongst other trees, and it is surrounded by shrubbery and vines. If you did not know it was there, you would easily miss it. One day last year, I happened to be working near the cherry tree and I was totally astounded by the sheer volume of activity in its crown. From birds, squirrels and chipmunks to insects and other hungry critters, they all descended upon the tree due to their appetite for cherries.

Until that day, I had never seen all those animals in harmony with each other in such a small space. Picture this: robins (*Turdus migratorius*), blue jays (*Cyanocitta cristata*) and squirrels gorging themselves on fresh cherries in unison, both with but also completely separate from each other. A pure scene of bliss and cohabitation at its finest. Some critters you might be able to see. Others, like the tiny chipmunk, you might not even know was a part of this communal feast. The only glimpse you might get is when they scurry down the tree to clean up whatever fruit gets dropped in between mouthfuls before retreating into the safety of the tree or nearby bushes. Chipping sparrows (*Spizella passerina*), wrens and tufted titmice (*Baeolophus bicolor*) land on the top branches, picking one cherry at a time and taking off to a nearby fence post to eat and repeat.

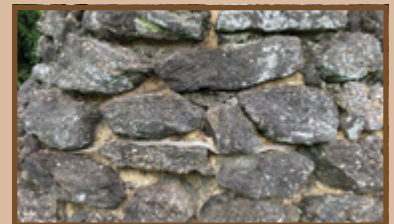


The frenzy was so captivating I didn't realize I had been standing still so long and my knees were about to give out. I had been afraid to move so I wouldn't scare them off, yet when I eventually took a few steps off to the side not one flutter or bite was missed.

This was the first time I have ever witnessed such a grandiose proportion of activity from so many different participants; birds, mammals and insects all because of one single cherry tree. It turns out fleshy fruit bearing trees enjoy a higher rate of visitation (Grünwald, 2010) due to their rich levels of carbohydrates and vitamins. Further research shows fleshy fruits are a significant source of water for most animals, especially birds during the dry days of summer.

Mount Vesuvius is a key historic feature in the rockery at Deep Cut Gardens. As such, it is an integral stop to each tour, visit or historical workshop. Designed by Theodore Stout and built by Carusso Construction Company at the request of Vito Genevese in 1935, this model can be seen standing atop the rose parterre. It was not until this past year that I developed another level of appreciation for this odd and seemingly out of place structure.

It was an early August morning while I was getting ready to lead a group tour, and I saw a perfectly intact snakeskin woven clear across the middle section of the volcano glistening in the morning light. It was obvious that just hours prior a snake had come out and utilized the structure for its rough and pronounced surface to help rub its old skin off. The translucent scaly skin was intact from the mouth parts and eyes all the way down to the tip of the tail, which was very unusual to see. Often, we see bits and pieces of skin stuck between branches or in the garden shed. This discovery was clear evidence that our Mount Vesuvius was more than just a landscape feature, but also a natural snake spa where skin exfoliation is easily supported. The skin did not last very long as the hot summer sun had melted it into the rock face within hours and whatever was left was picked by birds and insects before the end of the day. Since that day, I've been hooked and every morning I run down to the rockery looking for more snake skins. I found two more on separate occasions, so I am convinced of the significance of Mount Vesuvius when it comes to supporting wildlife in the garden.



I hope by sharing these two memories you will embrace their meaning and, on your terms, incorporate them into your own garden or backyard with the understanding that everything we do matters and plays a key role in more ways than you may know.

References: Grünwald, C., Breitbach, N., & Böhning-Gaese, K. (2010). Tree visitation and seed dispersal of wild cherries by terrestrial mammals along a human land-use gradient. *Basic and Applied Ecology*, 11(6), 532-541. • Lindell, C. A., Eaton, R. A., Lizotte, E. M., & Rothwell, N. L. (2012). Bird consumption of sweet and tart cherries. *Human-Wildlife Interactions*, 6(2), 283-290.

Is there a special story from your garden you want to share? Write to us at Deep Cut Gardens:

152 Red Hill Road, Middletown, NJ 07748

CORNER

NATURE

WILDLIFE AMBASSADORS

Heather FitzGerald, Park Naturalist

Our Monmouth County Park System Environmental Centers connect visitors with the natural world around us. We offer quality educational programs and hands-on learning experiences to families, groups and park visitors. Between our exhibits and our animals, there is so much to explore. The wildlife ambassadors within our environmental centers promote the understanding of animals that are native to Monmouth County. Visitors of the environmental centers love the opportunity to meet these animals and learn about

their natural history. The origin stories of each specimen varies, but these are animals that have ended up in need of human assistance, whether it was injured on the trail or illegally made someone's

Eastern Box Turtle

pet. Due to becoming socialized with humans, they are not able to be released back into the wild.

We are not wildlife rehabilitators (you can find NJ licensed rehabilitators here: <https://dep.nj.gov/njfw/wildlife/>). We are who the NJ licensed rehabilitators may call to ask if we can give an animal a permanent home, and with our limited space the chances are slim that we can take in an animal. We strive to give the animals in our environmental centers the closest mimic of their natural life as we can. Some requirements and basic needs are controlled temperature, humidity, lighting, nutrition, habitat type and mental and physical enrichment, such as visuals, tactiles and auditory stimulation. If these animals were outside, they would hear the birds chirping, feel the coarseness of the soil beneath their feet and smell the pine-oak forest. It's virtually impossible to recreate the outside environment inside, but our staff is certainly trying!

Frequently Asked Questions

Do they have names? We have multiple animals of the same species, so by assigning names, we are able to clarify exactly which animal we are talking about.

Can they bite? A lot of our animals were wild, so their instinct is to protect themselves. A few of our snakes were bred in captivity and are more docile. However, anything with a mouth can bite.

Is this your pet? By definition, a pet is an animal that has been domesticated and used as a companion. Our wildlife ambassadors are here to do an important job of educating visitors of what to do if you cross paths and how to cohabit in the natural spaces of Monmouth County. A snake in the garden! A turtle in the road! A frog in the playground! These are all common encounters we talk about with visiting families and school groups.

How can I see the animals? During our live animal presentations with a trained Park System Naturalist, participants get an up-close encounter with the animals. Every presentation's goal is to increase empathy toward animals in the natural world and create a positive pro-environmental mindset. Topics touched upon for each animal include where it lives, what it eats, how big it gets, and some unique facts for that animal species.

Meet a Few of Our Wildlife Ambassadors

Northern gray treefrogs (*Hyla versicolor*) can be found all around New Jersey except for the core of the Pine Barrens. They spend most of their time high up in the trees, except during breeding season from May-July

when they are at the water's edge. At that time, "Bruce Springsteen" is often heard calling! As their scientific name suggests, they can slightly change their coloration from shades of gray to green which helps them camouflage from predators.



Wayne and Springsteen, Northern Gray Treefrogs, Manasquan Reservoir.

Lesster, our yellow spotted turtle (*Clemmys guttata*), is a small aquatic turtle that occurs in wetlands throughout New Jersey. Adults will grow to just under five inches in length. This species' main characteristic is their dark shell



Lesster, Yellow Spotted Turtle, Huber Woods.

spotted with yellow polka dots. The staff at Huber Woods selected this well-suited name because Lesster has far less spots than any other spotted turtle we have seen! In the wild, its diet would consist of crickets, worms, frogs and some aquatic vegetation. Male spotted turtles typically have brown eyes, whereas, females will have red eyes.

Pandora, our northern pine snake (*Pituophis melanoleucus*), was bred in captivity and originally someone's pet. Its docile temperament makes this a lovely snake to share with our visitors. Northern pine snakes are a nonvenomous species native to New Jersey and are state classified as threatened due to habitat loss and illegal collecting for the pet trade. They are relatively large; adults will grow to about six feet. In the wild, their diet consists of rodents, other small mammals, birds and bird eggs. They love to burrow underground and often go undetected even in areas where they are common. The New Jersey Pinelands may hold some of the largest populations of pine snakes in the Northeast.



Pandora, Northern Pine Snake, Manasquan Reservoir.

Franklin, an eastern box turtle (*Terrapene carolina*), is definitely not shy when it comes to meeting our visitors! Box turtles are most known for their high, dome shaped carapace or upper shell, and a hinged plastron (bottom part of the shell) that will allow them to close up entirely when threatened. His bright red eyes are one of the most distinguishable characteristics for males in this species. Their skin and shell colors can vary, as well as the shell patterns. Adults will grow up to six inches in length, and in captivity this species can live up to 100 years!



Franklin, Eastern Box Turtle, Manasquan Reservoir.

Streak, a northern diamondback terrapin (*Malaclemys terrapin*), is a medium sized aquatic turtle that lives exclusively in salt marshes and other brackish waters, where freshwater mixes with saltwater. They are the only turtle in the world that is specially adapted to spend its entire life in this type of water. Adults vary in size between the sexes; males grow up to six inches, whereas females can grow up to nine inches in length. They are named for the diamond shaped pattern on their carapace. In the wild, diamondback terrapins avoid humans, are quick to flee, and difficult to observe but, in captivity, they are known to recognize habitats and quickly become sociable.



Streak, Northern Diamondback Terrapin, Huber Woods.

References: Schwartz, V. & D. Golden, "Field Guide to Reptiles and Amphibians of New Jersey". New Jersey Division of Fish and Wildlife 2002.

State of New Jersey, "Eastern Box Turtle Fact Sheet". Department of Environmental Protection. New Jersey Division of Fish and Wildlife. https://www.nj.gov/dep/fgw/pdf/education/box_turtle.pdf

State of New Jersey, "Spotted Turtle Fact Sheet". Department of Environmental Protection. https://www.nj.gov/dep/fgw/ensp/pdf/species/spotted_turtle.pdf

State of New Jersey, "Northern Pine Snake Fact Sheet". Department of Environmental Protection. New Jersey Division of Fish and Wildlife. <https://dep.nj.gov/wp-content/uploads/njfw/norpinesnake.pdf>

Brennessel, B. 2006. Diamonds in the Marsh: A Natural History of the Diamondback Terrapin. University Press of New England, Lebanon, NH



GREEN HERITAGE

805 Newman Springs Road, Lincroft, NJ 07738-1695



Volume 58, No. 1 Spring 2024

240703/24



In This Issue:

REDISCOVERING
WELLNESS:
THE MULTIFACETED
BENEFITS OF VISITING
YOUR PARKS,

IMPROVEMENT
PROJECTS IN THE
PARKS,

DESERT DYNASTIES,

CHERRY TREE AND
MOUNT VESUVIUS,

WILDLIFE
AMBASSADORS



www.MonmouthCountyParks.com