Cattails

7130 Marshy Point Road, Middle River, MD 21220
www.marshypoint.org
410-887-2817

The Marshy Point Nature Center Council's Newsletter
June - July - August 2022

Serpentine Barrens

Carl Gold

Ever wanted to know what deep inside the Earth looked and felt like a half billion years ago without risking time travel that might jumble up your DNA? Are you interested in going below the ocean bottom without getting crushed to death? Want access to seven miles of uncrowded trails in the midst of a rare ecological treasure? All you have to do is visit the 1900 acres of serpentine barrens at Soldiers Delight Natural Environmental Area (NEA) in Baltimore County, a short hop from I-795 in the center of Owings Mills.

Give or take a few million years, about 500 million years ago, tectonic plates from what is now Africa and what is now North America collided. Much of what we now know as the Atlantic Ocean was covered by the resulting land mass. In a few places, however, pieces of deep cracks in the sea bottom were pushed to the surface. As horizontal compression squeezed the massive continental sections together, these broken pieces were pushed vertically, forming the interior of mountains. Millions of years later, the once joined plates separated again. After further millions of years' erosion, all that was left of the mountains was the interiors made up of a type of metamorphic (caused by intense heat at creation) oceanic rock from deep below the sea. It is known as serpentinite. Because it is mantle rock, it is very unusual to find it at the Earth's surface.

Soldiers Delight is one of the few remaining examples of this almost otherworldly ecology in eastern North America. Lake Roland, in the Bare Hills neighborhood of Baltimore City, has a small remaining parcel, too. In the 1600s when European settlers first arrived, there were over 100,000 acres of barrens in the eastern United States. The barrens consist of rock that has the color and texture of snakeskin—hence the root word serpent. They are barren because the rock contains an unusually high concentration of magnesium which is toxic to much plant life, and very low concentrations of otherwise necessary nutrients like calcium and potassium. Early settlers referred to these areas as the Great Maryland Barrens. Hence the "bare" in Bare Hills. They diminished because they were not utilitarian - they could not be timbered or farmed. No thought was given to preserve these unusual landscapes until they were almost all gone. Serpentine barrens also have high concentrations of heavy metals, particularly chromium and nickel. In the early 19th century, Soldiers Delight and Bare Hills were the world's leading producers of chromium. The remains of a chromium mine can be seen at Soldiers Delight (follow the Choate Mine trail) and abandoned chromium pits filled with discolored water are visible adjacent to the eponymously named Serpentine trail at Lake Roland. As a result of this unusual mineral composition only certain kinds of plants can grow which are rarely found elsewhere. The careful observer

Cont'd on pg. 2

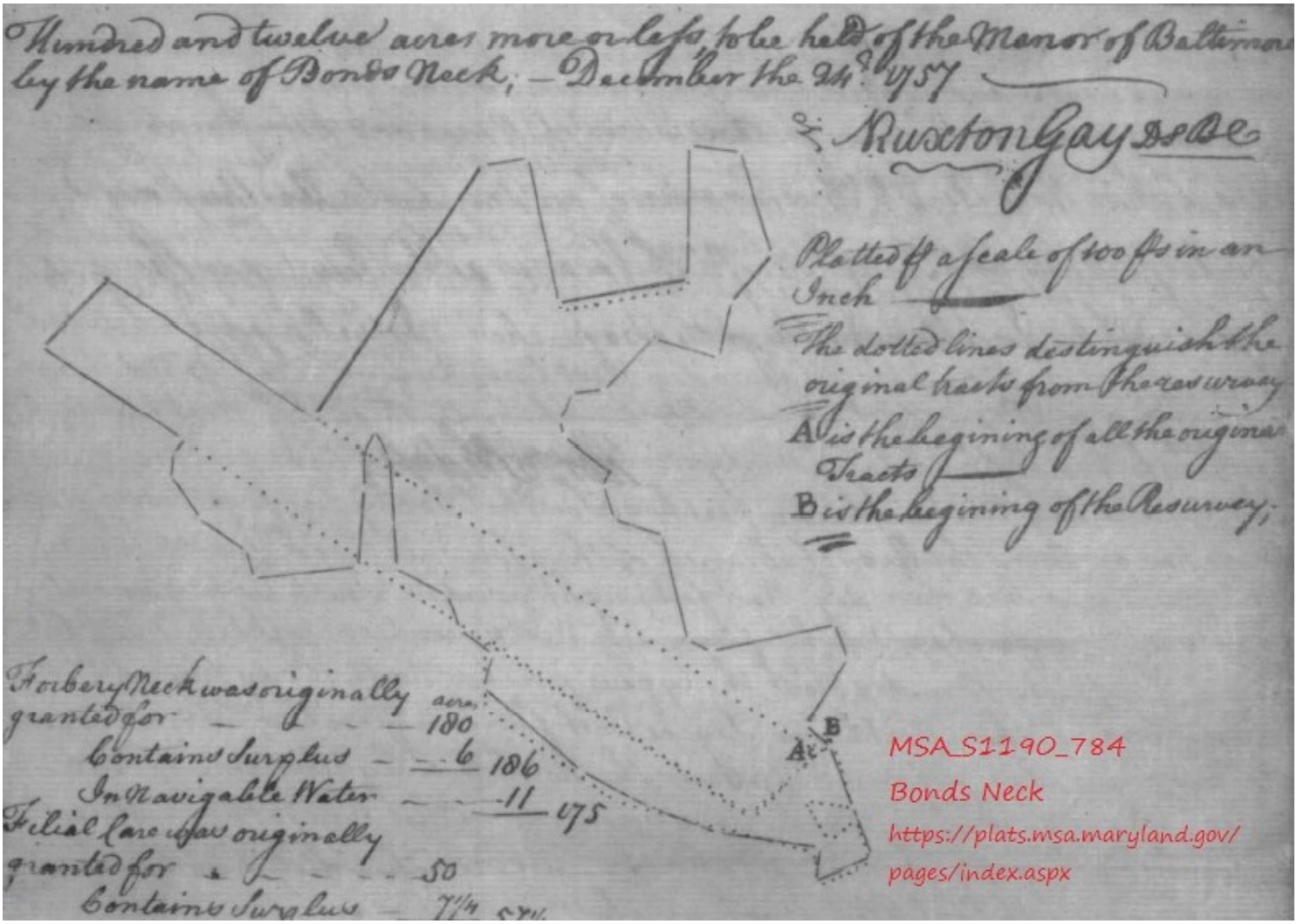
may see some of the more than three dozen rare, threatened or endangered plant species at Soldiers Delight as well as unusual insects and minerals.

On first glance, the barrens look desolate—no trees other than a few struggling oaks. There are broad swaths covered with low native grasses, sedges, and rushes that can tolerate the nutrient poor and erodible shallow soil. There are large sections covered with Virginia Pine, a well-meaning but mistaken man-made effort to create forest habitat. The pines have spread widely by self-seeding. While done with good intentions, the pine trees create a forest canopy that deprives rare plants like serpentine chickweed, flame flower, fringed gentian, and others of needed sunlight; planned burns correct this. Some scholars believe the indigenous peoples used the same method to make hunting easier.

Before you go, check with the visitor's center (410-461-5005 or https://dnr.maryland.gov/publiclands/Pages/central/soldiersdelight.aspx) to make sure a burn will not interrupt your visit.

The source of Soldiers Delight's name remains a mystery to this day. One of the earliest mentions of the name is recorded in a land transfer in 1750. It may have been named by the King's rangers stationed at nearby Fort Garrison. Perhaps the unfettered views helped their hunting, too. If you go, I guarantee you will be

—delighted.



The Benefits of Forest Bathing

Gerry Oshman

We all know that feeling after a walk in the woods. The tonic of wilderness was Henry David Thoreau's classic prescription for civilization and its discontents, found in the 1854 essay Walden: Or, Life in the Woods. This corresponds with the Japanese practice of forest bathing.

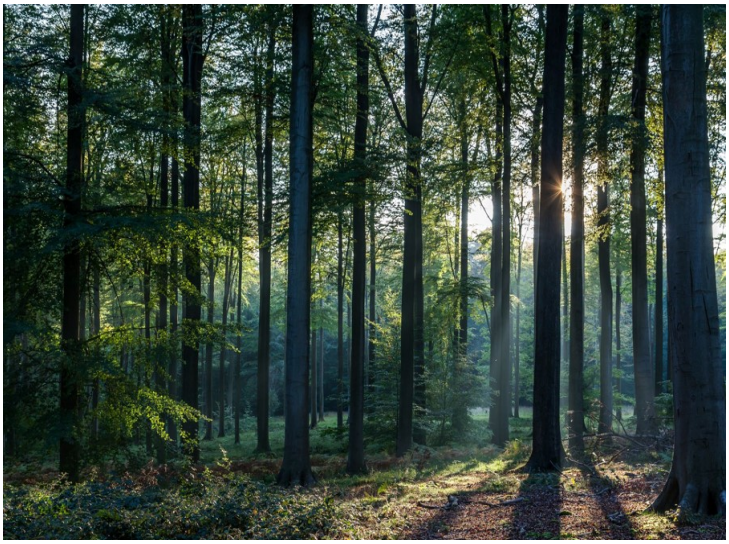
Forest bathing, or shinrin-yoku, became part of a national public health program in Japan in 1982 when the forestry ministry promoted this as therapy. The wisdom of the environment is evident in Japanese culture: Japan's Zen masters asked, "If a tree falls in the forest and no one hears, does it make a sound?" To discover the answer, masters do nothing and gain illumination. It's similar with forest bathing: Just be with the trees. No counting steps on an app, no worrying about calories burned. The point is to relax rather than accomplish something.

Japanese officials spent about $4 million studying the physiological and psychological effects of forest bathing, resulting in almost 50 designated therapy trails. Studies show that the activity of human natural killer (NK) cells in the immune system, associated with immune system health and cancer prevention, significantly increased in the week after just an hour of forest bathing. Positive effects were shown to last up to a month following each visit to the woods.

This is because of exposure to various essential oils, called phytoncide, found in wood, plants, and some fruit and vegetables. Trees emit these oils to protect themselves from germs and insects. Forest air doesn't just feel fresher and better; it's filled with phytoncide, which seems to actually improve immune system function. According to certified forest bathing guide Gregg Berman, "The human nervous system is both of nature and attuned to it."

Experiments on forest bathing at Japan's Chiba University measured its physiological effects on 280 subjects. The team measured the subjects' salivary cortisol, a hormone that increases during stress; blood pressure; pulse rate; and heart rate throughout the day in the city and then compared those using the same biometrics taken during a day with 30-minute forest bathing. The study concluded that "forest environments promote lower concentrations of cortisol, lower pulse rate, lower blood pressure, greater parasympathetic nerve activity, and lower sympathetic nerve activity than do city environments." In other words, being in nature made subjects' physiological system less agitated and more serene, resulting in better health.

Trees soothe the spirit, too. A study surveyed almost 500 healthy volunteers, twice in a forest and twice in a control environment. The subjects showed significantly reduced hostility and depression scores, as well as increased positive feelings, after exposure to trees. The conclusion is that forest bathing's psychological effects can trees. The conclusion is that forest bathing's psychological effects can be therapeutic. Just a brief visit to the park, even in urban environments, can relieve stress levels. What all this evidence suggests is we don't seem to need a lot of exposure to gain from nature, but that regular contact appears to improve our immune system function and wellbeing.



Planting Trees

Carl Gold

I am kneeling in the soil using my hands to fill a hole. I am dirty and my back is stiff. My fingernails are cracked, and my hands are callused. I have not looked at my watch or cell phone for hours. I have spent the morning planting native trees. Planting a tree is like planting oxygen. Replanting trees in urban areas that have been denuded can heal heat islands, clean the air, filter water, reduce asthma, provide habitat, and raise property values. Trees shade homes in the summer and serve as windbreaks in the winter. Trees absorb carbon and ultraviolet radiation. They are first-line defenders against climate change.

Early spring and fall are the best times to plant a tree. When a tree is planted, it goes into shock—hot summer weather and drought add to this stress and can kill the tree before it has a chance to adapt. Similarly, freezing temperatures prevent root growth; a winter-planted tree will struggle. If possible, plant a tree native to our region. Native trees bloom and leaf out timed to match the hatching of insects that rely on them for food. If those insects are not around, migrating birds that feed on the insects will go elsewhere. A single mature oak tree can host over 500 species of nascent moths and butterflies—more than any other plant or tree. An oak may take 40 to 60 years to mature but can live for centuries.

The planting hole should be 2 to 3 times as wide as the root ball. Start by removing any grass. Save it and set it aside. Make the sides of your circular hole perpendicular to the bottom, avoiding slanted sides. The bottom of the hole should be flat so that water will not pool under the tree and tilt it. If your soil is severely compacted from , consider amending it with compost or better soil and increasing the width of the hole to give roots room to grow. Low-cost compost is available from Baltimore City's Camp Small.

Cut away any wire and burlap or remove your new tree from the plastic pot. Now, you must act ruthlessly and counterintuitively. If your tree grew in a plastic pot, it is highly likely that the roots are encircling the tree, and if not addressed, will ultimately girdle and kill it. Use a knife or your fingers to release the circling roots; it is okay to cut them to do this. If any of the roots have woody portions that are growing back towards the trunk, cut them off. They will never change direction, so they must be removed. Next, find the tree flare or first structural root; this is where the trunk widens at the base of the tree. It is likely to be covered with soil that you will have to remove. Planting depth is crucial. The tree flare must be visible just above the surface once you fill in the hole- it is better to be an inch too high than an inch too low- the tree will settle as you water it. The easiest way to make sure the depth is correct is to lay your shovel across the hole as you are back filling from the soil you set aside. The root flare should be level with the bottom of the shovel handle or slightly higher. If you are working solo, stop and check that the tree is centered and straight. Take the grass you removed, flip it over and create a berm around the tree. Cover with mulch, making sure to leave the flare exposed. Think doughnut, not volcano.

From March to October, water your new tree at least weekly the equivalent of one to two inches of rainfall for the first two years. You might want to stake it to protect against lawnmowers and weed whackers. If deer are a problem, you can wrap inexpensive fencing around the stakes to protect the tree. Depending on how bad the deer problem is, you may need to keep the fencing for several years. You have now given all of us a gift that will surpass anything you could do in your will.

President's Message

Dave Oshman

Wow. What a fantastic Spring it was! Our Annual Spring Festival was held on April 16th and our new Director, Ranger John did a fabulous job to make it one of the smoothest running festivals ever. And only two weeks later, we hosted the May Day Faerie Festival at Marshy Point. We welcomed more than 6000 people over the weekend. It was the most successful fundraiser we've had at the Marsh and will help us do a lot around the park. We now look forward to summer. Summer camp is one of my favorite things that we do. It is in teaching nature to our youngest community members that we can look forward to the future when they will be the stewards of our world. Let us hope that we can all do our part to provide a world that can nurture them. Summer camp is one of my favorite things that we do. It is in teaching nature to our youngest community members that we can look forward to the future when they will be the stewards of our world. Let's hope that we can all do our part to provide a world that can nurture them.

Senior Naturalist's Report

John Lehman

It has been nine summers since I first stepped foot on the saturated, sandy soils of Marshy Point Park as an intern. A lot feels the same, yet so much has changed. From intern, to part-time naturalist and summer camp director, I learned and came to love this park and community. Starting in 2018, I spent several years at Lake Roland as a Park Ranger; but, now I am back. And let me tell you, what a homecoming it has been.

Getting right into it, we had our 18th Spring Festival, which hosted numerous familiar and several new vendors and exhibitors. For the majority of the day, I was busy running around making sure events like the egg hunt hay ride were running smoothly and that the parking was covered. During the frenzy, I saw people really enjoying themselves at our park. Overall, we had fantastic weather, and it was amazing way to bring in the season. With the experience of managing one festival under my belt, I look forward to the countless ones ahead.

Right on the heels of our Spring Festival, we hosted the second Faerie Festival at Marshy Point. With the dust settling, we had over 6000 individuals come to this event. That means that those 6000 individuals walked away with a positive experience at Marshy Point; to me, that is a special thing. With three performer stages, copious vendors, plentiful exhibitors, and a 25-foot maypole in the front lawn, I can honestly say that it was a remarkable sight to behold. This event would not have happened without the incredible hard work put in by dedicated full-time staff, part-time naturalists, and our incredible volunteers. I thank you all.

Staff are now prepping for a wonderful summer at the Marsh filled with summer camps, weekday programs for day camps, college interns, scout projects, and the ever-constant animal care. I have to take pause in what I do to take in the Marsh's nostalgic sights and sounds: the coastal plain that I missed so much, the rasping calls of the bullfrog at the vernal ponds, the pleading calls of the yellow-billed cuckoo at Carol's Glen, and the brackish tide of the Dundee.

I am excited to continue the excellence established at the Marsh and to build on it with my own experience and vision. I look forward to working with you all. In the meantime, I will be seeing you out on the trails.

Landing on the Right Name

Daniel Dean

What did Marshy Point remind people of during colonial times? As the vast portions of land were acquired, they were named by the new owners receiving the property. Some of the names remain today as neighborhoods. These land grants were in the form of patents by Lord Baltimore and later by the State of Maryland, according to the Maryland State Archives. Sadly, only some native names remain. We cannot confirm existence of a native settlement at our park but are investigating the possibility as there is evidence of hunting and fishing nearby. Our park fell into four sections of lands patented for the same family: *Bonds Neck, Midsummer Hills, Nicholson's Discovery*, and *James' First Attempt*. These tracts of land made up what was known as Marshy Point, remaining in the deeds until the early 20th century.

Bonds Neck, which was named by William Bond, contains the majority of our park land with 512 acres, which extended into the Biscayne Bay community. We know there was a stone which had the initials "WB" carved into it from reading the land patent and survey. Unfortunately, we have not been able to locate the property marker as the shoreline is not the same as it was from the 1757 survey. Midsummer Hills contained 246 acres and was patented in 1745. Our nature center, cemetery, and many of the active parts of our park are in this small section that was enveloped into Bonds Neck a decade later. Nicholson's Discovery from 1770 lies to the Northwest section of our park. T

his land was patented to Nathan Nicholson, who had married one of William Bond's daughters, Ruth Bond. She had passed prior to her father's will from 1767 with no children. In 1782, Bonds Neck was reduced in size by one of William Bond's sons, James Bond, who held the new patent. James' First Attempt minimized Bonds Neck to 462 acres. The other portion of land is suspected to be owned by Cassandra and her mother Elizabeth. This is just a theory until we find further documentation. Of William Bond's remaining children, Cassandra and her brother James held on as long as they could to the property before death (Cassandra passed on Oct 1, 1794; her headstone is located in our park's cemetery) and financial ruin (James Bond claiming insolvency in 1803).

Over time, lands can be subdivided into sections, enveloped by other land, and corrected from overlapping, all of which can change the surroundings. Even Bonds Neck contained portions of two prior lands named Filial Care (William Andrews, 1739) and Forberry Neck (William Ebden, 1677). When we look at these names, we must keep in mind the land looked different hundreds of years ago. Old growth trees were original and vast, as much of Baltimore and Harford County were considered forest. Settlers arrived and cut down trees to farm and live turning them into visible open areas.

When our park was purchased in the 1980s, there were still open areas from farming; now grown over with new growth gum trees. Imagine the land called Midsummer Hills: open land in large portions with a small cemetery and possible homes jotting the landscape. If you walk down our trails to the water, you will notice little slopes, which make sense given the name. Discovery and Attempt bring emotional thoughts or feelings of acquiring new land.

Forberry Neck and Filial Care are interesting as we don't know much of what was happening on those sections of land at the time and has been forgotten for now. Although the landscape may adapt to ownership, clues of the past remain in the minor notes which persist. The next time you visit Marshy Point Nature Center, consider how grateful we are to preserve the beauty of what may have become a development with no association to its former glory.

Marshy Point BioBlitz

Saturday, June 4, 2022
9am – 4 pm

What's a BioBlitz?

A BioBlitz is a rapid inventory of the living species in a particular place. Our goal is to document as many species as possible at Marshy Point Nature Center. Birds, fish, plants and fungi! Any living thing you can document with a camera!!

How can I participate?

Anyone can participate by taking photos of living things at the Marshy Point Nature Center and posting them to iNaturalist. The iNaturalist website and app are free to use – and it's a great way to learn about biodiversity!

Will there be public events?

Absolutely! The park will be open to the public. Visitors may also participate in nature walks focused on particular groups. See the website for full details. All walks start from the Nature Center.

8 am – Bird walk
9 am – Orientation, Fungi
10 am – Amphibians!
11 am - Aquatic insects
1 pm – Fish seining
(Bring your boots!)
2 pm – Plants
4 pm - End of BioBlitz!

Hosted by the Maryland Biodiversity Project and the Marshy Point Nature Center

www.marylandbiodiversity.com www.marshypoint.org

Marshy Point Nature Center
7130 Marshy Point Road
Baltimore, MD 21220

Support Marshy Point Nature Center

Marshy Point Nature Center's scholarships are presented yearly to college-bound seniors and undergraduate students who have shown a high level of commitment to the health of the environment and who plan to continue their studies in environmental sciences or nature education, and who have shown a strong affiliation with Marshy Point Nature Center. Qualified applicants are college-bound seniors from Baltimore County or undergraduate college students who wish to pursue a career in nature education or environmental sciences. Applications will be available online (www.marshypoint.org) or by calling the Nature Center at 410-887-2817.

You can also support the Nature Center by becoming an annual member. Memberships start January 1 and end December 31 each year individual. Family, individual, senior, and senior couple memberships are available. Members receive special program discounts, have access to priority summer camp registration (as well as a $25 discount for family membership holders), and are invited to special members-only events. All funds collected through memberships are put back in to the Nature Center and Park to support programs, animal care, exhibit and site development, and more. Drop off or mail in your application; you may by check made out to MPNCC, with cash, or on our website.

Marshy Point Newsletter Staff
Editor: Gerry Oshman
Layout and Design: Briana Searfoss