Mason-Dixon Trail System Newsletter

AUGUST/SEPTEMBER 2022

In this issue:

Follow us on

"A hiking trail should glide across the land as lightly as a caress, and the best of trails in their meanderings, do gentle reverence to the earth."

How you can help

We will be meeting at 9am for the work party. Meet at the ballfields. We will then shuttle to the Principio trailhead. Please bring loppers and pulaskis if you have them. We do have extras. The actual meeting will be back at Perry Point, inside the VA, at a shelter along the waterfront at noon. All are invited; bring your lunch!

Next meeting:
Sunday September 25th
Perry Point Park, Perryville

Check Facebook for weather updates

I swore I would never write about this little tangle of DNA wrapped in a protein blanket that has brought the world to it's knees. That's a cheap stab at drama, I know. What I don't get is the drama of using the phrase "unprecedented times". This belies an ignorance of history. History repeats itself, and pandemics are nothing new. What's new is the misconceptions spread by social media and the ability to fight back with a vaccine. But hey, I willl let that rest.

As a retired large animal veterinarian, I have a working knowledge of how respiratory pathogens are spread. In my world, a quarantined horse is best kept thirty-five feet from other horses. Yup, thirty five feet for strangles suspects! If you've ever had a horse sneeze in your face you will not doubt the wisdom of that dictate. They will blow your eyeballs out!

What I don't get is the use of "outdoor masks". Do healthy people working or enjoying exercise while staying out of the immediate "snot zone" of others really need to wear "outdoor masks"? Go ahead, throw tomatoes at me. I realize that some of the hiking groups mandated wearing them. Uh…well…as long as YOU had fun!

Here's what I really wanted to tell y'all. I picked up a recent issue of Equinomics magazine. All about the business aspect of equine health professionals. An article described how American veterinarians thrived in horse barns. Thrived! Yes, folks. It baldfacedly stated that 2020 and 2021 were hands down the most profitable years for practicing equine veterinarians. Why? People stayed home and happily rode their horses. Galloping athletes continued racing across eight furlong tracks. Amishmen worked their fields with their big beautiful 1600 lb workhorses. Practitioners stepped out and administered to them. Healthcare of our hooved friends was not to be denied because of a human pathogen.

Masks on or masks off? Personal preference and risk assessment. But as time wore on, I think open smiling faces prevailed. Fear is a powerful motivator. Ignorance fuels it. Okay I've said my piece. Ah well… Keep calm and exercise on!

Ruthie Franczek,
retired and happy DVM

President's Message

National Trails Day 2022

Saturday June 4th, over fifty energetic trail maintainers congregated at the Conowingo Visitors Center, ready to weedwhack, lopper, and even build a turnpike over .....creek. See the article on Building Trails for pics of the turnpike. Ten people, seventy seven rocks and three hours later, a sturdy crossing awaited dry hiking boots. More teams dispersed and miles of trails were cleared. Fred Smith, our Constellation Energy liason, coordinated tools, planning and even served volunteers a chicken sandwich lunch. Rob (1SG Bartholomew) did a splendid job organizing the troops.

Designing a trail

Land protected from development is managed as a various spectrum of protocols from Wilderness areas to Olmsted's Central Park. In the wilderness areas power tools are not allowed. In Olmsted's planned parks the land has been resculptured to an architect's design. In between the two extremes various levels of development are allowed based on the purpose of the land and the amount of development allowed

Trails vary from animal tracks to paved rail trails that become bike roads on weekends with high traffic. There are various types of trails, hiking trails, handicap trails, bike trails and Equestrian trails. Multimodal trails are a myth because once the bike traffic reaches a certain density the hikers are driven way. In addition long distance hikers do not like to hike on pavement. Maurice J. Forrester of the KTA said, "a (hiking) trail should glide across the land as lightly as a caress, and the best of trails in their meanderings, do gentle reverence to the earth." Handicap trails are designed so people in wheel chairs can use them. Bike trials lack steps and rocky areas. Due to the weight of horses, Equestrian Trails need to be hardened. Hiking trails are not capable of handling the weight.

When the National Park Service started protecting the Appalachian Trail Corridor, the ATC took a look at the tread way and realized the was a lot of erosion. Bob Proudman developed some guidance on how the trail was to be built and maintained. This guidance is in several books. The Mason-Dixon Trial System adopted Bob's guidance. In addition, Jeff Marion of VA Tec had his graduate students study the damage of sections of the trail. The basic conclusion was that side hilling was best. Worst was the routing straight up the slope or on a flat level. The secret was to get the water off the trail a fast as practical and avoid steep slopes.

When climbing a hill, one uses switchbacks to keep the tread way slope down. People want to short cut the turns, so one needs to minimize the number of turns and make the turns around a barrier like a big tree. (Continued)

Building a turnpike on the MDT

(Continued) on flat areas the topsoil gets beaten down and a mud pool forms that people then try to walk around. Therefore the tread way has to be raised by either a boardwalk or by turn piking by bringing in material to raise the footpath.

. Designing a trail author- Jim Hooper, MDT PA Director

A turnpike on the MDT

Building a turnpike on the MDT

Another lesson learned the hard way, ATVs can do major damage. They run up and down a trail, tearing up the soil. Along comes a heavy rain and the trail becomes a gully. The trail should not be made wide enough for ATVs. When cutting blow downs it is recommended that a gap be made that is small enough that ATVs can't get through.

The York Hiking Club maintains the AT on Peters Mountain. This is National Park Land. We had a National Park Ranger ask us to drop "trash" trees on a logging road to prevent the road from being used by ATVs.

The AT originally had lean-tos close to roads for easy construction and maintenance. The sites became party sites. At one shelter in eastern Pa I came across a shelter with a generator and stereo playing! Because of the problem the original shelters were removed and new ones built remote from roads. Also, it is recommended that the stay in the shelter be limited to two days. The second day be incase someone needs a rest day.

We have started work on a major rerouting of the MD-T in Hellam Hills Nature Preserve that may eventually double the length in the preserve to almost six miles. The new route will include views of the Susquehanna from Buzzard's Roost and also views of the Wildcat Run gorge. Stay tuned!

On July 12th we installed five hand grabs at the rock climb near Quarry Rd in Havre de Grace, MD.

Its location is map-7, west-to-east mile 0.0. The section is about a tenth of a mile long and is probably the most rugged section of the entire Mason-Dixon Trail. There is a bell at the top of the climb for people to ring when they reach the top of the climb.

Whew!

Boyscout Shelter, near Lock 12

Apollo Shelter, above Boyd's Run

New Hand grabs in Havre de Grace, MD section of the MDTS

Trail updates

Avian Flu Update

Good news: the trails around the Conowingo area have been reopened. Upwards of 485 black vultures died from the virus but to date, no eagles. The trail had been closed previously because this H5N1 strain can be spread on your shoes by walking through bird manure as well as contact with other body fluids of dead birds. Human infections have been negligible, but you could spread the virus to other birds. The commercial industry was hit hard but now seems to have cleaned up the epidemic. Backyard flocks are still reporting cases throughout the US, but not at the level previously.

There are a couple reasons the fowl fury has abated. Summer's high temperatures make the virus less stable. Also, the migratory birds that harbor the virus are up in Canada in their breeding grounds. In general, waterfowl are pretty much resistant to H5N1. In addition, this strain has proven to be rather persistent as seen in Europe.

There are four flyways over the US; we are the eastern flyway. What this could mean is another spate of infections when the geese return to our skies. Meanwhile, enjoy Trails and stay tuned.

Save the Snot Otters!

Do you know Pennsylvania's official state amphibian? It happens to be America's largest salamander: the Eastern Hellbender. These elusive slimy little creatures will warm their way into your heart when you view the video I listed at the end of this article. The underwater footage is simply awesome.

You may have seen signs along creekside trails admonishing you not to move rocks. Tishomingo State Park in northern Mississippi is where I saw this as I hiked last fall. It's along the Natchez Trace Parkway, a National Park. These little guys are picky about their stony lairs...you will see male hellbenders fighting to defend their territory in this video. Sadly, their territory is becoming scarce and so are they.

Several reasons for this: human activity in our waterways is disturbing silt which clogs the rocky dens. Hellbenders need good, clear, running water with plenty of hidey-holes to hang out in. Trees providing shade over the streams keep water temperatures down and prevent algae from clogging the surface. If you were one of these charismatic aquatic dragons, you would love the cold, shaded, waterways. Such streams are found deep in the forested areas of our protected lands on the East Coast.

HELLBENDER

(Cont) Save the Snot Otters!

The good news is: our nation's Clean Water Act of 1972 has made a urnaround in many waterways.

The Chesapeake Bay Foundation is pleased with the progress as it is the watchdog of the Bay's health. But there is a long road ahead. In June, $40 million from the Federal Infrastructure Investment and Jobs Act was approved for competitive grants. You can thank your dedicated congressmen and women from PA, VA, and MD who worked for this.

These grants will go to grassroots efforts by communities for environmental restoration. Neighborhoods and faith-based groups are planting trees and altering surfaces to allow better drainage of storm water.

As you can see, the Eastern Hellbender is an indicator species for water quality. Activists from the Chesapeake Bay Foundation have studied these creatures and installed nesting boxes in Pennsylvania streams. They have also promoted legislation that will positively impact the hellbenders. Poaching them is illegal; wealthy Asian and European collectors prize them. Consider yourself honored if you actually see one but leave him alone!

Treat yourself to this ten minutes of these endangered "mud devils":

https://vimeo.com/108512185?login=true

DID YOU KNOW the Hellbender can grow up to 29 inches and live up to 30 years?

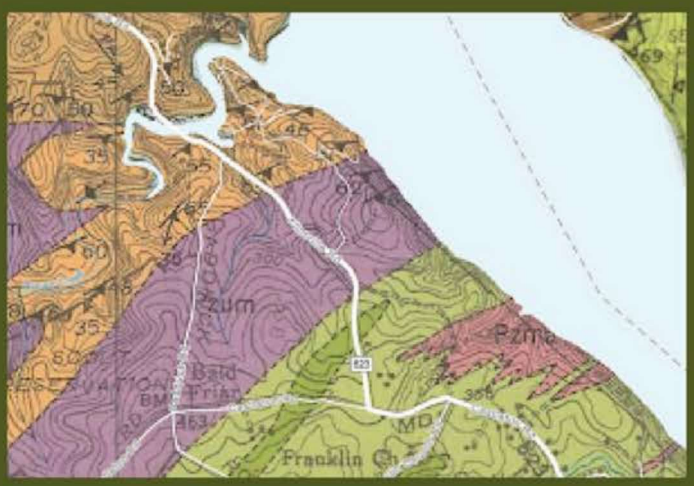
Tripping Over The Rocks!

Tripping Over The Rocks Along the Mason-Dixon Trail:
Watch out for the serpent rocks!

Article by Peter P. McLaughlin, Jr., P.G.

“Serpent rocks” on the Mason-Dixon Trail? Are these rocks hiding dens of wriggling, vicious snakes? No worries, it’s only that the rocks look a bit like snake skin. Serpentinites! According to Wikipedia, serpentinites are rocks containing abundant serpentine minerals that may have an olive green color and smooth or scaly appearance like snake skin. So, they are called “serpentine,” taking their name from the Latin word serpentinus. Serpentinites are a very interesting rock type. Historically, they have been a source of valuable minerals. They are an attractive building stone. And, the chemistry of the rocks make for the formation of unique landscapes where they occur.

Serpentine is unusually common in northeast Maryland and nearby areas of Pennsylvania. They occur in a large area in Soldiers Delight Natural Area in Baltimore County, at the Nottingham Park/State-Line Serpentine Barren in Chester and Cecil Counties, in the Rock Springs Nature Preserve in Lancaster County, and along the Mason-Dixon Trail on the west bank of the Susquehanna River south of Broad Creek. If you have hiked the area, you might recall having to labor up a gnarly, steep, cambered, and sometimes slick-rock section of trail between the rolling powerline access road and the Broad Creek Marina. The high point, which stands more than 300 ft above the river, is called Bald Hill and is underlain by serpentinite. On the geologic map below, the serpentinite is shown as the lavender area labeled with code Pzum (from the Geologic Map of Harford County, Maryland Geological Survey, 1968). To the south, shaded in green, the rocks are a bit different; that area is underlain by dark, metamorphosed igneous rocks called gabbro. To the north, the tan area closer to Broad Creek is underlain by another rock type: banded, mica-bearing metamorphic rocks called gneiss. [explanation: gabbro is a dark, granite-like rock formed from the cooling of deeply buried magma; a metamorphosed or metamorphic rock is a rock altered from its original igneous, sedimentary, or earlier metamorphic form by high heat and/or high pressure and/or hot mineral-rich fluids]



Watch Out For Serpent Rocks

Serpent Rocks

According to a report by the U.S. Geological Survey (Pearre and Heyl, 1960, Bulletin 1082K), the serpentine in the Bald Hill area is (in geology speak) “massive and compact and ranges from pale green mottled with black, through medium green, to nearly black... The rocks are thoroughly serpentinized, but... originally they may have been dunitic in composition.” [explanation: dunite is a rock rich in the green mineral olivine; serpentinization is alteration of an “ultramafic” rock like dunite by the addition of water into the crystal structure of the minerals within the rock by metamorphic processes that involve hot fluids and a reduction in heat and pressure]

How did these rocks form, exactly? According to the Pennsylvania Geological Survey (Trail of Geology pamphlet 16–100.0) and Maryland Geological Survey (2020 field trip guide) their geologic history is complex. The original rocks had olivine-rich (dunitic) layers that formed deep beneath the volcanoes along ancient island arcs around 490 million years ago during the early stages of the formation of the Appalachian Mountains. During later stages of the building of the Appalachians, beginning in the “Acadian” phase around 374 million years ago, the rocks were metamorphosed by changes in heat and pressure by and exposure to hot fluids, altering the olivine-rich rocks to serpentinite. Later stages of uplift were followed by erosion of the Appalachians down to their roots, exposing the rocks we see at the surface today.

A U.S. Geological Survey review indicates that serpentinites provided valuable mineral resources in northeast Maryland and southeast Pennsylvania in the 1800s. Chromite was extensively mined and used for pigments and the production of steel, much of it from Soldiers Delight and State-Line Serpentines. Magnesite was also locally mined for the manufacture of epsom salt. Small magnetite deposits have been found in places around Broad Creek and were mined for iron. In addition, serpentine makes a handsome greenish building stone. According to the U.S. Geological Survey, the Grace Episcopal Church in nearby Darlington was built using serpentine stone quarried along Broad Creek about a mile west of the Scout Camp section of the trail.

(Grace Memorial Episcopal Church and its serpentine building stone, Darlington, MD
(photo credit: Wikipedia)

Serpent Rocks

The serpentinite substrate results in a thin, poor-quality soil with distinct chemical and physical properties. These “serpentine soils” contain compounds that are toxic to many types of plants such as chromium and nickel and are usually poor in calcium and other important plant nutrients. Areas of bare rock are also common. As a result, these areas commonly have unique assemblages of plants and of interest for environmental preservation. A report on the habitat of the Bald Hill area done for the Harford County Department of Planning and Zoning (Farr, 1988) reported a number of plant species that are uncommon and adapted to life in soils formed on serpentinites: arrow-leaved violet (Viola sagittata), common cinquefoil (Potentilla canadensis), bluets (Houstonia caerulea), mountain mint (Pycnanthemum flexuosum), little bluestem (Schizachyrium scoparium), rock cress (Arabis lyrata), and early saxifrage (Saxifraga virginiensis). Other surveys have found plants that are common on serpentine soils including oaks (Quercus marilandica, Quercus stellata) that typically have somewhat stunted growth and other plants (such as maidenhair fern Adiantum pedatum and milkweeds Asclepias veridiflora and Asclepias verticillata).

So, the next time you find yourself panting as you make the climb up to Bald Hill, take a break and check out the rocks at your feet. Those scaly-looking slick rocks at your feet are the remains of the roots of an ancient chain of volcanoes that have survived nearly 500 million years of earth processes. They are yet another natural wonder to appreciate as you trip over the rocks of the Mason-Dixon Trail.

Sources

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