



March 2024 issue

The next regular meeting will be March 20 at 6:30 p.m. at the VFW Post at 3400 Veterans Drive in Traverse City.

For the short program, Jim Elder will be giving an update on the committee looking at possible changes to our workroom location. The main program is Rock Trivia night.

The next regular meeting of the Pebble Pups will be on March 20 at 5:30 pm at the VFW. This is what is planned for the meeting.

Igneous Rocks, the Starting Point? We'll talk about igneous rocks, both the ones that come out of volcanoes as well as those that harden underground. We'll talk about volcanoes in Colorado plus famous volcanoes of history such as Vesuvius, Mt. St. Helens or the famous volcanoes of Hawaii. Mineral of the month: quartz

February Highlights

65 Members and visitors attended the meeting. During the short program, Brody Dymond, one of our Pebble Pups gave an excellent presentation on "Stylemys: A Fossil Tortoise from the White River Badlands".

The main program was Steven Veatch speaking on "Garden Park, Colorado Area Fossil Discoveries".

A motion was passed to provide \$100.00 to purchase clearance warm weather clothing for to support the club's outreach to help local schools, food banks, and other organizations.

The Rockhound of the Month for February was Jim Elder.

Facebook Page

Visit the club's Facebook page at this web address. There is also a link on our club website. <https://www.facebook.com/TCRockhounds>

Food Pantry Donations

Lorna Coe and Jim and De Elder would like to thank all that have brought items for the food pantry and clothing donations. Due to the success of the program, they are going to continue this at every meeting. Non-perishable

food items, personal hygiene products, new children's underwear, cold weather new, or clean, lightly used clothing items and tote bags are welcomed. An additional item of need is toothbrushes and toothpaste. As an added incentive, every time you donate items, put your name in the hat for a drawing, which will take place at our Christmas dinner.

More Rock & Mineral Specimens Needs for the Pups

The Pebble Pups need specimens for study and for Steven Veatch to give out at the Pup's meetings and for public outreach events that are staged about 4 times a year. People can contact Steven at steven.veatch@gmail.com or bring them to the meetings for him.

Upcoming Field Trip Planning

We do have a new Field Trip Coordinator. Her name is Sarah Steel.

Steven Veatch is working on a possible field trip to the Cranbrook Institute of Science in Bloomfield Hills, MI.

Membership Information

From Cathy Kowaleski, Membership Chair:

You must be a paid member to continue to receive club benefits (participation in classes, outings and receiving club newsletters.) Dues are \$15 Adult or \$20 for a couple, Juniors (8-17) \$5, and those under 8 are free with an adult membership. Make checks out to GTARMC.

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Membership dues may be mailed to:

Cathy Kowaleski, Membership Chair
801 S. Garfield Avenue #241
Traverse City, MI 49686

Name badges are an additional \$8 per badge. Thank you!

Club Email Addresses

gtarmc@tcrockhounds.com (main club email address)

If you have any photos that you would like to share of club events or members, those can be sent to:

photos@tcrockhounds.com or noonanjohntc@gmail.com

To view club photos on Flickr, enter the following web address:

[GT Rock & Mineral | Flickr](#)

For scheduling requests for classes or workroom time, please send email request to:

scheduling@tcrockhounds.com

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Field Trip Coordinator

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Club Show Chair

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The above contact list will be included in each newsletter so that you know who to contact for various items.

GTARMC Pebble Pup Info

GEOLOGY HIKE SERIES: WATER REFLECTIONS

Saturday, April 13, 2024

10:00 AM - 12:00 PM

Grand Traverse Conservation District

Description: Join us for the first hike in our Family & Children Geology Hike Series featuring the Grand Traverse Area Rock and Mineral Club Pebble Pups - Water Reflections: Discovering Secrets Along the River!

This captivating and immersive walk is designed to explore the enchanting world hidden within the river's gentle currents. Participants embark on a mesmerizing journey to uncover the secrets of water. Through a combination of interactive experiences and expert-led discussions, the program invites you to connect with the natural beauty of rivers, fostering an appreciation for the delicate ecosystems and the intriguing mysteries that lie beneath. Whether through the lens of art, science, or mindfulness, "Water Reflections" offers a unique and enriching perspective on the dynamic and transformative power of rivers, encouraging a deeper understanding of our interconnected relationship with these vital waterways.

This program is geared towards an audience of children and families.

When: Saturday, April 13th from 10:00am - 12:00pm

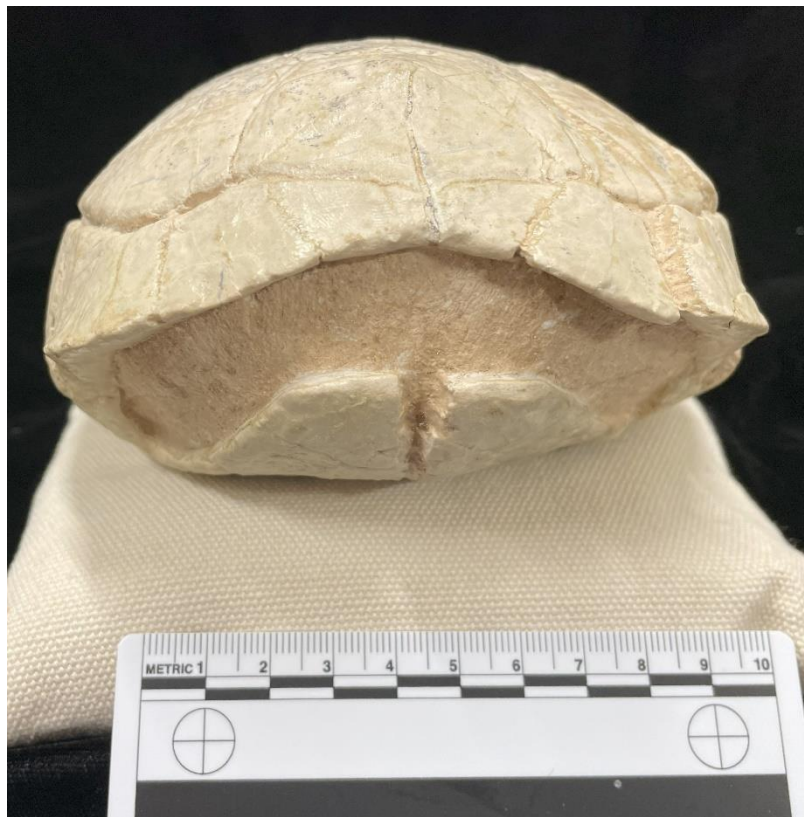
Where: Meet at the Oleson Pavilion next to the Boardman River Nature Center 1450 Cass Rd., Traverse City, MI 49685.

Registration: Free. You must register through the conservation district via this link: <https://natureiscalling.org/events/geology-hike-series-water-reflections>

Styemys: A Fossil Tortoise from the White River Badlands

by Broden William Dymond

Styemys was a tortoise that lived about 33 million years ago, during the Oligocene. *Styemys* lived on land, rather than land and water. Fossils of *Styemys* have been found in rocks in North Dakota, nearby states, Asia, and Europe. *Styemys* was first described by Joseph Leidy, a fossil expert, in 1851. He was one of the important scientists in America at the time. This tortoise fossil was found in the Brule rock formation in the White River Badlands of South Dakota.



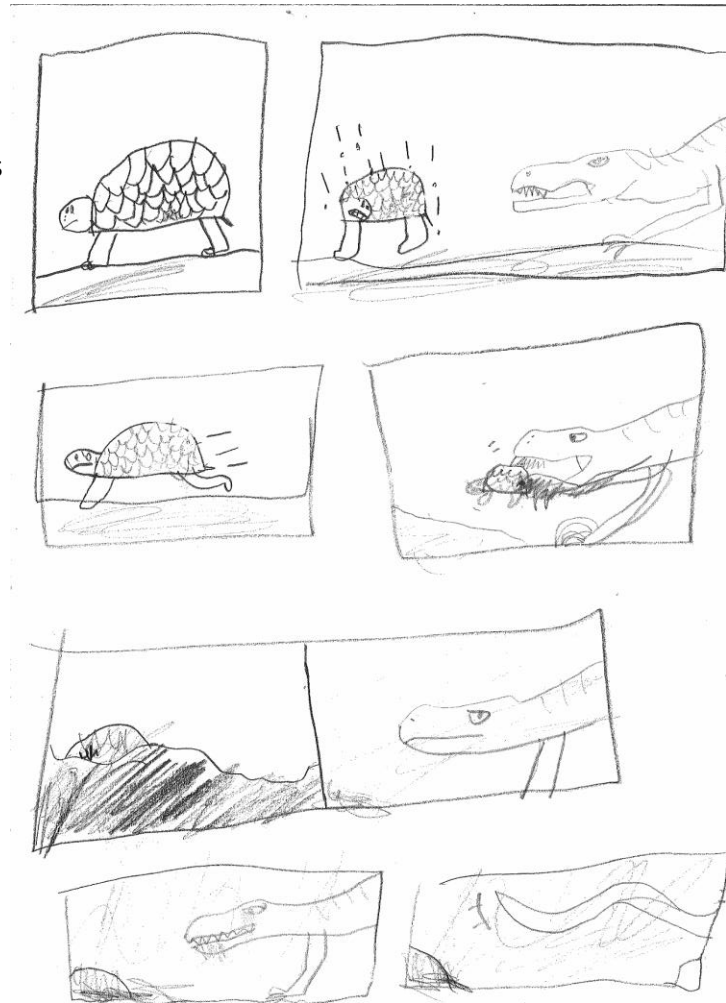
Fossilized carapace of *Styemys nebrascensis*. Found in the White River area of North Dakota. Photo by B. Dymond. From the collection of S. W. Veatch.

During this Oligocene, North Dakota was a treeless plain covered in shrubs, plants, and some types of grass. It rained sometimes and the temperature was mild.

Styemys had a domed **carapace** (upper shell) and a **plastron** (lower shell) for protection. Their limbs were made for living on land. *Styemys* was similar to Gopher tortoises that are living today and they probably ate plants. The legs of *Styemys* were different from Gopher tortoises so they probably did not dig tunnels. Turtles and tortoises at this stage in evolution survived well and have not changed much since that time.

The fossil of this *Styemys* is slightly crushed with scratch marks near the tail and seems to have the mark from a tooth. Here is what might have happened to this *Styemys*:

“One day, the tortoise was just walking along. He ate some grass just a little bit ago. He heard something behind him. It was a prehistoric crocodile! When the tortoise saw the crocodile, it started to run. The crocodile was faster, and it caught up to the tortoise. It bit and scratched the tortoise, but the tortoise fell into the mud. It was stuck so the predator could not get to it. The crocodile wanted the tortoise so bad but he noticed a sand storm coming and ran for safety. The end.” It was from this comic:



About the author: Broden Dymond is an active Pebble Pup in the Grand Traverse Area Rock and Mineral Club. He is 10 years old and is in the 4th grade.

And last but not least, a poem by Steven Veatch

Garden Park Bone Beds

Near Cañon City, Colorado



By Steven Wade Veatch

The sun burns in a blue, cloudless sky over bone beds.
Everything is quiet in the heat of Garden Park. A coyote darts by,
following a scent like a moth to light.

Dinosaurs once roamed here in ancient marshlands.
In Late Jurassic times, a long-necked *Camarasaurus* and *Diplodocus*
reached up high in trees for sweet Mesozoic greenery to eat.
A *Stegosaurus* tried to move, mired in mud;
a *Ceratosaurus* looked at her nested eggs and sniffed the humid air.

Fossil hunters and scientists have dug here since 1877,
among the hills and cliffs along the Fourmile Creek Canyon.
Cope and Marsh¹ staged part of their Bone Wars here,
where their rivalry played out at a heated pace.

Today, picks strike rock layers and shovels dig down through deep time
into thick Morrison mudstone to where buried bones of dinosaurs rested for millions of years.
Brushes clean, sifters shake, measurements and photos taken, and flies swatted—

a tooth of the ferocious *Allosaurus* pops up, then fossils of turtles and crocodiles.
More bones, and then a flurry of discovery, wonder, and excitement.

While standing on the brink of time, I peer into the past and learn
some secrets of Earth's ancient times.

As the sun dips down, the day's digging ends.

While listening to the twilight, I let the milkweed fall
from my hand to follow the breeze.

Watching the evening end and the wind tease the tips of grass,

I think about these fossils and wonder what creatures,

in a distant future, will look at our fossil remains.

What will they make of us?

¹Edward Drinker Cope and Othniel Charles Marsh, were preeminent paleontologists who
battled each other for dominance in the world of 19th century paleontology.