The Rostrum

The Newsletter of the Maryland Geological Society
Baltimore, Maryland
Established 1991

Volume 15, Number 3 *May 2006*

President's Message

My message for this issue of *The Rostrum* is simple but nevertheless important. This year's annual picnic is scheduled for June 17, 2006, at Flag Pond Nature Park. The success and continuance of this event depends on you. I want to extend an invitation to all members of the Maryland Geological Society (MGS) and encourage each and everyone to attend. Please be sure to read this issue of *The Rostrum* and the MGS Webpage (http://www.ecphora.net/mgs/) for details and contact Mark Bennett for reservations or to volunteer your services. I am serious about this! I cannot possibly eat all that German potato salad by myself. You can make a real difference in my serum cholesterol level. Is it going to be less than 200 or more than 240 on June 18, 2006? My life is in your hands.

I also want to strongly encourage the members of the Maryland Geological Society to "spread the word" about MGS. Whether an individual encountered while collecting fossils, a child, parent, or teacher during class room presentations, or a stranger at a museum, proselytize! This is the means by which an organization grows and remains vibrant. Tell anyone interested about the club, the Webpage, the meeting time, dates, and location. Let the word go forth.

Good luck collecting! **Brady E. Hamilton**

Dates to Remember

Sunday, May 21st - next MGS Meeting
Meeting Time & Location: 12 Noon to 4 PM
South Bowie Community Center, 1717 Pittsfield Lane, Bowie, MD 20716

Mineral of the Meeting: Dioptase. Bring a few choice specimens to the meeting.

Saturday, June 17th – 15th Annual MGS Picnic (details inside)

Please submit material for the next issue of The Rostrum by June 10th

"Chance favors the prepared mind"..... Louis Pasteur

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Maryland Geological Society

Founded in 1991, MGS is comprised of both amateur and professional mineral and fossil collectors. MGS emphasizes collecting, identification, study and display aspects of the geological sciences. MGS is a nonprofit organization affiliated with the American Federation of Mineralogical Societies (AFMS) and the Eastern Federation of Mineralogical and Lapidary Societies (EFMLS).

Dues

Dues are $15.00 per individual adult member. Applications for membership may be obtained from the MGS website or by contacting Dick Grier, Sr., Membership Chairman, 8052 Kavanagh Road, Baltimore, MD 21222, (410) 285-5554. Dues are payable on January 1st of each year.

Meetings

Meetings are held bimonthly, beginning in January at the South Bowie Community Center, located at 1717 Pittsfield Lane, Bowie, MD. The doors open at 12 noon and the meetings are completed by 4:00 PM. Club meetings will be held as scheduled so long as the South Bowie Community Center is open. Call 301-249-1622 after 11:00 AM to find out if the Center is open.

Meeting Dates & Programs for 2006

January 15: General meeting – no program
March 19: Four Stories by Eric Seifter
May 21: Joint MGS & AFF Meeting. Program TBA
July 16: Program TBA
Sept 17: Annual Auction. Program TBA
Nov 19: Elections & Pizza Party.

Correspondence

Direct mail to Gary & Cindy Lohman, Secretary, 21995 Barkentine Court, Great Mills, MD 20634. Phone: (301) 862-1957.

The Rostrum

Published bimonthly beginning in January. Submit material for publication electronically to john.richard.smith@us.army.mil or by mail to Rick Smith, 1253 Brewster St., Baltimore, MD 21227.

Website

(**http://ecphora.net/mgs/**)
Material for the website should be sent to Daryl Serafin at dkjjserafin@verizon.net.

Donations & Thanks

submitted by Dick Grier, Sr., Ways & Means Chairman

MGS would like to thank the following members for their donations to the silent auctions and raffles:

Tom Piscitelli: 14 agate geodes with quartz crystals from Dugway, UT some of which fluoresce SW bright green.

Flo Strean: Additional boxes

Mark Bennett: A Riker Mount with assorted Paleocene teeth (60mya), 4 teeth from Khouribga, Morocco; 2 porpoise periotics (earbones) which happen to be a left and right ear of the same specimen from Lee Creek, NC.; a small bag of teeth and things from Lee Creek, NC; a *Squalodon* incisor; and a *Pterorhytis conradi* also from Lee Creek NC.

Mineral of the Meeting: Dioptase

submitted by Bob Farrar

For the May meeting of MGS, the mineral theme will be one of my favorite minerals, dioptase. Dioptase is a great favorite with many collectors, owing to its beautiful green color and interesting crystals. It is not to be confused with diopside, which can also be green, but which is totally unrelated to dioptase. Well formed crystals of dioptase are not common, but there are enough of them on the market that most serious collectors will have at least one.

Dioptase consists of hydrous copper silicate, H_2CuSiO_4. Its color typically ranges from emerald green to slightly bluish green. With a hardness of 5, it is harder than most other green copper minerals. Dioptase crystalizes in the hexagonal system, and typically has rhombohedral terminations. Crystals are usually short and blocky, rarely elongate prismatic. Its hardness, color, and crystal form generally distinguish dioptase from other minerals.

Dioptase is one of many minerals associated with the oxidized zone of copper deposits. Probably the most outstanding locality is Tsumeb, Namibia. Many well formed dioptase crystals, up to 2 inches long, were mined at Tsumeb. Localities in the Congo also produce sizable crystals. The type locality, Altyn Tyube, Kazakhstan, is the source of many of the specimens on the market today. Less familiar, though still beautiful, are specimens from Dumesnil, Cordoba, Argentina. Recently, a find at Ica, Peru has turned up nice specimens, with numerous crystals perhaps a quarter inch long. The US, unfortunately does not have any really outstanding localities for dioptase. Druzes of tiny crystals are found at some of the copper localities of the Southwest, such as the Harquahala Mtns. of Arizona. Dioptase is probably more common than is realized in the Southwest, as it can occur as tiny crystals mixed with other green copper minerals. Good specimens of dioptase with crystals of any size are rare and desirable to collectors, and as such, often fetch high prices. However, there are enough more modest specimens on the market that most collectors can afford to add one of these beauties to their collection without having to mortgage the farm.

The Calvert Marine Museum

submitted by Daryl Serafin

Situated along the Chesapeake Bay, all the way down route #4 into Solomons, MD is the Calvert Marine Museum (CMM). I first visited the CMM about three years ago with my wife and two sons. We had a great time seeing all of the many things the museum had to offer. Since it had been quite a while since our last visit, we decided one rainy Saturday in January last month, to make the drive down and see what we've been missing out on. The drive down route #4 isn't too bad, and if you have children, there are lots of places to stop for food etc. After arriving at the museum, my wife and sons made a bee-line for the gift shop which is immediately on the left as you walk in. After about an hour, and $50 charged, I coaxed them out by promising we would stop back in on our way out. The gift shop is filled with lots of goodies

such as books on the history of the Chesapeake Bay, fossil collecting books, cookbooks, crafts, nautical stuff, toys and stuffed animals for the kids, and a whole bunch of other stuff.

Once you make it out of the gift shop and enter the museum part, you immediately see the entrance into the "Treasure from the Cliffs" area. This area has all sorts of fossils ranging from shark teeth, a whale skull, and a cabinet full of drawers of fossils including many types of shells found along Calvert Cliffs. I spent most of my time in this area taking pictures of every fossil I saw. There's a real interesting "picture-story" along one wall which shows how a whale skull was discovered after a hurricane a few years ago. It goes on to tell about how folks from the museum were able to remove it and eventually prep it for display at the museum. Along with the skull you also see a couple of really nice shark teeth that were found near the skull while quarrying it. One was a tooth from the sixgill shark, *Hexanchus gigas*. Just before you leave the fossil area you come upon a reconstructed jaw and skeleton of the extinct giant white shark, Carcharocles Megalodon. The jaw is over 5ft in diameter and contains tons of teeth. My kids loved looking at the teeth.

As you leave the fossil area you come to an area which resembles a mini-aquarium with a half-dozen large glass enclosures with different fish which I believe are indigenous to the bay. From this area you proceed into the museum where you can view all sorts of historical items representing the maritime history of the Patuxent tidal waters and adjacentChesapeake Bay. We spent a lot of time looking at
recovered relics from shipwrecks and stopped to listen to an account on how the British sailed up the Patuxent on their way to our nation's capitol, Washington, DC.

Next, we stepped outside to see the river otter swimming in his tank. I am not sure of his name, but he was amazing to watch as he swam around. The next stop we made was back inside the museum to the new Stingray and Skate tank. The tank looks like a small pool, about 3ft tall and 12 ft in diameter. Inside the tank are a few small stingrays and skates. While the museum guide working this exhibit was explaining the various details of these rays and skates, I kept wondering how I could reach down and grab the barbed tail off of one of the rays and add it to my collection of fossil stingray barbs.
Our last stop, as promised, was back in the gift shop where the family discovered a few more items needed to be purchased, and I even bought a really cool poster showing the various fossil Miocene shark teeth that are found along Calvert Cliffs. All in all we spent about three hours, but I could have easily gone back to the fossil exhibits to get one more look at all of the various fossils in the museum collection.

After our visit, I decided to visit the museum website (www.calvertmarinemuseum.com). I found an amazing amount of information about the museum, and even discovered some links to virtual on-line tours. I also used the opportunity to join the CMM Fossil Club, which is only $10 (after you join the museum). Belonging to more than one fossil club has its benefits, such as meeting other fossil collectors, and going on different field trips. Plus, I've also been able to email Dr. Stephen Godfrey, curator of Paleontology at the museum. He has been helpful in identifying some of the fossils that I've collected along Calvert Cliffs. You can find his email address on the museum website. I highly recommend a visit to the museum website, as well as an in person visit to the museum. It is well worth the drive and time.

Calvert Marine Museum
P.O. Box 97,
Solomons, MD 20688
(410) 326-2042

THE MARYLAND GEOLOGICAL SOCIETY

Cordially invites MGS and AFF members to attend

The 15th Annual Picnic/Swap-Sell

Saturday June 17, 2006

9:00 AM until 5:00 PM
at
Flag Ponds Nature Center, Calvert Co., Maryland

Bring the family. Also bring a picnic lunch and soft drinks, and join the fun!
Picnic tables and grills are available.
The MGS will provide hamburgers, hotdogs, rolls, soft drinks, salads, etc.

Admission: There will be no cost to MGS and AFF members, family and guests.
The MGS will pick up the tab!

Call Mark Bennett by Friday, June 16th at (443) 370-1325 to let him know who will be attending, what dish (if any) you will be bringing, or if you would like to volunteer in support of our picnic.

Swim, hike, fish and hunt fossils on the Chesapeake Bay!

Directions: From the **Capital Beltway**, take the Rte 50 exit to Upper Marlboro. From the **Baltimore Beltway**, take Rte 3/301 south to Upper Marlboro. **From Upper Marlboro**, take Rte 4 South for ~28 miles to the sign for Flag Ponds Nature Center. From **Annapolis**, take Rte 2 south to Rte 4. Just 10 miles south of Prince Frederick, look for the sign & turn left into the Flag Ponds Nature Park. **If you get to the Calvert Cliffs Nuclear Power Station, you've gone too far!**

For more information about Flag Ponds Nature Center call (410) 586-1477 or 535-5327 or check the following websites: www.calvert-county.com/flagpond.htm; www.dnr.state.md.us/baylinks/14.html or www.sherpaguides.com/chesapeake_bay/southern_maryland/calvert_county.html

MGS Field Trips

submitted by Mark Bennett, Field Trip Chairman

The Maryland Geological Society is an advocate of responsible collecting. The society has permission to collect in all of the sites listed below that require such permission. Some sites allow only organizations to attend, while at others individuals are welcome to go on their own. Most trips are weather dependent and some require at least an average level of physical fitness. Check each individual listing.

Please check the MGS web site at http://ecphora.net/mgs/ to get the latest field trip updates

Dave Andersen is organizing a trip to Red Hill on 03 June 2006. The site contains Devonian marine and terrestrial fossils (fish, amphibian and plant). Collection is by hammer and chisel almost exclusively. Contact Dave at 301-869-2662 or davander@erols.com for details and sign up.

Finds by MGS Members

submitted by Phil Schmitz, Contributing Editor

This section is open to all MGS members. If you would like the fossils that you have found listed in The Rostrum, please e-mail Paschmitz@hotmail.com or send a postcard briefly identifying the specimen(s) to: **Phil Schmitz**, 2708 Gibbons Avenue, Baltimore, MD 21214-2128.

The following are finds by MGS members that were on display at the March 19, 2006 meeting.

Jeff Sparks found in the Calvert Formation, a 5 3/8" *C megalodon* tooth and a 2 ¼" crocodile tooth on 3/13/06.

Chuck Ball found at Lee Creek, a fully rooted seal molar from the early Pliocene (photo on www.elasmo.com) on the weekend of 3/4-5/06.

Marshall Drecchio found in Prince George's County a swallowed *C. megalodon* tooth, a 3 ¾" *C. megalodon tooth*, and a porpoise (lumbar) vertebrae with the processes. He also found a Revolutionary War cannon ball on 3/16/06.

Mike Folmer found at Lee Creek, a nice 1 ½" ray scute on the weekend of 3/4-5/06.

John Adams found at Lee Creek a 1 ¼" sea urchin and a 2 ½" mako tooth on 3/5/06. Also in March in Calvert County, a squalodon, upper and lower *Notorhynchus* teeth, two small *C. megalodon* teeth and five associated shark vertebrae.

Daryl Serafin found at Lee Creek, a 5" whale tooth and several two inch sperm whale teeth on March 5, 2006. At Brownies Beach, he found two giant *Hadrodelphis calvertensis* (giant dolphin) teeth.

Dave Siegert purchased at a yard sale in New Bern, NC, a 1 ¾" *Paratodus* tooth, a poison sac from a ray, four nice scutes, two *Hadrodelphis calvertensis* teeth, two squalodon teeth, two seal teeth, a turtle leg bone, and a beluga whale ear bone on 3/4/06. All fossils were from Lee Creek.

Charlie Shyab brought amethyst from Uruguay, kyanite from Peru and sodalite from an unknown location.

Brady Hamilton found at Liverpool Pt. a fused crocodile upper and lower crocodile jaw and a basioccipital bone in late February, 2006.

Flo Strean found at Western Shores four internal clam molds on 3/16/06, and a piece of coral growing completely over a pectin shell. Also a porpoise rib bone, a very large barnacle, and a sand dollar, all found in Feb 06.

Eric Woody found at Liverpool Pt. three crocodile teeth (1" to 1 ½"), a crocodile vertebrae and a 1 ¾" *Otodus* tooth in Feb 2006. From Randle Cliff, a porpoise ear bone, a sperm whale tooth, a lower lateral 1 ¼" *C. megalodon* tooth, and a lower *Notorhynchus* tooth in March 2006.

Phil Schmitz brought some dinosaur teeth, including *Thescelosaurs neglectus, Sauronitholestes langstoni, Deltadromeus agilis*, and *Edmontonia rugosidens* among others. He also brought some meteorites, including a 3 ½ pound Gibeon (iron), and a two pound NWA 869 (stone).

Fossils
by Rick Smith

A tooth
So sharp
In sand
From shark

A bone
So dark
In shale
From fish

A shell
So frail
In time
From snail

To search
With eyes
A tooth
So small

To dig
With hands
A bone
So old

To hold
With care
A shell
So rare

A tooth
So round
Of fish
In brown

A bone
So bare
Of whale
In black

A shell
So light
Of whelk
In white

In streams
I screen
For teeth
So smooth

In fields
I search
For bones
So hard

In cliffs
I mine
For shells
So fine

These teeth
Of worlds
From rock
Now grave

These bones
Of seas
From life
Now ghost

These shells
So vast
From time
Now past

Minutes of the March 19th Meeting
submitted by Gary Lohman, Secretary

President Brady Hamilton called the March MGS meeting to order at 1250. New member Matt Westbrook introduced himself and was welcomed into the club. Returning member Marshall Drecchio announced to the club that he "…was not dead," but rather back after a 6-month hiatus.

For the VP report, Eric announced that he would be giving this month's presentation, which would include a contest and prize – more later. He was also trying to organize the joint AFF meeting and presentation.

The minutes from the January meeting were read and accepted with one change regarding the number of paid members and total membership.

The treasurer's report concluded that all bills were paid and that the club was merely collecting dues at this point. To date, there is $3,072.26 in savings and $1,474.04 in checking for a total of $4,546.30.

There are currently 149 members, including 43 new/re-newal memberships since the last meeting. Dick Grier Sr. announced that there have been some removals fro non-payment with more to come very shortly. President Hamilton asked how this compares to the same period last year. The net result of this comparison is a drop of about 27 members, with some prior members citing jobs and other commitments as a reason fro dropping out.

Rick Smith, newsletter editor, announced that here had been a couple of delivery issues with the newsletter that had since been resolved. If anyone needs copies of the newsletter, he has some available. Deadline for the next newsletter submissions is 15 April. Rick again pointed out the advantages of receiving the electronic version of the newsletter, which includes a substantial financial savings to the club. Dick Grier Sr. expressed a desire to get the newsletter out earlier. Specifically, with the meetings occurring between the 15th and the 20th of the month, he expressed a desire to get the Rostrum out by the first of the month. Rick pointed out that to meet this, the submission deadline would have to be pushed up by about one week – or about the 10th of the previous month as opposed to the usual 15th. Rick agreed to consider this for future releases. Rick introduced the two new sections that were added – odds and ends section and a Federation news section. The odds and ends section is intended for short articles with the hope of encouraging more short-contributions from members who may not be as inclined to write full articles. These new sections are experimental and if they are not used by the membership, then they can be removed in the future.

The web page has been updated with a gatherings page and new pictures. Check it out! A previous article by Dick Grier Jr. describing the history of the club has also been posted. The gallery has been split in 2005/2006 sections to reduce the load volume for those with slower internet connections.

As for field trips, Mark Bennett reported that the New York trip is on hold. The Red Hill trip is scheduled for 3 June. If interested in this trip, see Eric Seifter. Mark also needs someone to lead the Liverpool Point trip, which is the 2nd Sunday in May. AFF has trips scheduled for Blue Circle and Carmel Church in Virginia. If interested, contact Mark. The Virginia Museum has a trip scheduled to the Solite Quarry on the Virginia and North Carolina border. This trip costs $25 and the site is known for Jurassic insects. Again, if interested, contact Mark Bennett. Dick Grier Sr. reported that there is no Lee Creek trip this Spring. Dick explained that no reminders for the call-in date were sent this year combined with a change in the date which resulted in MGS missing the call-in time for the Spring trips.

Dick Grier Sr. reminded everyone that the club donated $150 dollars for memorial benches to the museum in Aurora but has yet to receive any correspondence from the museum as follow-up or even appreciation. If anyone has been there or is planning on visiting the museum, please see if the benches are there and report back to the club.

Mark Bennett is willing to give the July presentation on his trip to Tuscon and the Petrified Forest. Mark also reported that reservations have been made for the MGS picnic on 17 June.

Under new business, Brady Hamilton suggested that the club have flyers or cards to give out to new people that we encounter while collecting. Gary Lohman volunteered to share the tri-fold that he created to promote the club as part of the MGS exhibit at the St. Mary's and Calvert County fairs two years ago. Other suggestions for promoting the club were also presented, such as special awards at the county science fair and library displays. The possibility for a display at Johns Hopkins was also suggested and will be looked into.

The mineral for the month – epidote – was described The business portion of the meetings was adjourned at 1336. Following a break and doorprizes, Eric presented a talk that among other things answered the question: which of the four plastic mammoth models was most accurate based on our current state of Pleistocene knowledge. This was part of a contest that was won by an 8-year old girl, Sarah. Sarah also cleaned up with the doorprizes this month – congratulations Sarah!

March Program

submitted by Phil Schmitz, Contributing Editor

Eric Seifter gave a talk on The Last Dinosaurs of Egypt and other topics. A short synopsis of his very educational talk follows on the next page.

Dr. Stromer excavated many dinosaurs in Egypt. He uncovered three large species, *Spinosaurus, Carcharodontosaurs* and *Bahariasaurus*, and a small dinosaur. All of the fossils were destroyed during World War II. However, Dr. Stromer had made extensive illustrations of the dinosaurs. Recent excavations in Egypt (in 1999) have turned up a giant sauropod (named *Paralititan stromeri* after Dr. Stromer) and some small material, teeth, bones, etc. on the other dinosaurs he found. Eric brought in a large *Spinosaurus* vertebrae, a tooth, as well as a very detailed model of a skeleton of a *Spinosaurus*.

Eric also brought in a slab of rock (from the late Triassic of New Jersey) containing the footprints of *Batrachapus* (a reptile), but he didn't bring it in to talk about the footprints. He brought it in to talk about the red slab of rock the footprints were on, and the Permian extinction. For some unknown reason, at the end of the Permian, huge quantities of methane gas was released from the ocean beds which raised the level of carbon dioxide in the atmosphere, driving the oxygen level down to 9 percent. The oxygen was contained in the red Permian rock. The theory has it that many of the life forms at that time were not able to breathe with so little oxygen. This decrease in oxygen levels may explain the Permian extinction. Our present day atmosphere is about 21 percent oxygen and 78 percent nitrogen and a little carbon dioxide.

From My Backyard to Mars: A Rock Story

submitted by Caprice Alanna Roché

One day not long ago, I heard that scientists were looking for kids like me to help them learn about Mars. I was really interested! Scientists from the Rock Around the World project were asking kids from all over the world to send in rocks that they had collected from their own backyards. The scientists were going to use a special tool called a Thermal Emission Spectrometer to study the rocks. NASA's rovers Spirit and Opportunity were using the very same tool to study the rocks they were finding on Mars. The scientists planned to take the "squiggly line" graphs made by the Thermal Emission Spectrometers on the rovers, and compare them to the graphs made from the rocks sent in by me and the other kids around the world. The most amazing thing I could think of was…could they match?

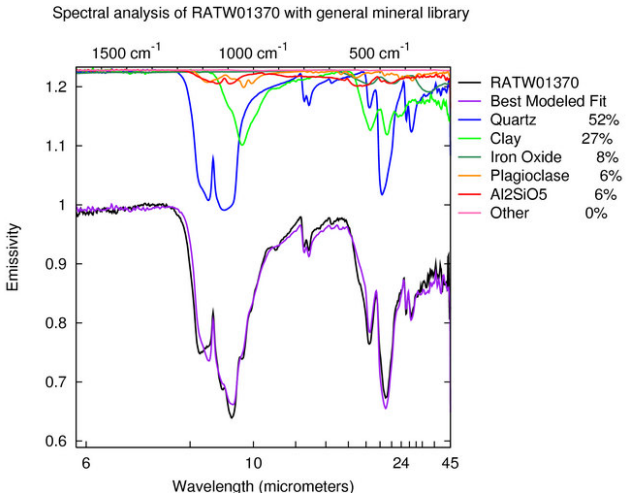
So, my Dad and I went out into the backyard and we looked for a rock that was native to our home in Freeland, Maryland. I didn't want to send in a rock that was brought to my yard by our homebuilders. I found a sparkly gray flat rock that was stuck in the roots of an old fallen tree. I sent my rock in to the Rock Around the World laboratory at Arizona State University. There, Dr. Phil Christensen and his helpers studied my rock along with over 7,000 rocks that other kids had sent in too.

A couple of months later, I heard back from Dr. Christensen about my rock. He sent me information about what my rock was made of, put a picture of my rock on the Rock Around the World website, and gave me a really cool certificate for sending in my rock. I think I'll keep checking in to see if any of the kid's results matched what Spirit and Opportunity discovered.

I learned some really fascinating things from participating in this project. For example, I learned that my rock was mostly made of quartz, clay, and iron oxide. I learned how scientists have to take time, be careful, and do their best to get the correct answers. Also, I found out that Spirit and Opportunity were only supposed to have lasted on Mars for about 90 days, but have been working up there for almost 800 days now!

If you want to learn more about the Rock Around the World project, you can go to http://ratw.la.asu.edu/ and check it out. You also can see a picture of my rock. Its number is RATW01370. I think this project was a great experience because it was fun, and I got to learn about rocks and Mars too. Actually, "fun" was the key word!

Caprice's rock (above) and its "squiggly line" **RATW** graph (right).



The Middle Devonian in Western New York

submitted by Gerald Elgert

The 18 Mile Creek and the adjacent cliffs on the shores of Lake Erie are probably the best known Devonian exposures in Western New York. This site is best reached by driving the Old Lake Shore Road to where it crosses the creek, dividing the towns of Evans to the southwest and Hamburg to the northeast. Please note that roadside parking is generally restricted in this area. At the time of the author's last visit two years ago there was parking available at a property under the bridge, on the west side of the creek. Kowinsky (2005) reports this land has now been sold to the state and the local fishermen and collectors are using it for parking. Samulski (2005) in a later communication also reports that a small park with public parking now exists at this location.

All the surrounding property is private land and the best action is to walk the creek. Grabau (1898, 1899) in a series of monographs described and divided the exposures of the creek gorge into 8 sections. Each of Grabau's sections represents differences in geological formation and dominant fauna components. This is Middle Devonian (~385 million years) strata of the Hamilton Group and is best exposed at the lower end of the creek, from its mouth at Lake Erie, about a half mile walk from the bridge and upstream along the creek. However, the length of the creek and adjacent shoreline exposures are so huge that they could not be explored in a single day. As a general rule, collecting from the stream bed, the talus slopes, and along the shoreline of Lake Erie is currently tolerated by the local land owners.

In Grabau's Section 8 the creek extends from the Old Lake Shore Road bridge to its mouth at Lake Erie. Collecting along this stretch is difficult, especially in times of high water. The same fossils - brachiopods, corals, cephalopods, cronies, gastropods, pelecypods, and trilobites are more easily collected by walking to the Lake Erie shoreline. In places along the beach and shoreline, trilobite bearing exposures are found on the surface although sometimes they are covered with sand.

Grabau's Section 7 reaches from the Old Lake Shore Road bridge to the NY Route 5 bridge, and is accessible by walking upstream. Crinoid fragments are to found here as well as large "heads" of the tabulate coral *Favosites*. Pyrite is a common component found in this section with its oxidation producing a rusty brown staining of the weathered surfaces in the limestone band. Wilson (2006) reports observing 56 different species in this section and in the nearby Lake Erie cliffs. This section is reported to be richly fossiliferous, but the fossils can be difficult to extract in the field. An abundance of the branching bryozoan, *Sulcoretipora incisurata* is reported in this section. A horizon closer to the base and marked by a layer of concretions contains the brachiopod *Athyris spiriferoides*, often with the two valves still articulated, and often bearing numerous species of epizoites (species that settle and develop on the surface of another animal or other solid object). Wilson (2006) reports that "at present this bed is largely covered with talus, but is occasionally accessible."

Continuing upstream from the Rt. 5 bridge we come to Grabau's Section 5. A noticeable feature of this section is where the Tichenor layer forms a sidewalk-like walkway at the base of the cliff and father along forms a small waterfall near the upper end of this section. Fossil bearing strata best exposed here contain innumerable individuals of the small brachiopod *Ambocoelia umbonata*, the brachiopods *Spinatrypa spinosa* and *Pseudoatrypa devoniana*, and the large rugose corals *Heliophyllum halli*, *Cystiphylloides americanum*, and *C. conifollis*. The brachiopods *Mucrospirifer consobrinus* and *Rhipidomella vanuxemi* are prominent here, as well as the smaller rugose corals *Stereolasma rectum* and *Amplexiphyllum hamiltoniae*. This layer also contains many individuals of the trilobite *Phacops rana*, generally as molts consisting of separated cephalon, thorax + pygidium, etc., although complete individuals are occasionally found (adapted from Wilson).

Finally, Grabau's Section 1 of 18 Mile Creek is the furthest upstream portion. Although it is approximately 2.2 km (as the missile flies) from the Lake Erie shore, it can be accessed from a "Public Fishing Rights Area" parking lot just off the South Creek Road/turn onto Versailles Road. A trail follows the west bank of the creek to a railroad bridge. A map of this access is provided at: www.dec.state.ny.us/eighteenmilesouth.pdf. By walking the trail, one can then cross over the railroad bridge and descend to the creek via a small lateral ravine extending northeast from the main gorge at the lower end. Of primary interest in this section is the presence of large numbers of conodonts, arthrodire fish armor plates, cladodid shark teeth, and plant remains (logs and branches) and microfossils. Wilson (2006) reports that the conodonts and fish remains are phosphatic and can thus be recovered from the rock by dissolution of the matrix with dilute (10 to 15%) acetic acid.

Although many of the 18 Mile Creek collecting areas require considerable walking and sloshing through the creek and dealing with 'No Trespassing' signs, there are adjacent sites providing easy access to the same strata. Batt (1999, cited in Wilson, 2006) describes several good exposures of the Hamilton shale where the Bullis Road crosses Buffalo Creek near the town of Marilla. A new bridge now crosses the creek, but easy access and parking can be had at the dead end of the former road leading to the creek. With the old road leading to the creek now blocked at both ends, this author found it easier to park by the eastern barrier and walk down to the creek. In the cliffs and in the stream bed good exposures of fossil bearing shale are reported, particularly in the area under and upstream from the new Bullis Road Bridge. Best access is always provided during periods of low water. Just downstream from the old bridge, fossil bearing shale is found in a low falls in the creek bed. It should be noted that much of the fossil bearing strata is in the cliff face. The best collecting is in the stream margin and bed where eroded blocks of shale collect and weather away. The Wanakak Formation is best exposed in the cliff face downstream from the bridge while the Windom is best found in cliffs upstream. The Wanakah Shale is in part exceptionally fossiliferous both in terms of number of species and abundance of individuals. Beuhler and Tesmer (1963) compiled a list of 289 fossil species from the Wanakah in Western New York. The list includes 28 species of corals, 44 bryozoa, 53 brachiopods, 54 mollusks, 42 ostracods, 35 echinoderms (crinoids and blastoids), and 6 trilobite species. *Basidechenella rowi* (Green), *Greenops boothi* (Green), and *Phacops rana* (Green) are reported as being the more common species collected from these locations.

A similar situation exists in the Cazenovia Creek near Springbrook at the NY Rt.78/US Rt. 20 bridge. The creek is accessible from the bridge at Northrup Road but with limited parking available. Walking upstream one finds fossil bearing strata in the small waterfall while downstream the Wanakah Shale is better exposed in the bed of the stream and on the cliff faces.

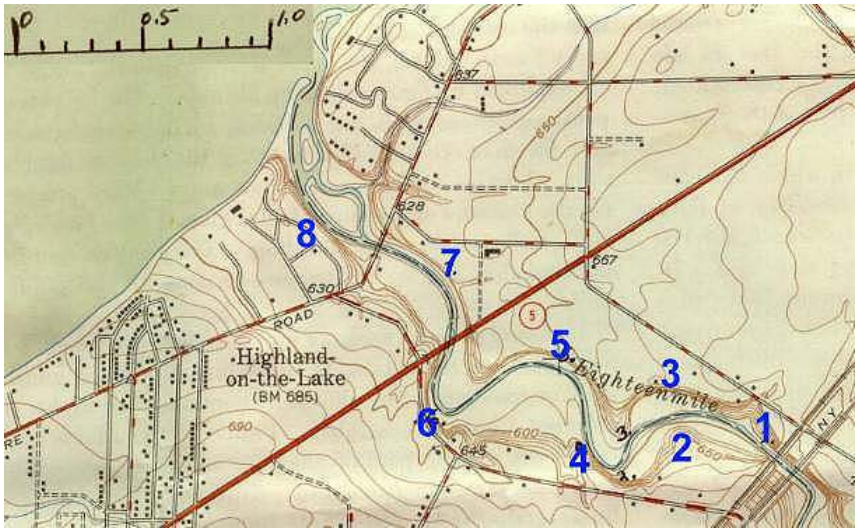
Again, all of these creek sites are best accessed during periods of low water. Water levels, at least in the upper portions of the creek, can sometimes be accessed at: www.zoarvalley.com. Hopefully we will have a dry summer. Contact the author (email: IS423@JUNO.COM) for plans of a trip to collect in this area sometime during the summer months.

References:

1. Kowinsky, 2005: www. FossilGuy.com (Jayson Kowinsky, who maintains a nice site of local interest).
2. Samulski, 2005: http://www.rockhounds.com/rocknet/messages/37835.shtml (Rock Net message board, Ken Samulski, June 06, 2005 at 12:57:57).
3. Grabau, A.W., (1898-99), *Geology and Palaeontology of Eighteenmile Creek and the Lake Shore Sections of Erie County, New York:* Buffalo Society of Natural Sciences Bulletin 6.
4. Wilson, 2006: http://bingweb.binghamton.edu/~kwilson (Dr. Karl Wilson of Binghamton University, this address links to his homepage and numerous other areas of interest).
5. Batt, R.J. (1999), Fossil Faunas and Microstratigraphy of the Upper Ludlowville

Formation: Small-Scale Sea Level Fluctuations and Converging Unconformities. *NYSGA 71st Annual Meeting Field Trip Guidebook*, SUNY Fredonia, October 1-3, 1999. Sun. C1-Sun. C38.

6. Buehler, E.J., and Tesmer, I.H. (1963), *Geology of Erie County, New York*, Buffalo Society of Natural Sciences Bulletin 21 (3)



Topo map of the Eighteen Mile Creek with Grabau's sections noted.

Odds & Ends

Compiled by Rick Smith - Editor

News Item:

Prehistoric Fish Crawls on Land

Researchers have discovered the fossilized remains of a fish with limb-like fins in the Canadian Arctic (Ellesmere Island). The animal named *Tiktaalik rosae*, was four to 9 feet in length, and lived 375 mya. It is believed that this fish represents one of the first fish to crawl upon land. They also believe that it could breathe air and had a strong trunk to support its weight upon land. Ted Daeschler of the Academy of Sciences in Philadelphia was co-leader of the expedition that made the discovery. This information was obtained from the article "Prehistoric fish used fins to crawl out of sea" by Dennis O'Brien, **Baltimore Sunpapers, April 5, 2006**. (submitted by **Dick Grier, Sr.**)

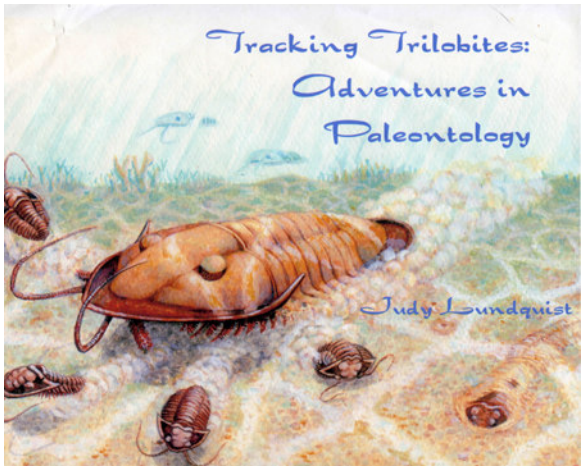
Trilos and Sulphur:

I often muse of what Richard Fortey wrote in his delightful book, ***Trilobite: Eyewitness To Evolution***. Much speculation has been generated as to what could have been the defensive mechanism of an apparently otherwise defenseless creature, and also why preservation is sometimes incomplete. At a trilobite site in England Fortey noticed a strong odor of sulphur - a 'rotten egg' smell - and this phenomena has been observed in various other sites worldwide. Could it be that the lowly trilobite somehow generated the sulphur or did it prosper in a sulphur charged environment that effectively banned all competition? Fortey tells of certain bacteria that can process sulphur as part of their metabolism. There is a certain relationship between the sulphur and iron in the preservation and formation of fossils. Why is it that antennae and feet are sometimes preserved and other times not? It would be interesting to know if any of the club members have had a similar experience. (submitted by **Gerald Elgert**)

Book Reviews:

Tracking Trilobites: Adventures in Paleontology by Judy Lundquist. Lexington, Kentucky: Kentucky Geological Survey, 2005. $9.43 soft cover; 70 pp; 3 pages of references; 3 pages covering Organizations, Scientific Web Sites and other Web Sites. The book is well illustrated throughout with photographs, drawings and other original art. This is a Kentucky Geological Survey Special Publication 4, Series XII, available through the Survey - telephone toll free at (877) 778-7827 for ordering information. The book is also available through PayPal by contacting the author directly: jlq.sci@insightbb.com. Although a science writer and museum exhibit preparator for over 20 years, this is Lundquist's first book. In reading it I am impressed as to how it is really a series of "sound bites." Each of her topics are well-written narratives in an easy jargon, understood at all levels, general to advanced. The latest in scientific theories are presented along with the reasoning behind these ideas. The technical terms are kept at a very basic level and argumented with excellent drawings and photographs. Beyond the basic descriptive portions she includes additional narratives leading the reader to a better understanding of how science works. What could be more complex than explaining how trilobite eyes function? I found this section to be the most advanced but with

the technical terms kept to a minimum and with yet another well worded narrative explaining it all. Each section includes a timely reference. Lundquist shows how to teach science. Her deliberate method prepares us for what Pasteur said about the prepared mind seeing. The book forms an exhibition of trilobite history, growth and development, identification, collecting and other vital pertinent issues. And get this - on the rear cover is a colored cut-out model of a trilobite (assembly required). Now I will need to hide the book from my grandson and his scissors. Definitely, this book neatly fits into a niche manifested by an ever growing media explosion and will prove to be a vide mecum to one and all interested in trilobites. (submitted by **Gerald Elgert**)



Book cover (right) used with permission of author.

Twilight of the Mammoths: Ice Age Extinctions and the Rewilding of America by Paul S. Martin, University of California Press, Berkeley, CA, 2005. 270 pp. $29.95. ISBN 0-520-23141-4. This is a timely book for all of those that attended Eric Seifter's excellent talk at the March MGS meeting. The author is a proponent of human predation as being a leading cause of the extinction of most of the large animals that inhabited North America during the Ice Age. Interestingly, he serves up the idea of creating "Quaternary Parks" and stocking them with species such as horses, camels, elephants, and lions to recreate the lost worlds of the Quaternary Period. The book is written in a style suitable for general audiences. (submitted by **Rick Smith**)

MGS Club Items for Sale

MGS has decals, coffee mugs, hats and t-shirts with the club logo for sale at very reasonable prices.
See **Chris Hurd** at the next meeting!

News from the Federations

Special Announcement from Carl Miller, EFMLS Region 4 VP

I'm trying to fill the VERY big shoes left behind by our former Regional VP Jennie Smith who decided last Fall to retire from the position due to her recent move to Texas. The big event for Region 4 each year is the annual Swap & Picnic at Lake Anna State Park on the second Saturday of June. The event is still on this year, I invite all of you to attend, and ask each one of you to help me get the word out to everyone. It is a great event! Let's keep it going in honor of all of Jennie's hard work over the past years!

Annual EFMLS Region IV Swap & Picnic, Lake Anna State Park, Virginia – Shelter #1, Saturday, June 10, 2006 – from 9AM to 3PM

Directions: I-95 to exit #118 Thornburg (approx. 10 miles south of Fredericksburg, VA); West on Rte 606 to Rte 208; turn Left onto Rte 208; Continue to Rte 601 and turn Right onto Rte 601 (Turn is just past Lake Anna Marine Supplies & Hardware); Continue on Rte 601 then turn Left into Park; Follow park road to lake, shelter is around to the Left past the park facilities.

Highlights: Material Swapping, renowned Region IV Treasure Box, and our outstanding Picnic Pot Luck Lunch. ***9:00 am***, we start swapping and socializing. Much of the swapping is done early in the day so come early and swap the materials you have tons of. BUT don't forget there is NO selling allowed in the park. ***12:00 noon***, we will be grilling

the famous Region IV hot dogs. Please bring your own world famous dish to share. ***1:30pm***, a fun auction of the weird, wild, funny, odd, and unusual stuff you have accumulated. PLEASE donate. Should be at least somewhat hobby related. ***All day***, the renowned Region IV Treasure Box will be open all day. Bring items that you have a ton of or no longer want. Hobby related, of course. Remember one rockhounds junk is another rockhounds treasure. **Door prizes**: Bring one with you because everyone loves to win!

Bring a lawn chair *Wear a hat* *Come join the fun!* **Carl Miller**

The EFLMS website is: http://www.amfed.org/efmls/
The AFMS website is: http://www.amfed.org/

Upcoming Shows & Events – 2006

Extracted from the EFMLS May06 newsletter

May 20-21: 38th Annual World of Gems & Minerals sponsored by the **Berks Mineralogical Society**, Leesport Farmers Market Banquet Hall, Rte 61, Leesport, PA, 6 miles north of Reading, PA.

May 27: Chesapeake Gem & Mineral Show at Goucher College sponsored by the **Chesapeake Gem & Mineral Society**, Kraushaar Pavilion, Dulaney Valley Road, just south of I-695, Towson, MD.

June 03: Spring Mineralfest hosted by the **Pennsylvania Earth Sciences Association**, Macungie Memorial Park, 8 miles southwest of Allentown, PA.

July 15-16: 37th Annual Gem & Mineral Show sponsored by the **Gem City Rock and Mineral Club**, Perry Hi-way Hose Co., 8270 Peach St, Erie, PA.

August 5-6: 57th Annual Gem Show sponsored by **The Gem, Lapidary, and Mineral Society of Washington, D.C.**, NEW LOCATION: Stone Ridge School of the Sacred Heart, 9101 Rockville Pike, Bethesda, MD, corner of Rockville Pike and Cedar Lane.

September 16-17: 41st Annual Gem & Mineral Show sponsored by the **Central Pennsylvania Rock and Mineral Club**, NEW LOCATION: Central Dauphin Middle School, Locust Lane, Harrisburg, PA.

September 23-24: 42nd Annual Atlantic Coast Gem, Mineral, & Jewelry Show hosted by the **Gem Cutters Guild of Baltimore**, Howard County Fairgrounds, West Friendship, MD, Md Route 32 at I-70.

November 18-19: Annual Gem & Mineral Show and 56th EFMLS Convention sponsored by the **Gem and Mineral Society of the Palm Beaches**, South Florida Fairgrounds, West Palm Beach, FL, EFMLS Annual Meeting on November 17.

Dates to Remember

Sunday, May 21st – MGS Meeting

Meeting Time & Location:
12 Noon to 4 PM
South Bowie Community Center
1717 Pittsfield Lane, Bowie, MD 20716
301-249-1622

Right (west) on Mitchellville Road to Pittsfield Lane (one block)
2.7 miles south of US 50 on US 301/3
Detailed directions are available on the MGS website.

Mineral of the Meeting: Dioptase. Bring a few choice specimens to the meeting.

Saturday, June 17th – 15th Annual MGS Picnic (details inside)

The Rostrum
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First Class Mail