The Rostrum

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

Volume 20, Number 5 September, 2011

President’s Message

The month of September holds two major events for MGS members. The first is the annual auction to be held during our regularly scheduled meeting. This is an important fund raiser for the club, an excellent time to add some new specimen to your collection, and an opportunity for members to make a few dollars. All the information and required paperwork is included in this edition of The Rostrum. If you would like to donate some items to the auction, 100 percent of the proceeds will go to MGS. The following weekend, MGS will celebrate a major milestone - the 20th year of our society’s existence. A memorable event has been planned and there is still a very limited amount of time to purchase your ticket. Our September 18th meeting will be your last opportunity to purchase a ticket. I hope many of you will be able to take part in the celebration.

Cheers,
Rick

Dates to Remember

Sunday, September 18 - Next MGS Meeting & Auction

Meeting Time and Location
11:00 AM to 3:00 PM
Bowie Community Center, 3209 Stonybrook Drive, Bowie, MD 20715

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

9th Annual MGS Auction

Deadline for tickets to 20th Anniversary Celebration extended to September 18th

Mysteries are not necessarily miracles.
~ Johann Wolfgang von Goethe
Meeting Dates & Programs for 2011

September 18: Annual Auction   September 24: 20th Anniversary Celebration

November 20: Elections & Holiday Party
The Maryland Geological Society
cordially invites you to attend our
20th Anniversary Celebration Dinner

What:
Food, Fun, Awards, Door Prizes, & Surprises!

Who:
Members along with their significant others (no children under 18)

When:
Saturday, the Twenty-Fourth day of September
from Two o’clock until Six o’clock in the evening

Where:
The home of Michael & Song Hutchins
Silver Spring, MD
Directions & Parking: please see attachment
Famous Dave’s will be serving a selection of BBQ including ribs, chicken, chopped pork, beef brisket plus corn bread & side dishes.
http://www.famousdaves.com/
Soft drinks will be provided.
Let us know of any vegetarian needs

Cost per person $10
Casual Attire
BYOB (beer & wine)
Event will be held rain or shine

Payment must be received by September 18th
Email: Dave Andersen - davander@erols.com
Or call 301-869-2662 between 7 to 9 PM, M-F
If no answer, please leave name and number

Make checks payable to: Maryland Geological Society
Mail Payment to: Dave Andersen 402 Belle Grove Road Gaithersburg, MD 20877
Or bring payment to the September 18th MGS meeting
New MGS Sticker For Sale

New full color stickers of the MGS logo will be available at the September 18th meeting! The price is $2.00 apiece or 3 for $5.00. Show your club pride and decorate your ride!

Mineral of the Meeting: Benitoite
Bob Farrar

The Mineral of the Meeting for September will be benitoite. Benitoite is a rare mineral, and there is only one significant locality where it is found. However, it is a special mineral in many ways that is well worth learning more about. Benitoite is in the silicate group of minerals, consisting of barium titanium silicate, BaTiSi$_3$O$_9$. The crystals of benitoite are absolutely unique: hexagonal-ditrigonal bipyramidal. They typically form flattened triangles. Prior to the discovery of benitoite in 1907, mineralogists had theorized that this crystal class was possible, but there were no known natural examples. Benitoite is usually "sapphire" blue, and was mistaken for sapphire when first found. Rarely, it can be white, yellow, or pink. Other physical properties include a hardness of 6.0 to 6.5, and a specific gravity of 3.7. It is also fluorescent blue under short wave UV light. The crystal form is entirely sufficient to distinguish benitoite from any other mineral.

The only significant locality for benitoite is San Benito Co., California, for which it was named. The type locality is the Dallas Gem Mine; other mines in the same area include the Junnila Mine and the Numero Uno Mine. There it is found in veins of natrolite cutting through serpentine. Crystals up to 2 inches have been found. Associated minerals include neptunite and joaquinite. Older books state that these are the only known localities for benitoite; it has since been found at Ohmi, Japan; Esneux, Belgium; and Magnet Cove, Arkansas; but none of these localities approaches the significance of San Benito Co.

Cleaner crystals of benitoite can be faceted into beautiful gemstones. As a crystal, it is popular among mineral collectors. However, the supply of both gemstones and mineral specimens is limited, and good pieces can be hard to find. So, if you do have such a piece in your collection, you may consider yourself fortunate.

(Photograph is by Didier Descouens, available from Wikipedia Commons at [http://en.wikipedia.org/wiki/File:Benitoite_HD.jpg](http://en.wikipedia.org/wiki/File:Benitoite_HD.jpg), and is used under the Creative Commons Attribution-Share Alike 3.0 Unported license.)

The Passing of Connie Smith
Jim Stedman

Emma Corinne Baker Smith passed away on August 26, 2011. A passionate fossil collector, Connie and her husband, Larry, are well known to fossil hunters throughout the area. The Smiths' Matoaka Beach Cabins, near St.
Leonard, Maryland, offer fossil collectors access to the beach beneath the Calvert Cliffs. The Smiths purchased the Matoaka site in 1960 and, in the ensuing years, collecting on the beach at Matoaka has been a rite of passage for many of us. On November 24, 1991, the Maryland Geological Society held its inaugural meeting at the Cabins. The MGS salutes the memory of Connie Smith and extends condolences to Larry and the rest of the Smith family.

Rostrum Cleans Up Big in Federation Contest
Gerald Elgert

Each year the Eastern Federation of Mineralogical and Lapidary Societies, (EFMLS) has a Bulletin Editors Contest. There are about 450 clubs in the federation, comprised of some 50,000 members. Each year the editor(s) of the various bulletins submit their best choices in eleven categories. Mini Bulletin, Small Bulletin, Large Bulletin, Drawn Features, Original Educational Articles, Advanced Original Educational Articles, Original Non-Technical Articles, Written Features, Junior Articles, Junior Drawn Features and Poetry. This year, six of our members won a total of nine awards. Congratulations to all! In the picture above, they are from the left: Don Greaves, Michael Hutchins, Bob Farrar, Gerald Elgert, Rick Smith, and Garrett Cooper.

Original Educational Articles
Trophy Award
Bob Farrar

Stromer’s Riddle: The Predatory Dinosaurs of Morocco
and
Fourth Place
Bob Farrar

Mineral of the Meeting: Jade

Original Advanced Educational Articles
Fourth Place
Michael Hutchins
California Miocene Dreaming

Written Features
Honorable Mention
Rick Smith

President’s Message
and
Gerald Elgert

How To Build a Dinosaur

Large Bulletins (Editor)
Second Place
Gerald Elgert
The Rostrum

Non-Technical Articles
Honorable Mention
Garrett Cooper

The Thrill and Agony of Diving for Fossils
and
Donald Greaves
On the Trail of Fossils: A Little Bowie, a Lot of Tucson and Arizona
and
Michael Hutchins
Fossil Collecting Along the Chickasawhay River, Mississippi
Field Trips
Rick Smith

The Maryland Geological Society is an advocate of responsible collecting. The society has permission to collect in all of the sites listed that require such permission. Most trips are weather dependent and some require at least an average level of physical fitness. Field trips are restricted to MGS members only.

If you have questions, suggestions, or might be interested in leading a trip, please contact me via email at rick.smith.mgs@gmail.com or by mail at 1253 Brewster Street, Baltimore, MD 21227, or call me during evening hours at 410-247-3961.

Robert Ertman of the Calvert Marine Museum Fossil Club has extended a kind invitation to MGS members to accompany their group on the two fall field trips listed below. More details will be forwarded following signup. Sign-up by email is preferred and should be received no later than the Monday before the trip, send email to robertertman@msn.com. Alternatively, call Bob’s cell phone at 410-533-4203.

Saturday, October 29th to Deer Lake, PA for trilobites and other Devonian marine fossils.
Sunday, November 27th to Odessa, DE, for petrified wood, and then on to the C&D Canal (grilled hot dogs & pot luck). The current collecting site in Odessa might be closed by then, but he is trying to line up permission to collect on the adjacent soybean field and the no-till corn field across the road.

News from Lee Creek, NC: The PCS Mine in Aurora, NC has canceled all fossil collecting for the fall season of 2011 due to safety concerns related to heavy equipment in the mine area as a result of receiving their mine continuation permit. Mine officials have stated that they will re-evaluate the situation as we approach the spring season of 2012.

Virginia Museum of Natural History field trips: The museum offers trips that are lead by the resident staff and they charge a fee. Several trips remain on their 2011 schedule and information can be found at http://www.vmnh.net/index.cfm/topic/field-trip-adventures. They will be offering boat trips to the Cape Fear River in North Carolina, to Aquia and Nanjemoy Formation exposures along the Potomac River, and to two rivers in Alabama. They will also be offering a trip to Stratford Hall in Virginia.

Vancouver Island Odyssey
Don Greaves

It was a dark and stormy night. Hopefully, that got your attention, but the truth is it was a really crystal clear night with the Milky Way visible and occasional meteors and satellites passing by overhead. This was our view of the night sky at our bed and breakfast accommodations midway up the northern coast in the Courtenay/Comox area of Vancouver Island, British Columbia, Canada. Our team consisted of Professor Charles Dailey, Sierra College, Rocklin, California; Gerald Elgert, editor of the MGS newsletter The Rostrum; and me. Our mission was to find Cretaceous fossils at sites described in the book West Coast Fossils: A Guide to the Ancient Life of Vancouver Island. We would not be disappointed in the weather, anyway, which was mainly sunny and dry with daytime highs in the delightful 20s (centigrade).

Our itinerary consisted of a flight to Seattle, a high speed ferry ride to Victoria, British Columbia on the southeastern end of Vancouver Island and a drive up the north coastal highway (Hwy 19) to the bed and breakfast (B&B) we would be staying at in Comox about halfway up the island. The B&B was located on the beach near the dock for the Powell River ferry that crosses the Strait of Georgia to Powell River on the British Columbia mainland.

Our first stop at a purported fossil site was an abandoned shale quarry near Nanaimo, about halfway to the B&B at Comox. We had the privilege of sharing the quarry with motocross bikers who raced on bulldozed tracks in the quarry. Fortunately we had no encounters with the bikers. Gerald managed to find a seed cone in a concretion, but in hitting it...
with his rock hammer, pretty much managed to flatten it beyond recognition. The surface of the motocross pit had been mostly picked clean by other collectors. We were soon to learn this was to be more the rule than the exception with our future collecting efforts.

The next day after a great breakfast at the B&B, which kept our stomachs full for much of the day, we drove up the north coastal highway about 20 km to a well known fossil site. Shelter Point, a shale exposure of an ancient reef in the Oyster Bay Formation, provides an exposure at least 1 km wide at low tide. One must always keep an eye on the tides as they can reach more than 3 meters and one can easily be stranded. (By now you might have noticed that Canada, like much of the rest of the world, is addicted to the metric system.) I must confess that the scenic quality of this site was vastly superior to that of the quarry we had visited yesterday. Our findings included (living) barnacles, crabs, oysters, starfish and what appeared to be harbor seals basking on rocks off shore. However, much to our chagrin, the only fossils we encountered at this site were just some chips of what others had found and left behind. Nevertheless, I did find two huge intact moon snail shells (not fossils) on the rocky beach in front of the B&B at low tide.

Later that day, undaunted, we went to another site in the Comox/Courtenay area on the Puntledge River above Stotan Falls. A popular spot with sunbathers and other bathers, it was the only place we encountered any bares. The river was shallow and we walked out on the stream bed a short way until we spotted depressions in the shale exposures apparently left by large ammonites (20-25 cm. across). I also found a pair of functional although rusty needle nose pliers which I donated to the B&B owner. I also had the misfortune to fall over backwards on the river bottom bedrock, which was covered by a brown algal scum. Fortunately no damage was done either to me, the bedrock or the scum.

The next day, still undaunted, we ventured over to Collishaw Point on Hornby Island. To get there we drove about 30 km down the coast highway back toward Victoria, took the Denman Island Ferry, drove across the island and took a second ferry to Hornby Island. Collishaw Point was similar to Shelter Point in that it was a shale beach that extended more than two km out to sea at low tide. Gerald found a fossil baculites inside a concretion. It had a vivid yellow green and purple sheen and in life must have been a beauty to behold. I managed to find a small piece of what appeared to be petrified wood that was inside a shale concretion. There was also a rock with what looked like teredo (shipworm) borings in clay. Fortunately, we managed to not get stranded overnight on Hornby Island. If you miss the last ferry, you’re there for the overnight and we made it back home in time to watch the impressive night sky at the B&B. The only near light pollution was the nearby Powell River ferry terminal. Otherwise it were dark enough to see an impressive Milky Way, communications satellites and the occasional meteor streaking across the heavens above.

Another day, another rocky beach fossil site to explore. This day it was Wells Beach in the Parksville area, about 60 km down the coastal highway from the B&B. We had tried unsuccessfully to find this site on the way up to the B&B on the first day; this time we hit pay dirt. Prof. Dailey found a fossil crab claw and part of the arm in a concretion which he broke open.

Earlier that day we had visited the Qualicum Beach Museum and met Graham Beard, curator of the museum and co-author of the book which had inspired us, West Coast Fossils. The museum had an impressive inventory of the fossils we had been looking for, including various ammonites, lobsters, crabs and petrified wood. Graham also invited us to his home nearby where we saw an equally impressive fossil collection in his back yard and shed. He mentioned having some 400 crab specimens in the museum collection. We wondered if this were why we weren’t finding any. Prof. Dailey
had previously written to Graham about a sepiid fossil, *Naefia*, which probably resembled a latter day cuttlefish. Graham accommodated us by bringing out a box full of these unusual, small and somewhat rare Late Cretaceous marine invertebrates. (The following article by Charles Dailey gives the background on the *Naefia*)

On Friday, Prof. Dailey and I again challenged the water of the Trent River above the Highway 19 bridge not far from the B&B. Gerald had researched the area for the lobster fossils supposedly found in the float on the gravel bars. What we found was that the former stream bed was now covered with blocks of marble that had washed downstream. Oh, well . . . Graham had suggested that we try further upstream, so we went back and made the trek about 2 km farther upstream. There we were rewarded with another fossil baculites in a concretion of fossil fish poop found by Prof. Dailey. We also found what appeared to be a small piece of petrified wood in a concretion that had apparently been split and left by an earlier fossil hunter.

Sadly on Saturday it was time to leave our B&B and our cordial hosts Mike and Patty Cope. With our mission nearly complete, we set out for Victoria and the high speed ferry to Seattle, only to stop at antique stores where Gerald purchased a piece of *authentic* Vancouver Island petrified wood that has subsequently been identified as from a formation millions of years in the future from the area we were collecting.

Our trip had been an enjoyable experience despite the dearth of fossil finds. We were advised that the best time to look for fossils here is in early springtime. So if you ever decide to do the trip, be sure not to go until just after the glaciers melt back far enough so that you can see the ground.

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**Some Notes on *Naefia***

**Charles Dailey**

*Naefia* is an unusual, small, Late Cretaceous cephalopod with a straight chambered shell. Graham Beard’s book *West Coast Fossils* illustrates some, mostly recovered in fish coprolites from the east coast of Vancouver Island. I wanted to see them in person (see article above). The inch to an inch and a half long, straight shell resembles a blend of the straight internal shell of the extinct squid-like belemnites but with the empty, coiled chambers of the small, living, cuttlefish-like *Spirula*. *Spirula*’s coiled shell is mostly surrounded by the body and only the upper and lower edges of the shell are exposed. *Naefia* is possibly an ancestral of *Spirula* or similar to such. The first shell chamber of *Naefia* and *Spirula* contain a siphuncle. In *Nautilus* and ammonites the siphuncle helped hold them in their shells and regulate the amount of gas in the chambers. The absence of a siphuncle in the subsequent chambers of *Naefia* suggests it may have become a totally internal shell as the animal grew around it. So far no gas secreting tissues have been discovered in *Spirula* and the sealed, gas-filled chambers may have been static ballast chambers. Seeing this critter and being able to include it in my zoology class lecture on the history of cephalopods was worth the effort of the trip. All the other many adventures described by Don were an added enjoyable bonus. (Photo by Gerald Elgert)
Dave Bohaska treated MGS members at the July meeting to a fascinating and thoughtful exploration of the world of whales, dolphins, and porpoises — the cetaceans — with an emphasis on their evolutionary development during the Miocene. (The term “whale” will be applied in this article to the cetaceans collectively.) Dave, Collections Manager of the Vertebrate Paleontology Department of the Smithsonian’s National Museum of Natural History, noted that cetaceans, just one of many vertebrates who made a return trip from land to living in water, are the “most marine” of marine mammals. According to blood protein and DNA analysis, cetaceans evolved from the artiodactyls (hoofed land mammals) and their skeletal structure reflects that evolutionary history. Though DNA and morphological evidence suggest that hippos are whales’ closest land relatives, Dave countered by noting that the oldest hippo fossils are from the late Miocene, while whales have an Eocene origin.

The fossil record of the cetaceans reflects the evolutionary history of movement from land to water. The very earliest whales had a well-developed hind leg and a pelvis attached to the backbone, allowing them to come onto land; in contrast, the later archaeoceti, archaic whales, had a reduced hind leg unattached to the vertebral column precluding any terrestrial existence.

Throughout his talk, Dave proved a point he made at the outset, “Paleontologists love skulls.” Study of fossil and modern cetacean skulls reveals the changes that occurred in the cetacean head, which was initially adapted for life on land, and later modified over millions of years for life in the water. Among the key indicators that he pointed to were:

1. the evolution in whales from heterodonty (different kinds of teeth in different parts of the jaw) that was typical of primitive mammals, including the earliest whales, to more simple, mostly uniform teeth throughout the jaw as is the case with modern toothed whales;
2. the movement over time of the nose from the front of the snout as is typical of land mammals, to the top of the head (i.e., the blow hole); and
3. the changes in the arrangements of the bones in the skull, including the maxilla.

Both groups of modern whales — the Mysticeti (baleen whales) and Odontoceti (the toothed whales) — come from the archaeoceti. Dave described both of these groups of whales and noted how they reflected different ways in which the architecture of the whale skull was rearranged from the earliest whales through “telescoping” which involves the squeezing of the bones of the skull from the front toward the back. In baleen whales, the back parts of the skull tend to override the front parts; while in toothed whales, the reverse is true.

Dave highlighted some of the modern oddballs among the cetaceans, such as the narwhal. In his wide ranging talk, he also provided fascinating insight into other non-cetaceans, such as walruses, seals, and sea cows.

At the close of his talk, the assembled members gave Dave a well-deserved loud round of applause for his great presentation. (Photo by Gerald Elgert)

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**Thank You For Recent Donations**

**Dick Grier, Jr.**

Les Heinzl:
- 2 polished Brazilian agate slices
- a large spider conch, Caribbean Sea
- a large white coral, Caribbean Sea
- palm wood specimens, loc. unknown

Michael Hutchins:
- a rhinoceros jaw with 7 teeth, Oligocene, Wyoming
- 12 *Turritella mortoni*, Aquia Fm., Paleocene, James River, Virginia
- dung beetle balls, Oligocene, Wyoming
bag of clam shells, Cretaceous, Mississippi
bag of shells, etc., Cretaceous, Mississippi
shell, undetermined species, Miocene-Pliocene, James River, Virginia
ammonite fragment, Cretaceous, Fort Washington, Maryland
1 Cucullaea gigantea, Paleocene, Fort Washington, Maryland
9 horse teeth, Oligocene, Nebraska
bag of miscellaneous Miocene shells, barnacles, loc. unknown
bag of petrified leaf prints, Florissant, Colorado
2 bags of fossil corals & shells, Oligocene, Mississippi
Gomphoceras sp., Silurian blastoid, Gotland, Sweden
2 Essexella asherae, Pennsylvanian coelenterates, Mazon Creek, Illinois
indeterminate shell, Miocene-Pliocene, James River, Virginia
indeterminate echinoid, James River, Virginia
indeterminate shell, Miocene, ZT’s Run, Virginia
bag of Petoskey Stones, Petoskey, Michigan
bag of corals, Swope’s Pit, Pennsylvania
Pleistocene alligator teeth and turtle, Florida
rolled portion of cheek teeth of Mastodon, North Port, Charlotte, Florida
2 gastropods, 2 brachiopods, Flat Rock, Indiana

Dick Grier Jr.:  
an Archaic projectile point, Indiana
an Orange Topaz xl., Pakistan
Parisocrinus crawfordensis, Mississippian crinoid, Indiana
Sarocrinus varsourensis, Mississippian crinoid, Indiana
Nanticoke Indian Arrowhead, Maryland
Maroccosuchus zennaroi, Cretaceous crocodile tooth, Morocco
Smoky Quartz xl., El Paso Co., Colorado

Donations to the club are important to the financial well-being of the club. They are used in the annual and silent auctions and for door prizes.

Minutes of the July, 2011 Meeting
Gary & Cindy Lohman

President’s Report:  The meeting was called to order at 12:10 pm by MGS president Rick Smith. New members and guests were invited to introduce themselves. Rick recently conducted a fossil program for a group of twenty 4-5 year olds and brought in some thank you drawings that the children had sent him. He urged other members to take similar opportunities to outreach to others. Rick asked Dick Grier Sr. and Tom Piscitelli to talk about the recent outreach programs that they had each organized. Dick conducted a program about dinosaurs, fossils, and minerals for a group of approximately one hundred cub scouts in Dundalk. Despite the large number of participants, the group was well behaved and enjoyed the many specimens that he gave out to the scouts. Tom and Joy Piscitelli gave a presentation at the Parkville senior center to about a dozen adults and a few children. The presentation was primarily on fossils, but Tom included local minerals as well. In order to generate interest in the program, they set up a display with various specimens at the center in the days leading up to the talk. Rick pointed out how much fun and rewarding such endeavors can be. Since he receives numerous requests from groups looking for such programs, contact Rick if interested in helping out.

Vice President’s Report:  Eric Seifter was unable to attend the meeting; consequently there was no vice president’s report.

Secretary’s Report:  Minutes from the last meeting were accepted as submitted. Secretary Gary Lohman explained how pneumonia unfortunately kept him and his wife Cindy from attending the annual EFMLS meeting in Syracuse this year.

Treasurer’s Report:  Treasurer David Andersen reported that the club has $2,027.88 in checking, $3,095.07 in savings, and $127.56 in cash, for a total of $5,250.51.

Membership:  Membership chairman Mike Folmer reported 117 adult members, 19 junior members, and 12 life members. These totals reflect 5 new members.
**Field Trips:** There are currently no field trips planned. If anyone is willing to lead a trip, please let Rick know and he will assist with the coordination.

**Ways & Means:** Ways & Means chairman Dick Grier, Sr. reminded everyone that September is the annual regular auction. Unlike the silent auctions held each meeting, members can bring in up to 10 specimens for auction at the regular auction. The club takes 10% commission on each auction item, which makes this an important fundraising activity for the club. To participate, forms with tags for each specimen must be filled out ahead of time in triplicate. Forms are available from Dick, on the website, and in the *Rostrum*. Dick stressed the importance of bringing specimens worthy of sale and properly identifying specimens, including the locality where they were found.

**Newsletter:** Newsletter editor Gerald Elgert expressed gratitude to Wendell Mohr of the Gem, Lapidary, & Mineral Society of Montgomery County for bringing back the MGS awards given out at the EFMLS’ Editors Breakfast at Syracuse. As in past years, MGS took quite a few awards, which were passed out at the end of the regular portion of the meeting. The EFMLS consists of approximately 450 clubs and over 50,000 members.

**Website:** Webmasters Daryl Serafin and Melville Hurd reported that the 20th anniversary celebration information has been added to the MGS website (http://ecphora.net/mgs). There were otherwise the usual number of emails and website 'hits.' It was reported in jest that there were no new requests for writing school reports, or requests for sending 'nice' fossils. Rick Smith added that he does try to respond to every email in one way or another.

**Old Business:** The major piece of old business is the preparation for the MGS 20th anniversary celebration. As Mel Hurd reported, there is now a published site, a date, and a time for the party. Cindy Lohman and Mel contacted several catering places and have nailed one down - Famous Daves. The cost to those attending will only be $10 per person with the club treasury paying the other 50%. An invitation will be sent out by email or by regular mail containing detailed information. The committee needs responses to know how many will be coming as well as any special dietary needs, e.g. vegetarian. Mel reported that they were still short on tables, which prompted enough volunteers to bring folding tables. Directions and parking information will accompany the invitation. Mel indicated that the intention of this party is to have members bring their spouses or significant others, i.e. couples. He also stressed that this was not a party for children. MGS will not be providing beer or wine, but Mike Hutchins, who is hosting the party at his house, is ok with people bringing their own beverages. MGS will however enforce responsible drinking!

In other old business, there is no new news on Lee Creek (see article in this issue on the closure for all of 2011). Their web site says the mine will be closed to collecting for the spring of 2011, but may be open in the fall. They apparently brought in guides for training, but indications are that there is only a 50/50 chance of a fall collecting season. They are still putting in roads and dealing with lots of sand slides.

**New Business:** In new business, MGS now has new T-Shirts and the last of the MGS mugs for sale. Rick Smith reminded those in attendance that the November meeting includes election of officers, which this year also includes the board of directors (two year term). As always, MGS is looking for anyone interested in participating and if you need more information to contact him or any of the other officers or board members. The business portion of the meeting was concluded at 12:55 pm.

**Mineral of the Meeting:** Bob Farrar then presented the mineral of the meeting, crocoite, a beautiful but rare mineral. It is composed of lead chromate and occurs in the presence of chromium-bearing rocks.

**Speaker:** Following the raffle, Dave Bohaska of the Smithsonian gave a presentation on "Miocene Whales" (see article in this issue). The meeting concluded with the silent auction.

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**Shows and Events**

**September 17 & 18 - 44th Annual Gem & Mineral Show** sponsored by the Central Pennsylvania Rock & Mineral Club. Zembo Shrine, 2801 N 3rd St; Harrisburg, PA.

**September 24 & 25 - 47th Annual Atlantic Coast Gem, Mineral & Jewelry Show** hosted by the Gem Cutters Guild of Baltimore, Howard County Fairgrounds, I-70 at MD Rt 32; West Friendship, MD. More information: [http://www.gemcuttersguild.com/gemshows.html](http://www.gemcuttersguild.com/gemshows.html)

**September 30 - October 2 - Desautels Micromount Symposium** hosted by the Baltimore Mineral Society. MHA Conference Center, Elkridge MD. More information: [http://www.baltimoremineralsociety.org/desautelssymposium.html](http://www.baltimoremineralsociety.org/desautelssymposium.html)
October 2 - Gem-Mineral-Fossil Auction sponsored by the Gem, Lapidary & Mineral Society of Washington, DC. Knights of Columbus, 9707 Rosensteel Ave; Silver Spring, MD. Preview 1 pm; Auction begins at 2 pm.

October 12, 2011 - National Fossil Day marquee event on the National Mall, hosted by the National Park Service and the Smithsonian's National Museum of Natural History. Come and enjoy many fossil-related events for all ages. For more information, see http://nature.nps.gov/geology/nationalfossilday/events.cfm#DC.

October 14, 2011 - Chesapeake Gem & Mineral Society Auction at the Woman's Club of Catonsville. The auction takes place beginning at 7:30 pm (viewing of auction items at 7:00 pm). Materials to be auctioned include gemstones, cutting rough, jewelry, minerals, fossils, books, magazines, and lapidary equipment. Directions: Go West on Fredrick Rd. from I-695 approximately 3 blocks to St. Timothy's Lane. Turn right & go 1 block to the Woman's Club; located behind St. Timothy's Church.

November 13, 2011 - Fall Rock Swap hosted by the Richmond Gem & Mineral Society. Free admission to the event which runs from 9 am to 3 pm. There will be swapping and buying of minerals, fossils, jewelry, and lapidary items. The swap will be held at the Ridge Baptist Church Meeting Hall, 1515 Eastridge, Road, Richmond. For more information, contact club president Carl Miller at (804)310-8762 or email him at kobold1@erols.com.

Continuing - The Grier fossil & mineral collections are for sale at 10% off. Still remaining are thousands of worldwide shark teeth. There are large numbers of ammonites, echinoids, and brachiopods, as well as fern fossils, vertebrate fossils and others. The minerals remaining include gold, emeralds, silver minerals, topazes, beryls, tourmalines, aquamarines, amethyst and heliodor. Arrange for an appointment by calling Dick Grier, Sr. at (410)285-5554.

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A Week in Oklahoma
Garrett Cooper and Gerald Elgert

We want to tell you a story of a week in the wilds of eastern Oklahoma.

Thursday - The weather was perfect this warm and muggy evening, preceding the Fourth-of-July weekend, as I headed down to Manassas to meet Garrett. We were to drive in his pickup truck to eastern Oklahoma non-stop for the purpose of a week of collecting. Since I am one of those collector types who considers an adventure as nothing more than an inconvenience well-considered, I wasn't about to mind a few hours (well, 24 is more like it) sitting in a cramped position in exchange for this opportunity. Garrett also brought along his Boston Terrier, Meg (short for Megalodon), whose favorite curl up spot seemed to be the driver's side floor; that is, under the brake pedals.

Friday - After driving all night, in the morning we stopped at a Subway Restaurant near Cookville, Tennessee, where Garrett purchased some chicken livers and gizzards. That was my introduction to the fact that we weren't in Maryland any longer. This was to be just the first of many such stories of his ability to find esoteric and off the road attractions. I've often wondered, "How does he do that?" Of course, don't we all know that the most popular restaurant in Iceland is Subway?

We also stopped off at a reservoir on the Arkansas River, Lake Dardenell, where Garrett introduced me to "Indian trash," his name for the chips of flint left behind when tool knapping is being performed. This area of Arkansas and Oklahoma is rich in deposits of flint. Apparently the native peoples, during their daily wanderings, would walk along knapping stone tools
such as arrow and spear heads. Sometimes an incomplete point is found, where the flint didn't crack correctly. In many places and this was one of them, the ground is literally littered with this “trash.”

Saturday - Recovered from the drive, we swam in Garrett's sister's pool and blew stuff up (fireworks). Oklahoma doesn't have the legal restrictions on fireworks as does Maryland. In Oklahoma you can buy small rockets that could probably take down a small airplane if aimed properly. One highlight of the trip was that we used Garrett's sister's home as a base and they have a swimming pool. That became particularly nice when the daytime temperatures ran past 100 degrees. Our hottest day was a recorded 122 degrees and was probably even higher when we were in the quarries.

Sunday - After church we headed to fossil hunt on the Rock-N'-Cedar Peacock Farm (here's the web address: [http://www.boxess.com/chome.htm](http://www.boxess.com/chome.htm)). We arrived shortly after the owner Mike, a long-time friend of Garrett's family in Oklahoma, had left to go to town. Since Mike wasn't home, we created a Plan B and headed towards Sequoyah’s Cabin National Historic Site. The Cherokee Indians were forcibly moved from their homelands in North Carolina and were forced-marched in a Trail of Tears to newly formed Indian Lands in Oklahoma. Sequoyah is best known for creating a syllabary or alphabet in the late 1800's, which made it possible to read and write in the Cherokee language. What was especially interesting to me was that he was related, by marriage, to the Montgomery Blair family which founded Silver Spring, in Montgomery County, Maryland. The world must have been a smaller place back in them days. Inside the Visitor Center there was an exhibit of the various arrowheads and spear points found in the area. There was a great variety of colors of flint available and that must be why so many of the stone tools found in this area are so varied and colorful.

Monday - This morning we got an earlier start and revisited the Rock-N'-Cedar Peacock farm. Upon arriving we found farmer Mike crafting hickory walking sticks for us to use on the hunt. Mike showed us some of his finds from throughout his years tending farm animals, mending tools, and planting in his fields. Among Mike's collection were brachiopods, burrow concretions, crinoids, what he thought was a dinosaur footprint, and plant matter trace fossils. He also showed us some pieces of what has later been identified as cycad seeds. Most of the material should date to the Pennsylvanian, but Mike told us a geologist from the University of Arkansas said his property was on a fault line and the fossils found there may span beyond the Pennsylvanian. In the stream bed, along the fault line, we found some Devonian brachiopods hiding in an iron stone matrix.

After Mike's farm, we grabbed some lunch at a Chinese food stand in the middle of nowhere - literally nowhere. There was this small trailer that had been converted to a kitchen, sitting in an empty field with a picnic table and it must have been a local attraction, judging by all the customers stopping by. (This is another example of Garrett's expertise in finding out of the way places of interest, many involving food.) We then drove a short distance to some property owned by Garrett's great uncle to possibly pick up some arrowheads and lepidodendron fossils. Roger, one of Garrett's cousins, showed us a piece of lepidodendron root that he had found earlier that day while taking care of his cattle. We didn't find much and finished the day relaxing in the pool.

Tuesday - After a good night's rest, we headed west towards Ardmore, Oklahoma, to visit a commercial vendor, Geological Enterprises, and hunt some road cuts for Devonian and Ordovician exposures. Donna, at Geological Enterprises, gave us a tour of the fossil preparation lab (here's the web address: [http://www.geologicalenterprises.com/about/](http://www.geologicalenterprises.com/about/)). She had a nice slab of what was advertised as Araucaria wood from Arizona, that I was particularly interested in. Upon closer examination, I decided the species could have been gingko. At least internally, these two species share many common characteristics while externally they are vastly different.

After Geological Enterprises, we set out in search of more dirt and rocks to collect. There was a cemetery nearby and we stopped to examine the tailings from a recently excavated grave, sans results, but as Garrett explained, “You never know what you will find if you don't look.” Our best find that day was a location off the I-35 scenic view stop for the Phenix, Arkansas, turnoff that Donna had suggested. There was this end piece of a cephalopod of some sort just sticking out of the cliff that we collected and brought back home. We later learned this was in the Ordovician Bromide Formation.

We stayed the night in Atoka, Oklahoma, to get closer to Black Cat Mountain for an early morning hunt on Wednesday. Day time temperatures were always over 100
degrees and were even more so when collecting along rock faces where the sunlight was reflected. The air conditioned room that night was a real life saver.

**Wednesday** - We woke up early and headed to Clarita, Coal County, Oklahoma, to the Black Cat Mountain quarry maintained by trilobite preparator extraordinaire, Bob Carroll, one of the best “shooters” in the trade. He is well known to those of us collectors who are fascinated with trilobites. At the Tucson show each year, his table sells out on the very first day. Bob took us to his quarry and pointed us in the right direction to find some Devonian trilobites, brachiopods, crinoids, and other more primitive critters. The quarry sits in the Haragan Formation, some 420 mya in age. Bob said that the sandstone where the fossils were found was once a somewhat featureless, mud covered plain. This was in a mostly deep, sub tropical marine shelf environment.

I had the easiest time as Bob had set aside a number of trilobite tails. Garrett was more interested in collecting entire specimens. Bob’s technique is to break the rocks and look for trilobites in cross sections. Once he finds something he likes, he keeps both sides of the split rock and saves it to prepare at his shop. We ended up surface collecting rather than splitting rocks and found quite a few really nice specimens. Afterwards, Bob showed us his preparation lab and some of his current projects, one of which is extracting two huge trilobites using a scribe rather than his usual air prepping with grit. (Bob’s website is: [http://www.blk-cat-mtn-trilobites.com/](http://www.blk-cat-mtn-trilobites.com/).)

**Thursday** - We stayed in Ardmore Wednesday night to get an early start at an Ordovician quarry in the Bromide Formation. We met with Leon Theison, the owner of Custom Paleo, and followed him to his privately owned quarry in Ardmore. Leon does some prepping work for Geological Enterprises and had purchased the quarry from the former owner there. He taught us a lot about the Ordovician life that once flourished in the shallow inland sea of that era. The quarry is just a few steps away from where his living room is today. Leon charged for collecting in his quarry with the minimum price being about $50. My first find of the day was a huge straight shelled ammonoid that with the matrix cost me $45. My next find was a trilobite with a broken mouth part that greatly interested Leon. Had it been complete, he would have kept it but being broken I got it for a mere $20. Garrett, however, was shelling out some big bucks with all of his finds. Eventually, Leon let us walk away with some pretty cool plates of fossil hash featuring trilobites, crinoids, and various other ancient marine life. I found more than my share of the more interesting (to me, anyway) lower invertebrates such as sponges (pictured), bryozoans and corals. He then fed us sandwiches and showed us some of his collection. Afterwards, we looked again at that piece of petrified wood in hopes of determining whether it were Araucaria (as identified), or gingko. Garrett later said that Donna had sent the specimen out for a more positive identification. We then drove east to Muldrow and finished the night with a dip in the pool.

**Friday** - We were driving the local back roads, looking for streams with exposed gravel bars where arrowheads and
spear points might be found. Near the town of Vian we crossed a creek by a dairy farm that looked promising. After obtaining permission, we soon were finding flint flakes (always a good sign), crinoid stem fragments and some other jumbled fossil hash in the stream bars there. One of Garrett’s cousins, who had driven up from Dallas to join us, found a really nice white spear point just inches from Garrett’s mom who had accompanied us that day. 

**Saturday** - We mostly loafed around Garrett’s sister’s house with occasional dips in the pool and playing with her kids. That evening we went to a “Broadway Joe’s” family restaurant where I was treated to some of the best ever catfish eating. WOW! We departed Oklahoma later in the evening.

**Sunday** - We stopped along an on-ramp, on the west side of Nashville, Tennessee, to stretch our legs and were pleasantly surprised by finding more Devonian era fossils falling out of the road cut. Later we stopped by the Gray Fossil Museum for a short visit and arrived back home late in the evening Sunday night. Then came the task of sorting out whose fossils were whose and I suspect we each have some of each. But Garrett is one great guy and easy to get along with. We’re already planning another trip along about Christmastime.

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**9th Annual MGS Auction at the September 18th Meeting**
**Submitted by Dick Grier, Sr.**

At the September 18th meeting, MGS will hold its 9th annual auction. It is requested that members keep the number of specimens that they submit for auction to ten (10) or fewer. A member entering items in the auction must submit duplicate copies of the auction form on page 16 (a copy for the auctioneer and one for the cashier). The member might make a third copy if he or she wants to follow along with the auction. Handmade copies will be accepted. Each specimen should be numbered with an identifying tag from the identification tag form on page 17. Identification with localities is required.

You may indicate a minimum bid amount - it will not be sold for less. The experience with club auctions is that specimens too highly priced are passed over, but, please, no junk. Items can be fossils, minerals, artifacts, or meteorites with a name and locality. A 10% fee will be charged for each item sold, which will go to the MGS Treasury in the furtherance of the club’s programs and projects. The MGS will be helped if the regular dealers would donate something to the auction.

Previous auctions have been a huge success, everyone has had fun, and the money raised for the MGS Treasury has kept our annual dues low!

What you need to know to prepare for the MGS auction at the September Meeting:

1. Members can bring up to ten specimens of mineral, fossils, artifacts, or meteorites.
2. Proper identification and localities should be placed on numbered tags.
3. Two forms listing the specimens must be submitted.
4. Minimum bids can be placed on the item and will be undersold.
5. MGS raises money through auctions and door prizes that finance all projects we promote.
6. MGS will assess 10% on each specimen sold.
7. MGS will also have specimens to be auctioned from our members’ donated material.
MGS Auction Form  
(submit in duplicate)

Name: _______________________________       Page: ____

Date: __________

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Tickets for Auction Items

Please fill out the tickets, cut them out, and attach them to the item to be sold.

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Dates to Remember

Sunday, September 18 – MGS Meeting & Auction

**Meeting Time & Location**
11:00 AM to 3:00 PM
Bowie Community Center
3209 Stonybrook Drive, Bowie, MD 20715
301-464-1737

Location/Directions: The Center is located off of Route 450 in Bowie. Detailed directions and a map can be found on the MGS website (www.ecphora.net/mgs/).

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

9th Annual Auction

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*The Rostrum*
Gerald Elgert, Editor
9910 Lorain Avenue
Silver Spring, Maryland 20901

First Class Mail