

Volume 54, Number 7

July 2010



# Chippers' Chatter

Newsletter of the Chesapeake Gem & Mineral Society  
Baltimore, Maryland

## It's Time For Our Annual "Parking Lot" Picnic

from Richard Hoff, Program Co-Chair

It's July and we all know that July is when we start our meeting an hour early so that we can have our annual lark in the park (ing lot). Besides lots of food, we'll have a rock swap and some games to play. The date for this fantastic event is our usual 2<sup>nd</sup> Friday of the month meeting night - July 9.



Besides lots of food, we'll have a rock swap and some games to play. The date for this fantastic event is our usual 2<sup>nd</sup> Friday of the month meeting night - July 9.

Dinner will be potluck, so please bring something to share with about 10 other people. The club will provide a grill, hotdogs, setups and drinks. We're all fantastic cooks (or shoppers) so I'm sure the buffet will be as impressive as always. I'm pretty sure that if he's in town, Keith will bring some of his famous ribs and I hope some of you bring fried chicken and perhaps more ribs. We'll also need salads, and of course calories desserts. I'm already starting to drool with anticipation.

We hope you will participate in the swap. It's a tail-gate event where all are welcome to bring hobby related items such as slabs, minerals, jewelry, etc. to trade with others who may have something you're interested in.

Back by popular demand - with all it's tall tales and gross exaggerations will be the "Ugly Rock Contest". To enter, bring along what you consider to be your ugliest rock and be prepared tell us some fantastic tale about it. Your story need not be true, but certainly can be amusing. The winner will receive first choice from the prize table. Then, as if that isn't enough, we'll see how many rounds of "Gem-stone Bingo" we can play before it gets to dark.

If you have something you would like to donate for the prize table, please don't hesitate to do so. Items should be left unwrapped and the material identified.

So come on down and join us for delightful evening of good times and camaraderie. We'll bring some tables and chairs outside, but if you want to bring your comfortable

lawn chair, go right ahead and indulge your comfort.

Remember, the food and fun starts at 6:30 p.m. at the Women's Club of Catonsville - our usual meeting location. If it rains (don't even think rain), we'll move inside.

If you have any questions, call me at 410-602-5280.

*Ed. Note: Everyone should do their "anti-rain dance" at 10 p.m. on Thursday July 8<sup>th</sup> so we'll be assured of good weather. It worked last year, so let's do it again!*



## Welcome To Our Newest Members

from Marilyn Cornish, Treasurer

In the last two months we've been graced by the addition of several new members. Please welcome:

John Kolasa 443 465-2155  
4349 Norrisville Rd.; White Hall, MD 21161  
443 465-2155 <sekol@aol.com>

Mike Shongo & Pepi Rix  
8013 Midhaven Rd; Dundalk, MD 21222  
443-396-7007 <seneda1961@yahoo.com>

and welcome back:

Dave & Trinh Mitchell  
8402 Governors Run; Ellicott city, MD 21043  
410-486-9728 <caverdave@hotmail.com>

Susan & Jonathan Powell  
1995 Rideau Rd; Gloucester ON,, Canada K1K 1E1  
613-425-0901 <7288greely@gmail.com>



## Chesapeake Gem & Mineral Society

Members of the Eastern Federation of Mineralogical & Lapidary Societies  
Affiliated with the American Federation of Mineralogical Societies

The Chesapeake Gem & Mineral Society was established in order to allow its members to gain knowledge and skills in various phases of the Earth Science field. Through field trips, exhibitions, and cooperation with other societies, we endeavor to further not only our own knowledge, but also that of the general public.

Meetings are held on the 2nd Friday of each month except August at the Women's Club of Catonsville, St. Timothy's Lane & Frederick Rd in Catonsville, MD. Meetings begin at 7:30 P.m. and visitors are always welcome.

Dues are \$10 for individuals \$15 for husband and wife, and \$20 for family memberships.

### Officers:

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Gil Charlton

Vice President  
John Buchleitner

Recording Secretary  
Earle Pftzing

Corresponding Secretary  
Phyllis Dyer

Treasurer  
Marilyn Cornish

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Gary White

**2010-11**  
Bernie Emery  
Carolyn Weinberger

### Editor:

Mike Hakulin  
<haksdad@aol.com>

### Guest Editor:

Carolyn Weinberger  
<cscrystals2@verizon.net>

**Deadline is the 15th of each month.**

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## From The Executive Office

by Gil Charlton, President



The June auction gave everyone an excellent opportunity to acquire new specimens and machinery for their hobby. Thanks to all who donated items to the Club Side and a special thanks to all the auctioneers.

It was also great to see the many visitors that came to the auction. One has already become a member and hopefully, more of them will also become new members of our club.

Next is our club's annual July picnic. The picnic starts at 6:30 PM.

Please remember to bring something to share with our members. Hot-dogs, burgers and soft drinks will be provided.

Along with the great food we will have the annual 'Ugly Rock' contest and ROCKS bingo for entertainment.

See you at the picnic,

Gil

## Personals

from Lynne Luger

It was great to see *Virginia White* up and around and at our June meeting. She says she's doing just fine thanks to Gary's nursing skills.



*Mike Hakulin* continues to get a bit better each day. He's still on pain medication, but the dosage has been reduced and cannot yet drive himself because of the drowsiness they cause. He says that he's still getting stabbing pains "like an ice pick being driven into my head", but is managing to cope.

## Coming Events

by Keith Kaneda, Program Co-Chair

For September, new member Martin Schmidt will present a talk entitled "An Overview of the Geology of Maryland". Sounds like a terrific program!

In October we'll have our third and final auction of the year. You might want to start getting your good items ready now!

The November program is still in the planning stage and of course December will be our wonderful annual Holiday Party potluck dinner.

Mark the dates.... September 10<sup>th</sup>; October 8<sup>th</sup>; November 12<sup>th</sup> and December 10<sup>th</sup>.

## June Meeting Minutes

by Earle Pfetzing, Recording Secretary



The June 11th meeting of the Chesapeake Gem & Mineral Society was called to order at 7:50 pm by President Gil Charlton. After welcoming members and guests, he thanked Bernie Emery and Lynne Luger for all the work they did to make the club show a success. They in turn thanked all the members who worked at the show.

Program Co-chair Richard Hoff reminded everyone that the July meeting will be the annual picnic, to be held in the Women's Club parking lot. The event will begin at 6:30 pm on Friday, July 9th.

Treasurer Marilyn Cornish indicated that the club remains financially sound.

Personals: Lynne Luger noted that Larry Krause, who had been a long time dealer at our show, had passed away.

Lynne reviewed the "rules" for the auction and the business meeting was adjourned at 8:02 pm. The meeting itself ended at 10:07 pm.

Submitted by  
Earle Pfetzing  
Recording Secretary

## Wow!!! What a Father's Day for Steve Dyer!!!!

by Phyllis Dyer

I had an extra day off from work giving us a chance to travel to upstate New York to Herkimer and the Adirondack Mountains.

We started the day before checking out the Herkimer Diamond Mine. After finding out when they opened and safety rules etc., we moved next door to the Crystal Chandelier restaurant for dinner. As we were finishing up our meal, the couple from the gift shop/museum came in and sat at the table next to us. We had a conversation about the restaurant, KOA Campground and Herkimer Mine - turns out they own it all, along with their children. They were a lovely couple and offered so much history and information about the area. I was ready to stay a week with all their enthusiasm and the beauty of the area. I will bring the info to the club picnic.

On Friday morning we were up early and at the mine before 9:00 a.m. and then spent the morning banging with hammer, chisel and whatever else was needed. Unfortunately for Steve, when we walked into the mine area, I looked down and found my Herkimer Diamond in matrix. So I was good for the day. Steve did his thing all morning, and I chatted with a young kid from Vermont who found a huge limestone with four to five crystals in the matrix. Then I perused all the piles and wandered until lunch time.

They have the Herkimer Diamond Cafe and nice restrooms for collectors, but Steve and I had our trusty cooler and made our own lunch. Then it was off to their second floor museum - exhibits of New

York minerals, Herkimer Diamonds (of course!), fluorescent minerals and then some worldwide minerals.

Ace of Diamond Mine was next door, but Steve opted not to go there and check it out.



Then we were off to the Crystal Grove Mine and Campground about twenty miles down the road. Steve collected here and met a young couple who had "staked a claim" in one area. They had been coming up for various weekends starting in April and had a pit 6-8 feet in diameter and 5-6 feet deep. At night they put a tarp over their claim to protect their diamonds...as they were pulling some Herkimer diamonds approximately 1 inch long or better from their pit.

On Saturday we took a day trip up into the mountains. Wow again - you need a week or two for the beauty. Our first sighting of the morning was a new fawn and her mom standing in the middle of a lonely mountain road. Then throughout the day it was a wild turkey every few miles. Lucky for the turkey - Thanksgiving is a few months off. We loved the remoteness and beauty of the area, the tiny villages plus the beautiful camping sites along the lakes. Saturday night was our special dinner for Father's Day and a good night's rest.

Sunday took us over to eastern New York above Albany to visit a dear friend. Then back to Maryland. We are awaiting our next adventure, but first we are off to North Carolina to visit Aunt Amberly with the grandchildren.

See you at the picnic.

## *Mineral of the Month*

by Steve Weinberger

Most mineral collectors enjoy going out into the field to gather specimens. The obvious reasons are that specimens are usually free (unless in a fee area), the number of specimens is sufficient for both collecting and trading, and the exercise can help keep us in shape!

Collecting minerals (or cutting rough), does not involve great expense because the tools and equipment needed are minimal. First and foremost is a good 10x loupe. Do not skimp on this because a cheap lens can distort images, cause chromatic aberration, and tire the eye. A good Hastings triplet or Coddington doublet will serve you well. Magnifications higher than 10x will limit your field of view, and much less than 10x will not reveal details of the minerals well. Some of the newer loupes even have LED lights to help you see into vugs or in poor lighting conditions.

A rock hammer is an important tool for breaking away rocks or reducing them in size. Even Bernie uses one! Again, buy a good tool - one made for geological work, not a general household hammer. The hammer should have a square head and either a pick or chisel on the other side of the hammering surface.

Various cold chisels help to pry rocks loose. These come in different widths as well as star shapes. Get one designed for rocks and not woodworking! Long handled pry bars are often needed too. Be sure they are also designed for geological use and not general "around the house" purposes. Good geological hammers and chisels are made by Estwing®, but there are other makers of geological tools as well.

You need to have a good collecting bag, box or pail for your discoveries unless you can juggle 30 or 40 samples while walking back to your car. And don't forget "rock wrap" (newspaper) to help protect your specimens on your way home.

Other tools you might find useful include a knife (for testing hardness), stick on numbers or labels for later cataloging your finds, and a notebook and pencil. Identification of minerals is critical and you can't rely on your memory, especially if you put the pile aside after you get home with plans on getting to it "later". For minerals, you need to indicate the name of the mineral, location, and date you found it (which can be helpful at times). Remember - a mineral without a location is just a rock!

Depending on where and when you go, you want to plan ahead by wearing proper clothing -- long pants, perhaps a hard hat, steel toed shoes, hard hat and safety glasses or goggles. You probably also will need insect repellent, food, and drinking water to keep you hydrated. In some instances you'll also want water to rinse off your specimens before taking them home. Cell phones are essential today as well - just in case there is an emergency.

Do not collect alone and be sure to leave your itinerary with someone who could look for you if need be.

## *Campground at Herkimer*

by Phyllis Dyer

Here's the information about the campground that Steve and I stayed in while in Herkimer, NY. It's a lovely place and the owners do everything they can to make visitors feel at home.

KOA Kampground  
Herkimer, NY  
2010 Campground of the Year

The campground is located right across from the Herkimer Diamond Mine and is run by Sam & Renee Scialdo-Shevat. It's a beautiful campground with many amenities.

Rena & Rudy Scialdo run the nearby museum and another son owns the restaurant.

If you're not into camping, they do have beautiful cabins, cottages and lodges, but you'll need to make a reservation ahead of time as they do get busy during the summer months.

## *Working Dark Colored Agate*

from Rockhound Rambling, Sept. 2008

Working with dark colored Moss Agate - like the black Montana variety, small pits may sometimes appear on the finished, polished surface. The light colored polishing powders, such as tin oxide or cerium oxide, often pack into these small pits, making removal difficult and white spots surely distract from the stone's appearance. Try rubbing a small bit of black India ink into the spotted area, and then try to rub off the ink. The white spots will disappear.

## Spring Sold Out...Fall's on the Horizon

by Steve Weinberger

The good news is that the spring EFMLS Wildacres Workshop was a sell-out and had a waiting list. The bad news is that although we were able to gain a couple of extra rooms, we were not able to accommodate all on the list.



The good news is that our fall session, **is not yet filled** and so, if you act now, you can attend this fun filled, educational week in the mountains of North Carolina. For your registration fee of \$350 per person you'll be treated to a week of fresh air, good food, an opportunity to learn one or more new skills or refresh old ones, hear talks by our excellent speaker, Lisa Carp, meet lots of new people with interests similar to your own, and "get away from it all".

The Wildacres facility is located in Little Switzerland, NC about an hour north of Asheville, on a private mountain just off the Blue Ridge Parkway. There are two "motel style" buildings that house the bedrooms plus a canteen, meeting room and a couple of classrooms. Also on the property is a lovely auditorium, library, dining hall and a variety of other classroom/shop buildings.

The peacefulness at Wildacres is only broken by the sound of laughter, quiet talking and the sounds of nature. (Wildacres however is not a place for those with serious health problems – the terrain is hilly, and the nearest medical facility by ambulance is an hour away.)

So what's keeping you from at-

tending? Our fall dates are September 6 - 12 and the Speaker in Residence is Lisa Carp. Lisa will talk about and show lots of jewelry during her six lectures during the week.

Classes being offered are:

- Cabochons - basic  
Al DeMilo, instructor
- Cabochons - intermediate  
also taught by Al DeMilo
- Faceting -  
Steve Weinberger, instructor
- Geology I -  
Rob Robinson, instructor
- Geology II -  
also taught by Rob Robinson
- Glass Engraving & Etching -  
Jay Bowman, instructor
- Making Metal Beads - Cold Connections  
Pat Baker, instructor
- Making Metal Beads - Hot Connections  
also taught by Pat Baker
- Photog. Small Mineral Specimens -  
Bruce Gaber, instructor
- Photog. Gems & Jewelry  
also taught by Bruce Gaber
- Precious Metal Clay - Bronze  
Lisa Blackwell, instructor
- Precious Metal Clay - Chain Making  
also taught by Lisa Blackwell
- Silversmithing -  
Lendle Hill, instructor
- Wirewrapped Jewelry - basic  
Jacolyn Campbell, instructor
- Wirewrapped Jewelry - intermediate  
also with Jacolyn Campbell

You can download an application form from the EFMLS website <[www.amfed.org/efmls](http://www.amfed.org/efmls)> (click on the Wildacres tab).

Join us for a fun week of learning, sharing, creating and fellowship in beautiful North Carolina!

## Shift in Earth's Axis

by Steve Weinberger

Scientists with NASA believe that the massive 8.8 Chilean earthquake did more than just topple buildings and roadways. They believe that the quake probably shifted the Earth's axis and shortened the length of the day by 1.26 microseconds.



As we know, earthquakes occur when the plates within the earth shift - usually one sliding atop another. The more the plate shifts, the more violent the quake. This movement can change the distribution of mass on the planet which in turn can affect the rotation of the earth.

Richard Gross, a geophysicist at NASA's Jet Propulsion lab in Pasadena, CA uses computer models to calculate the effects of these quakes and shifts. He estimates that the length of our day has been shortened by 1.26 microseconds and the axis has moved about 8 centimeters (3 inches).

Other notable changes as a result of the quake include a 2 meter (6 foot) upward movement of Santa Maria Island off the coast of Chile near Concepcion. Changes to the length of day and distribution of mass are not new. Scientists noted that the 9.1 magnitude Sumatran quake in 2004 shortened the day by 6.8 microseconds and shifted the axis as well.

We probably won't notice any changes to our lives from these shifts, but the scientists are watching.

References:  
MSNBC; Bloomberg Report NASA

# The Wittelsbach Blue

by Jana Barzinski from Gem Cutters News, May 2010

Currently on display at the Smithsonian is the Wittelsbach-Graff diamond, a fabulous gem, just recently sold at auction for a whopping 23.4 million dollars.

Was this blue diamond cut from a sister stone of the French Blue, the original diamond that was



recut into what we now know as the Hope Diamond? Only time and testing will tell.

The stone is slightly oval and when sold, weighed 35.56 carats. It was cut in an unusual pattern - the star facets on the crown are vertically split and the pavilion has sixteen needle-like facets arranged in pairs, pointing outward towards a flat culet.

It is believed that the diamond is of Indian origin. Historical records mention the diamond as far back as the end of the seventeenth century. It was originally given as a gift from Philip IV of Spain to his daughter on the occasion of her engagement to Emperor Leopold I of Austria in 1664. On her death in 1675, the gem passed to Leopold I who later gave it to his third wife. When she died, she bequeathed the stone to her granddaughter. When she married in 1722, the stone was given her name of his family - the Wittelsbachs and it was passed down within the family until 1918 when the last king of Bavaria abdicated.

In 1931 the great gem, along with other Wittelsbach jewels was sold by Christies. And then the diamond disappeared from public view! Rumors included one that the stone

had been resold in 1932 through a Munich jeweller and had reappeared in Holland. It was later proved that the Wittelsbach had been sold in Belgium in 1951 and again in 1955, but the owners were never identified. It is possible that in 1955 the Wittelsbach was put on display at the Brussels World Exhibition, but it was not specifically identified by name.

Then, in 1962 a Belgian diamond expert named Joseph Komkommer received a call asking him to look at an Old Mine cut diamond. When the package arrived and was opened, Komkommer recognized that the dark blue diamond before him must be one of historical significance and subsequently was able to correctly identify the stone as the lost Wittelsbach. He and a consortium of diamond buyers from Belgium and the US were able to subsequently purchase the diamond for £180,000 (\$274,535.00). In 1964 it was sold to a private collector who retained it until December 2008 when it was sold by Christies in London for a record £16.4 million (\$23.4 million!) to Laurence Graff, a London based jeweler.

The stone was damaged, having chips on the girdle. Graff made the decision to have the gem recut - considered sacrilegious in many circles. The resulting recut gem is slightly smaller than the original - now 31.06 cts.. Following the recutting, the name was formally changed to the Wittelsbach-Graff Diamond.

It has been suggested that the Wittelsbach was cut from the famous French Blue Diamond which originally was purchased in India by Tavernier and sold to Louis XIV

of France. It has been proven that the Hope Diamond was cut from the French Blue. From what we know of the French Blue, it is highly unlikely that it could have yielded two large stones, but there is the possibility that the rough that Tavernier purchased in India yielded both the French Blue AND another gemstone. Tests will soon be done on the Wittelsbach-Graff to see if the diamond has similar properties to the Hope and thus the French Blue.

You can view this fabulous gemstone at the Smithsonian until August. For a limited time too, you can see the Hope Diamond on display

out of its setting. As a tribute to the 50<sup>th</sup> anniversary of its donation to the Smithsonian, a new setting is being fabricated and the stone will be displayed in this new setting sometime in early summer. After a few months, it will be remounted in its old setting once again.



The Hope Diamond out of its setting



"Embrace Hope" the new temporary setting for the Hope Diamond will be unveiled later this year



The Harry Winston setting we're familiar with

## The First American Gold Rush: The Forgotten Gold Rush

by Jackie "Georgia Peach" Fisher, from the Stone Chipper, June 2009

1st place - AFMS 2010 Original Article Competition

When people think of the so called "Gold Rush," they usually envision miners and donkeys headed west to California or north to Alaska, but there was an earlier rush to riches in America - in Georgia in 1829. Prior to the Georgia Gold Rush of 1829 there was knowledge of gold in north Georgia. American Indians possessed gold which they said came from the mountains. There were also reports that the Spanish and French mined gold in north Georgia from 1560-1690.

A rich belt of gold was found in what was later to become Dahlonega in 1828, and the Georgia gold rush started in 1829. Dahlonega comes from the Cherokee language meaning yellow money. By 1830, 4,000 miners produced 300 oz/day from an area on Yahoola Creek. By 1831 an estimated 15,000 miners were in Dahlonega.

An Act of Congress in 1835 established the United States Mints in Dahlonega, Georgia and Charlotte, N.C. These mints coined only gold. The mints existed for only 24 years and ceased operation during the Civil War.

Gold from Dahlonega had a silver content of less than 5% which caused the coins to have a greenish gold hue. The fineness standard was .900 so the silver was left in the gold from Georgia. When gold from California was brought to the mint, the silver content was around 15%. so silver was removed, possibly resulting in an orange gold color. If gold content exceeded .900, copper was added to achieve .900 fineness.

By the early 1840's mining shifted to working on deposits. When miners heard of the California Gold Rush, many left. Some 500 mines in 37 counties produced gold for many more years. An estimated 870,000 troy ounces were produced between 1828 and the mid 20th century when commercial production ended.

Miners from Georgia also played roles in gold mining in Colorado. John H. Gregory discovered the first Colorado gold lode in 1859. Golden Colorado was named after a Georgia miner named Thomas L. Golden. Aurlia Colorado, which later merged with Denver, was founded by Georgia miners.

On May 13, 2008, one million dollars in sunken coins from Dahlonega were recovered from the 1846 shipwreck of the SS New York, off the coast of Louisiana. The ship was sailing from Galveston to Louisiana. There are still treasures to be found in Georgia and I have been to Dahlonega myself to pan for gold. Perhaps you could find something there too.

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## Ripple Marks On Your Slabs?

from The Gem Rock, November 2007

There are several reasons for this problem:

- The carriage (or arbor) may be out of alignment.
- The blade may not be dished.
- The bearing may be faulty.
- The blade may not fit the shaft properly.
- The feed speed may be too fast.

To find a remedy, slow the feed speed. At the same time, make sure the blade is sharp. If it is not sharp, dress by running a piece of brick or grinding stone through several times. If this doesn't help, check the alignment. Check the bearings by trying to wiggle the shaft. If it wobbles, the bearings are faulty. Be sure there isn't any dirt under the shaft collars. If your check indicates misalignment, and you don't have the experience to re-align the carriage, contact your supplier or manufacturer.

Don't let the blade slow down during cutting. Variation in RPM destroys accuracy, reduces cutting efficiency and dulls the cutting edges of the blade. Use ample motor power. When running the piece through by hand, use only light, firm pressure. Tighten vise clamps after every few cuts for a smoother cut. Successive slabs are sawed from one piece of rough.

To cushion rocks in a vise, use rubber composition such as stair treads, boot soles, etc. If blocks must be used, line with the composition for a snug fit. To mark rocks for trim sawing, use a Flair® pen instead of the aluminum pencil. It is easier to see and doesn't run in oil coolants. It is also water-soluble.

## *The World of Minerals: Tiny Diamonds Hint at Past Catastrophes*

by Dr. Vivan Gornitz, Bulletin of the NY Mineralogical Club, March 2009

8th place, AFMS 2010 Advanced Adult Articles Competition

Recent discoveries of minuscule diamond grains in 12,900 and 2,300-year old sedimentary layers from various locations provide evidence for two unrelated meteorite impacts that had far-reaching consequences. The impact event at 12,900 years ago may have triggered a 1,300-year cold spell that temporarily reversed a warming trend at the end of the last Ice Age, while the younger event may have set off a powerful tsunami that swept over Long Island and the site of present-day New York City.

Nanodiamonds are found in meteorites and at impact sites, such as Meteor Crater, Arizona. The heat and intense pressures at the moment of impact convert the meteoritic graphite into diamond. In addition, the hexagonal polymorph of diamond, lonsdaleite, is also detected at impact sites. Lonsdaleite belongs to the hexagonal crystal system. It has an index of refraction of 2.40 to 2.41, a specific gravity of 3.2 to 3.3, and a Mohs hardness of only 7-8. Its lower hardness, as compared to diamond, is attributed to the presence of impurities and lattice defects. The atomic arrangement in lonsdaleite is related to ordinary diamond as that of wurtzite is to sphalerite, when all of the Zn and S atoms in each polymorph are replaced by carbon atoms.

Minute diamonds, ranging in size from 2 to 300 nanometers, were recently reported from 12,900-year old sediments at numerous localities across North America and northwest Europe. Three diamond polymorphs—cubic diamond, lonsdaleite, and n-diamond—were identified by electron diffraction. (N-diamond is another form of crystalline carbon also asso-

ciated with impacts). In addition to the nanodiamonds, magnetic microspherules, higher than average levels of iridium, and carbon spherules—all consistent with the occurrence of an impact event—appear within this widely distributed time horizon. The 12,900 year old date is significant in that it marks the onset of the Younger Dryas, a 1,300-year period toward the end of the last Ice Age, when glacial conditions recurred. Most geologists had previously believed that the cold climate was provoked by a sudden influx of frigid water released by the melting and disintegrating of ice sheets surrounding Hudson Bay, Canada, that flowed into the north Atlantic Ocean. This cascade of icy fresh water disrupted normal ocean circulation patterns and prevented the warmth from the Gulf Stream and its northerly extension—the North Atlantic current—from reaching the north. As a result, the entire region plunged back into an ice age. The native American Clovis hunting culture disappeared at this time, as did the woolly mammoths.

The new findings, however, suggest that the trigger for the Younger Dryas may instead have been a meteorite impact that struck the ice sheet or exploded in the air above, like the mysterious Tunguska event in Siberia, 100 years ago. A sudden impact, rather than climate warming, could have disaggregated the ice sheet, setting into motion the chain of events described above. Skeptics, however, point out the absence of a crater and absence of shock metamorphosed and melted minerals in the alleged impact sediment layer. While the nanodiamonds are suggestive, they feel that additional evi-

dence would be necessary to make a more convincing case. Some even question whether nanodiamonds were found or, if they are indeed diamonds, where they came from.

Meanwhile, lonsdaleite nanodiamonds were also found in approximately 2,300-year old shelly sand and gravel deposits sandwiched in between organic marsh deposits off the shores of New Jersey and Long Island. In contrast to the Younger Dryas boundary, grains of feldspars, ilmenite, and olivine showing planar deformation lamellae were found in addition to the lonsdaleite, features typical of shock metamorphism effects associated with impacts. The thick gravelly deposits were interpreted as tsunami deposits, created when a meteorite crashed into the ocean off the coast of Long Island. While powerful hurricanes could also pile up heaps of sand and gravel, the thickness of the layer—up to a foot and a half—argues against a storm deposit. Furthermore, one would be hard pressed to explain the presence of a high-pressure polymorph of diamond and shocked mineral grains in an ordinary storm deposit.

Two conclusions can be reached, based on this new research. The first is that minerals can provide important clues that help to decipher past mysterious and violent events in Earth history. The second is that, if the impact hypothesis proves correct, meteorite collisions may be a lot more frequent and commonplace than previously imagined, with potential implications for our future safety and survival of our civilization.

continued on page 10



THE GEM, LAPIDARY and MINERAL SOCIETY of WASHINGTON, D.C., INC.  
5010 Lightfoot Avenue, Silver Spring, MD 20901

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AND SALE

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Directions on reverse side

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**August 20 - 22**  
**LEBANON, PA**


**Beads! Findings! Minerals! Fossils! Gems & Jewelry!**

**THE MID-ATLANTIC'S BEST SHOW**

RETAIL AND WHOLESALE EXHIBITORS  
 CLASSES, TALKING & CAMPING  
 BEAD, JEWELRY AND MINERAL RELATED DEMONSTRATIONS  
 OPEN TO THE PUBLIC ♦ WHOLESALE ROOM

FRIDAY & SATURDAY, AUG. 20-21: 10 A.M. - 6 P.M.  
 SUNDAY, AUG. 22: 10 A.M. - 4 P.M.

**\$6 ADMISSION - CHILDREN UNDER 12 FREE**



Lebanon Expo Center, Route 72  
 5 mi. N. of PA Turnpike—Exit 266 (old exit 20),  
 right on Rocherty Road.  
**www.gem-show.com**  
(see website for updates)  
**(717) 838-8870**



*Committee Chairpersons*

**Auctions - Lynne Luger and Bernie Emery**

**Directory (address changes) Carolyn Weinberger**

**Field Trips - Dave Fordyce**

**Greeters - Al Pribula, Earl Pftzing**

**Hospitality - Liz & Wendy Stanne**

**Legislation - Dave Fordyce**

**Library - Tony Wilner**

**Mineral of the Month - Steve Weinberger**

**Personals/Announcements/ Sunshine - Patricia Smith and Lynn Luger**

**Programs - Richard Hoff, Keith Kaneda & Tony Wilner**

**Safety - Johnny Johnsson**

**Show - Bernie Emery and Lynne Luger**

**Showcase - Steve Dyer**

**Telephone Chain Lynne Luger**

**410-832-5906**

**Phyllis Dyer**

**410-349-1630**

**Dawn Johnsson 410-833-5508**

**Mary Chandler 301-663-8348**

**Liz Stanne 410-486-3774**

**Wendy Stanne 410-486-4018**



Carolyn Weinberger  
PO Box 302  
Glyndon, MD 21071-0302



## Mark Your Calendar

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### July:

9: Annual "Parking Lot" Picnic.  
Note the 6:30 pm start time!

28: Baltimore Mineral Society meeting. Cockeysville Fire Hall - York Rd just south of Shawan Rd. 7:30 pm. Program - 2010 Tucson Gem Show.

### August:

7 - 8: GLMS/DC annual show. Stone Ridge School, 9101 Rockville Pike, Bethesda, MD. See discount flier on previous page.

13-15: East Coast Gem & Mineral Show; W. Springfield, MA. Featuring the collection of Bill Larson of PALA International (think pegmatite minerals!).

20-21: Gem Miners' Jubilee. Lebanon Expo Center. See discount flier on previous page.

### September:

6-12: EFMLS Fall Workshop at Wildacres

10: Chesapeake Gem & Mineral Society meeting. First meeting of the fall season!

18-19: 45th Annual Central PA Rock & Mineral Show. Zembo Shrine, 3rd & Division Sts., Harrisburg, PA.

25-26: Atlantic Coast Gem & Mineral Show at the Howard Co. Fairgrounds. The club will have an info table and display.

## Tiny Diamonds

*continued from page 8*

### For Further Reading:

Cagen, K.T., et al., Evidence for a Tsunamiogenic Impact Event in the New York Metropolitan Area Approximately 2300 B.P., *Eos Trans. AGU*, 89 (53). Fall Meet. Suppl. Abstract P31A-1381.

Chang, K., 2009. Scientists Link Diamonds to Quick Cooling Eons Ago. *New York Times*, Jan. 2, 2009.

Chang, K., 2008. Meteorite Strikes. Setting off a Tsunami: Did It Happen Here? *New York Times*, Dec. 30, 2008.

Kennett, D.J., et al., 2009. Nanodiamonds in the Younger Dryas Boundary Sediment Layer. *Science*, 323, 94.

Krentz, S. et al., Evidence for a Tsunami Event and Coastal Reorganization in the New York Metropolitan Region -2300 yr BP. *Eos Trans. AGU* 89 (53), Fall Meet. Suppl., Abstract OS5 3 B-1311.

West, A., et al., 2008. Presence of all Three Allotropes of Impact-Diamonds in the Younger Dryas Onset layer (TDB) Across N America and NW Europe. *Eos Trans. AGU* 89 (53), Fall Meet. Suppl., Abstract PP23D-01.