

# Nittany Mineralogical Society Bulletin

Nittany Mineralogical Society, Inc.

P.O. Box 10664

State College PA 16805

Editor (see page 8):

David C. Glick

February, 2014

Visit our web site: [www.nittanymineral.org](http://www.nittanymineral.org)

## February 19th meeting:

**TWENTY YEARS AGO** this month, Dr. Duff Gold presented our club's first program, *How Do Diamonds Form?* We're pleased to have him revisit the topic of diamonds in this month's program.

**NOTE:** If Dr. Gold's schedule prevents him from presenting his program on diamonds, we will have a new program by Dr. Charles Miller on *Geology from the Air*, using images from passenger airplanes to observe interesting geology.

## Diamonds

by David (Duff) Gold  
Emeritus Professor of  
Geology,  
Penn State Department of  
Geosciences



*Our February meeting will be held Wednesday the 19th in room 116 (smaller auditorium) of Earth & Engineering Sciences Building on the west side of the Penn State campus in State College, PA. Maps are available on our web site.*

*6:30 to 7:30 p.m.: Social hour, refreshments in the lobby*

*7:30 to 8:00 p.m.: announcements, questions, answers*

*about 8:00 p.m.: featured program*

*The event has free admission, free parking, and free refreshments, and is open to all; parents/guardians must provide supervision of minors. Bring your friends and share an interesting evening.*

Early man recognized the uniqueness of certain pebbles by their equant shape, relatively high density, extreme hardness, light color, clarity and sparkle, and cherished them as a talisman. Although most are transparent and colorless, varieties include blue, red, green, black and "beer bottle" brown. The mystique of diamonds has developed from their rarity and has grown with clever marketing and the technological advances that made use of some of these unusual and extreme properties. Amongst these has been the cutting and polishing techniques that have exploited their high refractive index to enhance their beauty in jewelry and convey a message of wealth and prestige for the wearer. Their value to an industrial society lies in their use in abrasives, grinding tools and die stones.

*Continued on page 2*

## Junior Rockhounds Meetings:

Sorry, we have been working on it but do not have a meeting planned for February. We share your disappointment. - *Junior Rockhounds Chair*

## 20 Years of NMS:

## Another Junior Ed. Day Coming Up

by David Glick

President and Newsletter Editor

This is it, the twentieth anniversary of our first meeting! I offer my congratulations and deep gratitude to those whose involvement and support have kept the Society such an active organization through those decades. I wasn't involved at the beginning, which makes me even more impressed with those who were.

At last month's meeting reviewing our history, we had hoped to conclude with some time for discussion, but my long program on "where we've been" made us run short of time. We can take some time during this month's meeting 7:30 time slot for any discussion of "where we're going" and other such topics.

Our history has featured a long list of symposia, shows, field trips, and meetings for kids, but aside from our monthly regular meetings, our longest-running activity has been our annual **Minerals Junior Education Day**. This year will mark the 18<sup>th</sup> such event. At this time, we've had a very good response for the tentative April 5<sup>th</sup> date from the leaders of many popular stations; we're working on finding a venue. Unfortunately, Boalsburg Fire Hall, which worked very well last year, is undergoing renovations and is unavailable. We are pursuing possibilities and hope to have an announcement of a location and a definite date very soon. **We welcome volunteers** to prepare, set up, present, and pack up. Please contact me (see p. 8) if you can help. Donated specimens, tools, mineral books, etc. are also welcome for our sales table. Last month's Bulletin had additional details. ❄

### ATTENDING THE FEBRUARY MEETING?

Donations of labeled **door prize specimens** are invited.

Your donated snacks and drinks will be welcomed.

Bring a friend!

## Diamonds *Continued from page 1*

My talk covers a brief review of the types of diamonds, their origin, habitats, source regions and exploration models. It is apparent that diamonds form in the upper mantle beneath “old cold cratons” and are much older than their emplacement age in volcanic-type pipes and dikes that transport them to the surface. I will present an example of an artisanal mining and concentrating process at Lemphane, Lesotho and contrast it with “economy of scale” and “vertically integrated” operations at Orapa, Jwaneng, Letlhakane and Karowe in Botswana.



Jwaneng open-pit diamond mine, Botswana.

*Public domain image by Cretep, from Wikipedia.*



Uncut diamond crystals.

Most diamond mines are marginal ventures where operational and processing and marketing costs for gem quality “stones” can be broken down to approximately 26% to mining and sorting, 4% to cutting and polishing, 20% to the manufacture of jewelry, and 50% to retail jewelers. The success of the Botswana model lies in the coupling of an “economy of scale”, and “vertical integration” operations with good management. It could serve as the flagship for mineral exploitation in the Third World. ✨

## Meeting Programs Coming Up

Mar. 19: Geode Night, with the ever-popular Jeff Smith “The Geode Guy.” Buy a geode and be the first to ever see inside when it’s cracked open for you, or just come and enjoy Jeff’s program, with updates from his 2013 visit to the source of the Mexican geodes.

Apr. 16: Rock Spheres: Discovery Cubed, by Jim Garthe

## NEWS FROM THE FEDERATIONS

Nittany Mineralogical Society, Inc., is a member of EFMLS, the Eastern Federation of Mineralogical and Lapidary Societies, and therefore an affiliate of AFMS, the American Federation of Mineralogical Societies. We present brief summaries here in order to encourage readers to see the entire newsletters.

The **EFMLS Newsletter** is available through the link on our web site [www.nittanymineral.org](http://www.nittanymineral.org), or remind Dave Glick to bring a printed copy to a meeting for you to see. The February issue includes class descriptions, schedule and registration form are included (and are also on the EFMLS web site). Ellery Borow’s safety article says “wear the right mask for the task,” to protect from dust or fumes as needed. Ten new video programs from the 2013 Rochester Symposium have been added to the EFMLS library, including those by Quintin Wight, John S. White, and Jeff Scovil. Historian Andy Celmer revisits some of June Culp Zeitner’s 1968 thoughts on rockhounds’ public image and preserving field trip possibilities.

The **EFMLS Convention** will be held at Plymouth Meeting, PA, outside Philadelphia; the meeting will be Friday, March 28, and the Philadelphia Mineral Treasures & Fossil Fair will be on the 29<sup>th</sup> and 30<sup>th</sup>. See the new article reprinted on page 3 of this Bulletin.

The **AFMS Newsletter** is available by the same methods. The February issue includes part 2 of Jon Spunaugle’s article on club tax status. The Inter-Regional field trip for 2014 will be near Terry, Montana, July 31-August 4; collecting will include agates in the Yellowstone River gravel bars, Cretaceous invertebrate fossils, and dinosaur fossils. The conservation & legislation article covers rules applied to “special designation” public lands such as wilderness areas. Shirley Leeson’s ALAA article notes there are plenty of public lands (generally National Forests) east of the Rockies, and they too have management plans which affect access for rockhounds (and can be influenced by public input, including input from rockhounds). Several Club Rockhounds of the Year are introduced.

Please see the web sites for the complete Newsletters. There’s a lot there! *- Editor*

## 2014 EFMLS CONVENTION COMES TO PHILADELPHIA- MARCH 28-30

*by Karenne Snow, Convention Chair*

The Philadelphia Mineralogical Society and the Delaware Valley Paleontological Society are proud to be the hosts of the 2014 EFMLS Convention. The two societies have hosted "Mineral Treasures + Fossil Fair" at the LuLu Shriners Temple in Plymouth Meeting PA for almost 15 years and have gained a reputation for holding a premier club show.

The "Mineral Treasures + Fossil Fair" show features more than 25 mineral and fossil specimen dealers recruited by PMS while the DVPS sales arena is a true fossil fair. Both societies combine their efforts to create a kid-friendly experience in the Kids' Corner on the show floor. There is a fossil sandbox filled with all kinds of goodies for the kids to search for and all children are invited to select 6 mineral specimens to take home. Information packets for Scout leaders are available to help Scouts with their badge requirements. Both of our clubs believe in sharing the fun and learning of our hobby with the next generations of collectors and scientists!

Mineral exhibits and fossil exhibits are interspersed throughout the show area. We're looking forward to this year's Convention exhibits expanding these educational offerings into a third room! A unique addition to our show the last several years is a mineral exhibit from the Academy of Natural Sciences of Drexel University in Philadelphia.

When you come to the show, be sure to allow enough time to listen to the lectures that both our societies plan. There is something for every mineral or fossil person.

The EFMLS Convention gives us in the Philadelphia area an opportunity to share some of our favorite places with you. We're particularly excited to be offering a trip to the Wagner Free Institute of Science, a Victorian-era museum and a marvelous step back into time. Our second field trip is an excursion into the Wissahickon Creek area of Fairmount Park to see the intense metamorphic processes that produced the famous Wissahickon schist and its associated minerals - garnet, staurolite, kyanite, magnetite, and tourmaline. If you join us for the Convention allow some time before and after the weekend to enjoy other historical and scientific offerings of the Philadelphia area. We have lots of ideas that we are eager to share with you!

Mineral Treasures + Fossil Fair Show March 29 - 30 at  
LuLu Temple, 5140 Butler Pike,  
Plymouth Meeting PA 19462

EFMLS Convention March 28 - 30 at the DoubleTree  
Suites by Hilton Philadelphia West  
640 Fountain Road, Plymouth Meeting PA 19462  
Call 610 834 8300 for the convention room rate.

Convention packets will be mailed shortly or you can  
request a convention packet from  
<minerals.fossils.rocks@gmail.com>

**Directions to Lu Lu Shriners Temple**  
5140 Butler Pike  
Plymouth Meeting, PA 19462

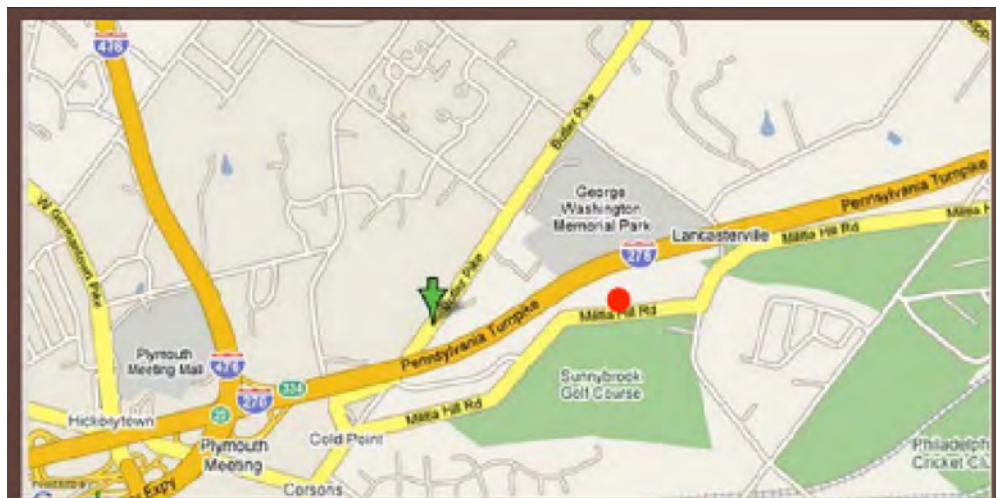
### **From the PA Turnpike (I-276):**

Take Norristown exit 333. After tollbooth follow signs for Plymouth Rd. Turn right at bottom of ramp onto Plymouth Rd. Continue to the traffic light. Turn left at the light onto Butler Pike and proceed 3/10th mile, bearing left where the road forks to a stop sign. Proceed through the stop sign, bearing right, for 5/10th mile, passing beneath the Turnpike, to Lu Lu Shriners Masonic Temple which will be on the right.

### **From the Blue Route (I-476):**

Take exit 20. Follow signs for Plymouth Rd, bearing left. At the bottom of the ramp turn right onto Plymouth Rd. Continue to the traffic light. Turn left at the light onto Butler Pike and proceed 3/10th mile, bearing left where the road forks to a stop sign. Proceed through the stop sign, bearing right, for 5/10th mile, passing beneath the Turnpike, to Lu Lu Shriners Temple which will be on the right.

The Philadelphia Mineralogical Society looks forward to hosting you at the 2014 EFMLS Convention and Show. Mark your calendar now for March 28-30, 2014.



## American Rockhounds in Germany: Our Hunt for an Idar-Oberstein

by Jim Brace-Thompson

Ventura Gem & Mineral Society (CFMS)

From: Rockhound Ramblings, 11&12/2012

(6<sup>th</sup> place, AFMS Original Adult Articles, 2013)

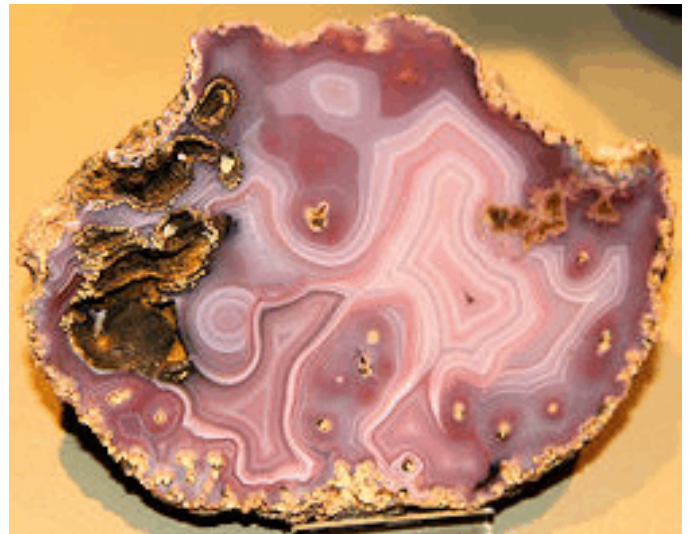
What do you do when your daughter's been living in Germany for two years, and you have yet to receive an Idar-Oberstein agate on your birthday? Nancy and I packed our bags and headed to Berlin for a visit with the wayward girl and her boyfriend, Peter. I forgive Hannah for not sending a Solnhofen fossil bird, but an agate should've been a slam-dunk. Maybe it's her way of getting even for dragging her on those hot, dusty field trips to the Mojave Desert as a child. In any event, it was off to Germany with a mission: bring home an Idar-Oberstein or bust!

Before we depart, though, what's so dang special about an Idar-Oberstein? It might be said that the whole modern gemstone agate industry—and our lapidary hobby—began in 1497 in what were then two small villages separated by the river Nahe. These villages had two things going for them: volcanic rocks filled with agate and jasper nodules and water power provided by the Nahe to run mills for cutting.

We arrived in Berlin on October 20 and found a landscape reminiscent of a New England fall with yellow and orange foliage punctuated by bursts of bright red. Leaves floated through the air. After visiting with Peter's Slovakian parents and two days making "normal" tourist stops, we made our way to the Museum für Naturkunde. Severely damaged during WW II, parts of the building are still being restored and one fossil hall was closed for renovations. As compared to other major museums I've visited, this one seemed small, but appearances can be deceiving. The collections consist of 30 million specimens, with just a tiny fraction displayed. A central hall is devoted to dinosaurs and features the world's largest mounted dino skeleton. The hall also holds Solnhofen

fossils. Solnhofen is the locality of Archaeopteryx, the first bird, and this museum has the most complete specimen found to date. To our luck, it had been removed from its case and was under study in a small room adjoining the exhibit hall, allowing us a rare close-up look. Adjoining the dino hall was a mineral hall, with cases crammed on top of cases. If variety is your thing, 75% of the mineral species on earth are here. Most, though, were "specimen grade" with museum-quality pieces interspersed. I would've preferred seeing fewer, flashier specimens better highlighted—like they had done in the dino hall. The mineral hall, though, gave us our first peek of what brought us to Germany: a couple Idar-Oberstein agates. (Okay, Nancy. I admit. We also came to see Hannah and Peter....) But a peek was all we were to get; their museum gift shop sold not a single rock or fossil—just knickknacks, toys, postcards, and books.

Then Hannah mentioned a rock shop, Der Krystall-Laden. My ears perked up, but as former VGMS member Red Jioras had warned me, most German rock shops look like they did their shopping at Tucson. This one proved no different, filled with Brazilian agate and amethyst, healing stones and crystals, beads and baubles, Moroccan fossils, tumbled stones, Green River fish, and Arizona petrified wood. But, contrary to Red's warning, they also had three small shelves of



Samples of Idar-Oberstein agates.



Archaeopteryx fossil on display

German specimens. Most were minerals from industrial mining districts, as well as thunder eggs from Saxony—still no Idar-Oberstein. The time had come to go to the source!

We spent a day driving a rental car across Germany, from Berlin to Trier on the Luxemburg border, with Nancy happily scooting along the autobahn at speeds of over 100 miles-per-hour. The closer we got, the more we entered a fairy-tale landscape, with vineyards snaking up steep slopes, villages of half-timbered houses, and castles commanding the high ground around every bend. After settling into the hotel, we did an evening tour of the Roman wall of Trier and its cathedral, which seems to have been sacked by every invading army since the Vikings.

Morning found us closing in on our goal. On the road to Idar-Oberstein, we passed more fairy-tale landscape and contemporary windmills whirling in the breeze. A caution to anyone who may follow in our footsteps: get a good map. These are medieval villages and aren't based on the square grids of modern American towns. We spent much time just finding our way. But that way finally led to the Deutsches Edelsteinmuseum (German Gemstone Museum) and Museum Idar-Oberstein.

The latter sits beneath a cliff featuring the Felsenkirche



Scenic drive to Idar-Oberstein.

("Church in the Crag"—built literally into the cliff face) and the remains of two castles perched above. While the museum in Berlin had given us a glimpse of Idar-Oberstein agates, these two museums ate up a whole memory card in my camera as I clicked away at one local agate after another. The two museum gift shops were much like the Berlin rock shop—apparently stocked at Tucson—but there, sitting on a shelf in the Deutsches Edelsteinmuseum shop, I finally found it! I felt like Gollum from Lord of the Rings, holding "my precious" in my grubby little hands. Even though "my precious" wasn't the prettiest agate in the world, it was an honest-to-goodness Idar-Oberstein, plucked from the earth in the very vicinity where I was standing.



Steinkaulenberg mine tour

To see exactly where it came from, our next stop was the Steinkaulenberg Edelstein Mine. At one time, 100 mines dotted the hills in this region, but they eventually played out or became too dangerous to work further, and the local agates were replaced by supplies shipped in from Brazil, where local residents had immigrated. While most of the mines have been permanently shut off, a few are still accessible, and the Steinkaulenberg offers underground tours. (They also have a field salted with agates where you can scrape around to find one of your own on a fee-dig.) The mine was restored and opened in 1979 and has seen 2.6 million visitors since. They had a brisk flow while we were there with groups of 2 dozen at a time. The tour was impressive, and you could view almond-shaped gas pockets in the host rock filled with agate, jasper, and quartz crystals. But if I thought I was going to come away with an Idar-Oberstein agate from the very source, I had to think again. Plucking at stones in the mine was verboten, and the gift shop held only dyed Brazilian agates, Brazilian amethyst, and small trays of common tumbled stones and minerals all arranged—as my daughter noted—in typical German fashion: alphabetically.

What surprised me was the quantity of fine amethyst. I'd always heard of Idar-Oberstein agates but not amethyst. Although much smaller, the vugs rival Brazilian amethyst cathedrals in their deep-purple hue. In the earliest days of mining, these were cast aside since lapidary techniques of the



Historische Weiherschleife (gemstone mill).

region were tilted to agate polishing, not gemstone faceting. During the mine tour, we learned that it took a year of hard hand labor to go just one meter into the dense rock, and if you didn't make a strike, you were plumb out of luck. And even if you did strike it big, the best pieces would be claimed by a local noble. Cold, damp, and dangerous conditions with bad air and dim lighting resulted in most miners dying before age 35. Artisans grinding the stones fared little better; few survived beyond their 30s due to silicosis from inhaling rock dust.

To see the conditions these artisans faced, our final stop for the day was the Historische Weiherschleife (Historic Gemstone Mill). The general layout, sounds, and smells were the same as a lapidary workshop today—except for the size of the equipment (sandstone grinding wheels 4.5 feet in diameter and over a foot thick) and the huge belts dangling all around, connected to axles run by a waterwheel instead of electricity. Also, instead of sitting at your grinding wheel, you laid belly-down on an oblong bench, literally keeping your nose to the grindstone.



Nancy and some jumbo grinding wheels.

So we finally had an Idar-Oberstein. But, like Gollum, I wasn't satisfied. Next day, Nancy was speeding along the autobahn again on our way to The 49th Annual Munich Show, billed as "Europe's top show for minerals, gems, jewelry, and fossils." In other words, the Tucson of Europe.

When we arrived in Berlin, it was sunny and warm. In Munich we had two days of nonstop snow, which required



Tyrolean Duet entertaining show-goers.

much beer-drinking to stay warm. Fortunately, we'd be inside most of the time, and as soon as we walked in, I knew I'd found my new favorite show. The crowds were big and flowed nonstop, prices were reasonable (very un-Tucson-like), and many of the dealers were "diggers" themselves with personal stories about their wares.



Holger Quellmalz—the Lowell Foster of the thunder egg district of Germany—surveys his display case at the Munich Show.

Best of all, the first two booths were from Idar-Oberstein and Freisen, with agates for sale. Here and there in the hall, we saw more Idar-Obersteins and by the end of our trip, I had secured a half dozen, not as great as those we'd seen in the museums, but still! Plus, we experienced things you just don't see at Tucson, like the Tyrolean accordion duet that inspired folk dancing in the hall. As a final bonus, I met and talked with "Mr. Agate" himself: Rainer Bode, publisher of the highly acclaimed book series *Agates I, II, and III*. For anyone hoping that a reprint of *Agates I* might be in the works (Lowell?), sorry to disappoint. They advised that we try eBay or used book shops. But I do have Rainer's business card with his email address in case we want to mount a reprint campaign. Meanwhile, like Gollum, it's time for me to end my story and slink away to covet my precious. Oh. Did I mention the German fossils we found? Next time! ❄

## Geo-Sudoku

by David Glick

This puzzle contains the letters AEIGKMNRT, and one row or column spells out one of the non-geological factors affecting the retail cost of diamonds. Each block of 9 squares, each row, and each column must contain each of the nine letters exactly once. The solution is on page 8.

	T	K	M		N			
R	I	M		K	E			
	E			T		K	I	
N						A		E
M	A	R						
I		E			M			
K	R	I	T			E		
			E				G	I
E	M		A					T

### Delaware Mineralogical Society

#### 51st Annual Earth Science Gem and Mineral Show

To foster interest in geology, mineralogy, paleontology and the lapidary arts

**WHEN** - Saturday, March 1, 2014 - 10 A.M. to 6 P.M.  
 Sunday, March 2, 2014 - 11 A.M. to 5 P.M.

**WHERE** Delaware Technical & Community College  
 400 Stanton-Christiana Road  
 Newark, Delaware 19713  
 Exit 4B off I-95

**HOW** - Tickets available at the door. Adults \$6.00, Seniors \$5.00, Juniors \$4.00, and children under 12 free with Adult.

#### FEATURES

- Interesting and educational exhibits of mineral, lapidary and fossil specimens
- Displays from regional and university museums
- Expanded list of outstanding dealers of minerals, fossils, gems, jewelry and lapidary supplies.
- Hourly door prizes and large specimen raffle
- Lapidary demonstrations
- Children's booth where youngsters may purchase inexpensive minerals, fossils

#### For further information, contact

- [www.delminsociety.net](http://www.delminsociety.net)
- Wayne Urion (302) 998-0686  
 (E-Mail- [wurion@aol.com](mailto:wurion@aol.com)) (Show Chair)

**Info and Discount coupons at** [www.delminsociety.net](http://www.delminsociety.net) ❄

## Rutgers Geology Museum Open House

February 29 —New Brunswick, New Jersey:

9:00 a.m. to 4:00 p.m.

**It's All Free!**

Mineral Sale: 135 Scott Hall.

Mineral ID in Scott Hall Room 206 from 11:30 3:00.

Check out <http://geologymuseum.rutgers.edu> for more information.

#### Presentations announced are:

- 10:00 am to 11:00 am, "Imaging the Ancient Margin: How the Southeastern United States Was Built", Presented by Dr. Lara Wagner, University of North Carolina Department of Geological Sciences
- 11:30 am to 12:30 pm: "Quarrying Urbanite (Concrete): Treating the City as a Geological Resource", Presented by Tobiah Horton, Rutgers University Department of Landscape Architecture
- 1:30 pm to 2:30 pm: "Multiple Meteoroid Impacts in Antarctica
- and the Mid-Brunhes Event/ Marine Isotope Stage 11: If there's a connection, there are serious implications for humanity", Presented by Dr. Alan R Rice, American Museum of Natural History Department of Earth and Planetary Sciences
- 3:00 pm to 4:00 pm: "Rising Tides: What Can the Past Tell Us About Future Sea Level Change?", Presented by Dr. Robert E. Kopp, Rutgers University Department of Earth and Planetary Sciences.

Also, there will be special Hands-on activity sessions for kids (ages 8+) in Scott Hall: Earth Impact, Drilling into Science, Marine Ecology, and Skeleton Detectives. These are offered at various times throughout the day. ❄

## Classifieds

**Ads may be submitted to the Editor (see page 8)**

**FOR SALE:** 2 Homemade Lapidary saws for sale - 14" and 18". Both come with working motors, arbor, belt, pulley, rock clamp/carriage, and a blade. Both are mucked-out and ready to move. Both could use a little TLC. For more info contact Mike Zelazny at [fabricatefilm@yahoo.com](mailto:fabricatefilm@yahoo.com)

## Some Upcoming Shows and Meetings

Our web site <http://www.nittanymineral.org> has links to more complete lists and details on mineral shows and meetings around the country.

**March 1-2, 2014:** Delaware Mineralogical Society Show, Delaware Technical & Community College, Stanton, Delaware. Sat. 10 - 6, Sun. 11 - 5. <http://www.delminsociety.net/marchshow.htm>

**March 22-23, 2014:** Che-Hanna Rock & Mineral Club Show. Athens Township Volunteer Fire Hall, 211 Herrick Ave., Sayre, PA. Dealers, exhibits, kids activities, demonstrations, fossil ID, special exhibit and silent auction by Carnegie Museum, fossil exhibit by Paleontological Research Institute. Sat. 9-5, Sun. 10-4. <http://www.chehannarocks.com/show.html>

**March 22-23, 2014:** 36th Annual Gem- Mineral & Jewelry Show sponsored by the Franklin County Rock and Mineral Club, Chambersburg, PA; Hamilton Heights Elementary School, 1589 Johnson Road, Chambersburg, PA

**March 29-30, 2014:** EFMLS Convention and Philadelphia Mineral Treasures and Fossil Fair, by Philadelphia Mineralogical Society and the Delaware Valley Paleontological Society. Lulu Temple, 5140 Butler Pike, Plymouth Meeting, PA 19462. Sat. 10-5, Sun. 10-4. <http://pms.moonfruit.com/#/mineral-show/4527879809>

**April 18-19, 2014:** First Gem, Mineral & Fossil Show for the non-profit North Museum of Natural History and Science. At Farm & Home Center, 1383 Arcadia Rd (off Manheim Pike), Lancaster, PA. Friday 10-6, Saturday 10-5. [www.northmuseum.org/rockshow/](http://www.northmuseum.org/rockshow/)

**May 10, 2014:** South Penn Spring Rock Swap, sponsored by Central Penn. and Franklin County Rock & Mineral Clubs. South Mountain Fairgrounds, Arendtsville, PA.

**May 17-18, 2014:** World of Gems and Minerals, by Berks Mineralogical Society. Leesport Farmers Market Banquet Hall, Rt 61, Leesport PA.

**June 7, 2014:** Spring Mineralfest - Mineral Fossil and Gem Show sponsored by the Pennsylvania Earth Sciences Ass'n. Macungie Memorial Park, Macungie, PA

### Geo-Sudoku Solution

A	T	K	M	I	N	G	E	R
R	I	M	G	K	E	N	T	A
G	E	N	R	T	A	K	I	M
N	K	T	I	G	R	A	M	E
M	A	R	K	E	T	I	N	G
I	G	E	N	A	M	T	R	K
K	R	I	T	M	G	E	A	N
T	N	A	E	R	K	M	G	I
E	M	G	A	N	I	R	K	T

### INVITE A FRIEND TO JOIN THE SOCIETY

The Nittany Mineralogical Society prides itself on having among the finest line-up of speakers of any earth sciences club in the nation. Everyone is welcome at our meetings. If you'd like to be part of our Society, dues are \$20 (regular member), \$7 (student rate), \$15 (seniors), \$30 (family of two or more members, names listed). Those joining in March or later may request pro-rated dues. Your dues are used for programs and speakers, refreshments, educational activities, Bulletins, and mailing expenses. Please fill out a membership form (available at [www.nittanymineral.org](http://www.nittanymineral.org)), make checks payable to "Nittany Mineralogical Society, Inc." and send them to

Nittany Mineralogical Society, Inc.

P.O. Box 10664

State College, PA 16805

or bring your dues to the next meeting.

**We want to welcome you!**

### SOCIETY OFFICERS

David Glick (President) 814-237-1094 (h)

e-mail: [xidg@verizon.net](mailto:xidg@verizon.net)

Dr. Bob Altamura (Vice-President) 814-234-5011 (h)

e-mail: [raltamura@comcast.net](mailto:raltamura@comcast.net)

Ellen Bingham (Secretary and Acting Treasurer)

e-mail: [emb22@psu.edu](mailto:emb22@psu.edu)

John Passaneau (Treasurer, on leave) 814-231-0969 (h),

e-mail: [jxp16@psu.edu](mailto:jxp16@psu.edu)

### OTHER CONTACTS

Field Trips: Ed Echler 814-222-2642

e-mail preferred: [eechler@comcast.net](mailto:eechler@comcast.net)

Junior Rockhounds: Dr. Andrew Sicree

814-867-6263 (h) e-mail: [sicree@verizon.net](mailto:sicree@verizon.net)

Membership Chair: David Glick (see above)

Programs: Dr. Duff Gold 865-7261(o), 238-3377(h)

e-mail: [gold@ems.psu.edu](mailto:gold@ems.psu.edu)

Door Prizes: *volunteer needed!*

Refreshments: *volunteer needed!*

Facebook: Mike Zelazny e-mail: [maz166@psu.edu](mailto:maz166@psu.edu)

The **Bulletin Editor** will welcome your submissions of articles, photos, drawings, cartoons, etc., on minerals, fossils, collecting, lapidary, and club activity topics of interest to the members. Please contact:

David Glick

E-mail: [xidg@verizon.net](mailto:xidg@verizon.net)

209 Spring Lea Dr.

phone: (814) 237-1094 (h)

State College, PA 16801-7226

Newsletter submissions are appreciated by the first Wednesday of the month. If you include photographs or graphics, please do not embed them in word processor files; send them as separate graphics files (TIF, or good to highest quality JPEG files, about 1050 pixels wide, are preferred). Please provide captions and name of photographer or artist.

Visit us at [www.nittanymineral.org](http://www.nittanymineral.org)