

Nittany Mineralogical Society Bulletin

Nittany Mineralogical Society, Inc.
P.O. Box 10664
State College PA 16805

August, 2012

Visit our web site: www.nittanymineral.org

Editor (see page 8):
David C. Glick

August 15th meeting:

Show and Tell

by the members and guests

Our August meeting will be held Wednesday the 15th in the room 114 auditorium of Earth & Engineering Sciences Building on the west side of the Penn State campus in State College, PA. Maps are available through 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;
election of delegate to EFMLS convention; door prize drawings
about 8:00 p.m.: featured program*

The event has free admission, free parking, and free refreshments, and is open to all – Bring your friends and share an interesting evening.

The program topic for August will be **Show and Tell**, presented by anyone and everyone who would like to “show and tell” for 5 or 10 minutes or so. This is a great chance to bring in lapidary work, new specimens, books, photos, equipment, projects in progress, interesting contrasts and comparisons, **anything you like** which represents some area of interest in our hobby or science, and share it with others. You can speak about it as informally or formally as you’d like. Stories on their own are fine, too. Connect with other members who have similar interests, or awaken an interest or spark an idea in someone else. We’ve had many fun and interesting presentations in the past, and look forward to more this time around.

During the business meeting, we’ll have an **election of a delegate** (and alternates, if any) to the EFMLS convention’s business meeting Sept. 14 in Harrisburg. The president of each club is automatically a delegate, and a second delegate may be elected by the membership of each club, along with an alternate for each of those delegates. NMS Field Trip Chair Ed Echler has volunteered to stand for election as our second delegate. If any other members will be attending the EFMLS business meeting Friday Sept. 14 at 7:00 p.m. and are interested in being a delegate or an alternate, please contact Dave Glick (see p 8) by August 15th. - - Editor

ATTENDING THE AUGUST MEETING?

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

NMS will provide ice and drinks;
your donated snacks will be welcomed.
Bring a friend!

Fall Semester Calendar - Note: November Meeting Changed to 28th

Please mark your calendars now! Our usual third-Wednesday meeting has been changed in November (because of Thanksgiving) to Wednesday the 28th. Here’s what we are planning:

Sept 19: Roadside Geology part 1 by Dr. Charles Miller
Oct 17: tentative - Volcanos by Dr. Barry Voight
Nov 28: Roadside Geology part 2 by Dr. Charles Miller
Dec 19: Holiday Dinner

We’re always seeking speakers, particularly on mineral topics. If you can present or know someone who can, please contact Program Chair Duff Gold (see p. 8). - Editor

Junior Rockhounds

The meeting time and place for Junior Rockhounds meetings this Fall have not been set; please watch the web site and this Bulletin for news. Juniors and their families and guests are invited to the regular meeting on August 15th and the picnic on August 26 (see the articles on this page)

Each month’s Junior Rockhounds meeting has a new topic or topics with fun, hands-on learning for the kids. We encourage those who attend to become NMS members, but it’s not required. Just \$7.00 covers a whole year (through October 2013) of student membership. Parents may get a lot out of the meetings, too! Check the web site for news, or contact Dr. Andrew Sicree (see page 8). - Editor

Join Us for the NMS + Geosciences Club Picnic

Our annual picnic will be held **Sunday, August 26**, hosted by the Binghams in Pennsylvania Furnace, PA, a few miles from State College. This year it’s a joint event with the Penn State undergraduate Geosciences Club. See the enclosed flyer (p. 9 of the PDF), and **RSVP** to Ellen Bingham at 814-360-3464 or emb22@psu.edu. Everyone is welcome, including junior members and families, guests, non-members and prospective members; please RSVP.

The Binghams and NMS will supply the grill, chairs, tables, place settings, utensils, cups, napkins, corn on the cob & butter, ice, iced tea, lemonade, and koolaid.

Please bring: a dish to share (a side dish, or dessert, or chips and dip, etc.), your own meat to grill or other main dish for yourself; and any beverages you want that aren’t listed above. - Editor

**Willard Truckenmiller's
Lapidary & Rock Yard Sale
September 7 - 8**

Friday September 7 and Saturday September 8.
9:00 a.m. to 4:00 p.m.

Directions: From the Bellefonte exit (161) of I-80 OR the North/East termination of I-99:

- go approximately 5 Miles on PA Route 26 North
- you will come to an intersection where Route 26 makes a left turn (toward Howard)
- DO NOT FOLLOW ROUTE 26 ANY FURTHER
- Instead, follow the road straight through, for approximately 1 mile toward Jacksonville
- School House Hill Rd will be on your left
- Turn left and go 100 yards to sale on School House Hill Rd

Lapidary equipment available:

- 17" Lortone Saw
- 12" Vibrating Lap
- Small Vibrating Vibra Lap Tumbler, used one time
- Silversmithing Scale
- 2 - Wheel Grinder / polisher
- Diamond Wheels
- Cloth Sanding Rings
- All you Need 6" Grinder / Polishing Unit
- UV Lamp, Short Wave and Long Wave
- UV material ,Calcite, Franklin NJ
- Slabs, Agate, Jasper and Obsidian
- Sterling Silver Wire Faceted material
- Sterling Silver rings Rough, Agate and Jasper
- Abalone Obsidian Polished Stones
- Large amount of Petrified wood Large Petrified Wood Display
- Large Cabochon Display, suitable for large club display, must be sold as one unit (Over 200 Cabs (27 / 22)
- Display Boxes

**Elections in October -
Nominations Start Now**

by David Glick, NMS President

The Board of Directors must set a slate of candidates by early September for the October 17th elections. The incumbent officers have agreed to run again; any additional nominations or volunteers for the elected officer positions should be made as soon as possible.

The Board again requests additional volunteers to get involved with running the Society, providing new energy and fresh thinking. In many cases it would be useful to have newcomers spend some time on committees and attending Board meetings before stepping into elected office. All members: please consider volunteering! We could use help in organizing door prizes, refreshments, publicity, the Bulletin, and more. Members are invited to attend Board meetings (generally held on the first Wednesday of the month at 7:30 p.m.), to see how we operate.

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 or remind Dave Glick to bring a printed copy to a meeting for you to see.

The June issue starts with an invitation to attend the EFMLS Convention and Show, "Crystals: Flowers of the Mineral Kingdom," in Harrisburg (see article on page 2). The Eastern Foundation Fund and the auction at the Show to benefit it are also discussed. President RJ Harris notes that we should be active in thanking quarry and land owners who allow us to collect, such as Eric Stahl of National Limestone with his Mount Pleasant Mills and Middleburg quarries here in Central Pennsylvania. Elery Borow's column says "Safety Should Not Be an Afterthought," regardless of excuses or how innocuous a pile of dirt and rocks in a collecting area might look. AnneLynn Benson reviews the spring Wildacres session at which she was a scholarship recipient. Biographies are presented for several of the candidates up for election in September. Club Rockhound of the Year nominations are invited; the program is likened to student of the month or employee of the month awards posted in schools and businesses. Darryl Powell's column on juniors talks about being a mentor. Wildacres Workshop Fall schedule (September 3-9 in North Carolina) and a registration form are included.

The **AFMS Newsletter** is available by the same methods. The June issue opens with a note about the forty items in the Endowment Fund auction in July. The ongoing effort to persuade the US Postal Service to issue stamps featuring birthstones can be supported by mailing in an individual form or signing a petition at a show; see <<http://www.amfed.org/stamps.htm>>. The safety column covers poisonous snakes. The July convention and its "Celebration of Agates" seminar is described. Junior Activities Chair invites articles about "best practices" which might help junior program leaders. Some ideas on "How to get Good Publicity" are presented.

Please see the web sites for the complete Newsletters.
There's a lot there!

- Editor

Garage Sale / Bake Sale report

One June 9, NMS and several of its members held a Mineral - Gemstone - Jewelry-Fossil Group Garage Sale and Bake Sale. After paying for some advertising, NMS made about \$150, mostly from donated material and the bake sale. As a bonus, our host John Passaneau ended up with a clean garage. It was a nice day and things went smoothly; the Board is considering holding another sale in the future.

Let's Go To the Show - Rides to Harrisburg

The big convention and show in Harrisburg (see below) is only an hour and a half away from most of us. With varying schedules and interests, it would be hard to set one schedule for a bus trip to go there. Instead, NMS will work to match up drivers and riders to share rides. If you want a ride or can offer a ride, please e-mail Dave Glick and he will post your message on a page on the NMS web site:

www.nittanymineral.org/rideshare.htm

Convention and Show Information for the **EFMLS Annual Convention**

Theme: Crystals—"Flowers of the Mineral Kingdom"

**September 14-16, 2012
Harrisburg, Pennsylvania**

Hosted by the

Central Pennsylvania Rock and Mineral Club, Inc.

Show: www.rockandmineral.org/annualshow.htm

(Site includes printable \$1 off coupon)

Convention:

www.amfed.org/efmls/conventioninformationhbg2012.pdf

The Central Pennsylvania Rock and Mineral Club wishes to invite you to join us for our 47th Annual Gem, Mineral and Jewelry Show September 15-16, in Harrisburg, Pennsylvania. The EFMLS Convention activities take place Friday, September 14, thru Sunday, September 16, 2012. It has been 12 years since our club hosted the EFMLS convention. At that time the EFMLS was celebrating its 50th Anniversary.

More Harrisburg - Central Pennsylvania travel information:
<http://www.amfed.org/efmls/conventionp.htm>

Convention Hotel:

The convention hotel, the Radisson Penn-Harris, 1150 Camp Hill By-Pass, US 11-15 is 4.2 miles away from the show venue. The special convention room rate is \$104.00 per night plus tax. Please call the hotel at 717.763.7117 by **August 15**, 2012 and mention EFMLS Convention to receive the convention rate.

Show Location and Information:

The Club's 47th annual show will be held in the Zembo Shrine building, 2801 North Third Street (Third and Division), Harrisburg, PA. The building was constructed in 1929. The exterior is fossil limestone. (Please, NO rock picks!). Show hours are **Saturday 10 a.m. – 6 p.m. and Sunday 10 a.m. – 5 p.m.** The EFMLS Endowment Fund Auction will be held in the Zembo small dining room at 2:00 p.m. Saturday. Auction donations may be brought in beginning at 12:30 p.m. There will be 30 vendors, children's mini-mine, lectures by one of our member geologists, Jeri Jones of Jones Geological Services, and Scouts merit badge instruction. There is free parking and refreshments will be available in the building. Admission \$6; kids 12 and under free.

Questions may be directed to
R.J. Harris: roqfreq@rjharris.com



More from the Show web site:

SCOUTS IN UNIFORM ARE FREE - Boy and Girl Scout Merit Badge Booth -11 a.m. and 2 p.m. both days.

SCOUT LEADERS: see web site for badge requirements covered at the show

Jeri Jones, Jones Geological Services

Free 30 minute programs throughout the show in the "Mini Car Room"

Saturday September 15:

| | |
|------------|--------------------------------|
| 10:30 a.m. | Fun With Rocks and Minerals |
| 11:30 a.m. | Volcanoes and Earthquakes |
| 1:00 p.m. | Let's Track a Dinosaur |
| 2:00 p.m. | So You Want to Be a Geologist? |
| 3:00 p.m. | Fun With Rocks and Minerals |
| 4:00 p.m. | Let's Track a Dinosaur |

Sunday September 16:

| | |
|------------|--------------------------------|
| 11:30 a.m. | Let's Track a Dinosaur |
| 1:00 p.m. | Volcanoes and Earthquakes |
| 2:00 p.m. | So You Want to Be a Geologist? |
| 3:00 p.m. | Let's Track a Dinosaur |

VENDORS:

Caldron Crafts—Catonsville, MD

Carved Opal & Obsidian—Austin, TX

Caveny Creations—Fort Mill, SC

CMM Collectibles—Jonestown, PA

Custom Cut Gemstones—Bridgewater, NJ

Don Smoley's Minerals and Gems—Munhall, PA

Down to Earth—Blossburg, PA

Dragon's Stash—Airville, PA

Eastern Gold Prospector's Assn.—York, PA

Franko Wire-Wrapping—Farmington, WV

George Belzner—Schnecksville, PA

Hartstein Fossils—Newark, DE

House of Charles—Mechanicsburg, PA

Joseph A. Dague Minerals—Chambersburg, PA

KBT Minerals & Fossils—Vienna, VA

Kerry Matt Minerals/Fossils—Lancaster, PA

Lindon Mineralogy—Reading, PA

Minhas Gems and Minerals—Philadelphia, PA

M. Jacob Gifts from the Earth—New Eagle, PA

Mike's Minerals—Boardman, OH

Pam's Beaded Treasures—McClure PA

Shirley Rex—Camp Hill, PA

Raymond's Minerals—South Park, PA

Rough 'N Tumbled—Kinnelon, NJ

Russell's Trees & Treasures—North Liberty, IN

S.J. Gemstones—Painted Post, NY

Silvertown—Cleveland, OH

Talisman Associates—Rockville, MD

V&S Enterprises—Sun City Center, FL

Also:

Eastern Federation of Mineralogical and Lapidary Societies

Annual Convention

Pennsylvania Geological Survey

Club Member Displays

Silent Auction and Wheel of Rocks*

(*Proceeds benefit CPRMC College Scholarships)

NMS at Spring Creek Festival

reported by Bob Altamura



Bob Altamura (seated in photo above) once again organized NMS's participation in ClearWater Conservancy's Spring Creek Festival at Millbrook Marsh in State College, held this year on June 2. Bob presented a version of his "Natural Glass in Rocks" station from Minerals Junior Education Day earlier in the year. He handed out tumble-polished Apache tears as souvenirs which would remind the visitors about that topic. John Passaneau brought his demonstrations of earthquake motion, including friction and measuring vibrations in three directions, also from Junior Ed. Day. His handouts were chunks of fault breccia which had been formed by motion and grinding of the rocks. Duff Gold (seated in photo below) helped staff the station through the day, and all three offered informal discussion on those and other topics. Occasionally during the day Bob also gave a lapidary demonstration using his all-in-one RayTilt machine (at right in photo above), carving and polishing pieces of obsidian. The photographs were taken by John Passaneau.



2012 Field Conference:

Journey Along the Taconic Unconformity

The 2012 Field Conference of Pennsylvania Geologists will be held in northeastern Pennsylvania and adjacent New Jersey and New York, on October 19 and 20. Details are on the web site, <fcopg.org>. Pre-conference field trips on October 18 include Fossil Collecting in Northeast PA; A Float Through Time, The Geology of the Delaware River; Hiking the Geologic Trails; and The Tom McElroy Memorial Field Conference Golf Tournament. The conference pre-registration deadline is September 14. There are discounted registrations available for the first ten students registering.

The web site home page includes links to several YouTube videos from the 2011 conference in the Dunkard Basin, the opposite corner of Pennsylvania.

*

Geo-Sudoku

by David Glick

This puzzle contains the letters ADEGIMNTU, and one row or column spells how the intensity of an earthquake is described (related to the story starting on page 5). 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.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| I | E | | | N | | | U | T |
| | | | | A | | | | N |
| | T | | | | E | | | |
| | | | M | | | | U | |
| | A | | T | | | | | |
| G | | U | | I | D | | | |
| T | I | | | M | N | A | G | |
| | | G | N | | | D | | |
| D | | | | | M | | | |

Connections: Fine Particles

by Dr. Charles E. Miller, Jr.
Retired Geologist

(For years, Irish author James Burke contributed a monthly article to *Scientific American*. The common theme in his articles was "connections." His articles described how one fact or observation connects with another and another, etc. Often, those connections crossed scientific fields and decades of time. This theme inspired the following article.)

In 1971 the author was part of a Vanderbilt University graduate geology class. A field trip to Lauderdale County in northwestern Tennessee, about six miles west of Gates, observed spectacular land disturbance from a November 1970 4.1-magnitude earthquake. An area approximately 400 x 850 feet (7.8 acres) was affected (Fig. 1). Earthquake-induced rapid-flowage mass wasting in the form of mud flows (landslides) and subsidence produced a textbook example graben (Figs. 2-3). Grabens are elongate, down-dropped areas usually bounded with normal faults along their length. This graben was approximately 100 x 550 feet. Within the graben, the original land surface dropped as much as 30 feet (the land owner is seen above the right scarp of the graben in Fig. 3). Differential ground movement was also responsible for splitting a tree vertically down its middle (Fig. 4).

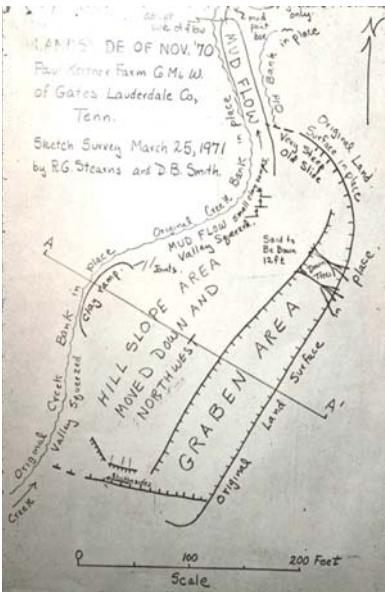


Figure 1. Original notes showing affected area on the Paul Keltner farm in Lauderdale County, TN. This land disturbance was from a 4.1-magnitude earthquake that occurred in November 1970.

Figure 2. Cross sections showing: inferred section before the landslide moved, and section after movement. The lower cross section depicts the graben shown in Fig. 3.



Figure 3. Approximately 30-foot-deep graben in loess; Lauderdale County, TN; 1971. A sensitive clay underlies the loess. Paul Keltner, landowner (in white shirt), is standing at the right scarp of the graben. He serves as scale for estimating the amount of land surface dropped. Image by the author; 1971.



Figure 4. Tree split vertically by ground movement in loess. Differential ground movement is due to liquefaction of sensitive clay underlying the loess. Image by the author; 1971.

Northwestern Tennessee lies within the New Madrid Seismic Zone (NMSZ), an intraplate earthquake zone encompassing parts of Tennessee, Illinois, Missouri, and Arkansas (Fig. 5). The NMSZ has been the center for some of the largest earthquakes in the 48 states. Of these, the 1811-1812 New Madrid earthquakes are probably the most famous, having temporarily reversed the flow of the Mississippi River. The NMSZ is an aulocogen, a failed arm of a triple junction. This seismic zone includes faults associated with rifting of the supercontinent Rodinia about 750 million years ago. Periodically, one of these faults is

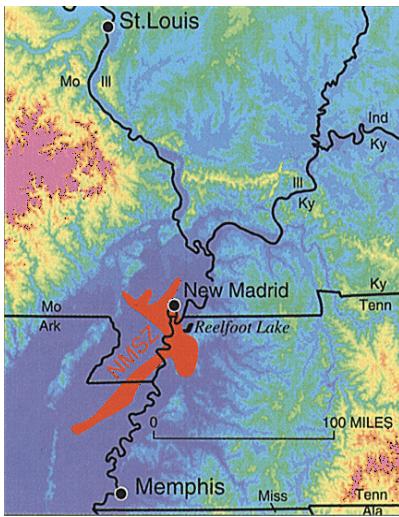


Fig. 5. Location of the New Madrid Seismic, a mid-continent intraplate earthquake zone. Public domain image, US Geological Survey via Wikipedia user Vsmith, NMSZBig.gif.



Fig. 6. Eroded loess soil, at least 50 feet thick, in northwestern Tennessee. Image by the author; 1971.

reactivated, as witnessed at this locality. The NMSZ has potential for producing large earthquakes in the future.

Soils in the study area are loess - wind-blown (eolian) soil, mostly silt - common in the Mississippi River Valley where it can be 70+ feet thick (Fig. 6). Loess can have a nonglacial or glacial origin. The former originates from deserts, dune fields, playa lakes, and volcanic ash; the latter from floodplains of glacial braided rivers. Loess deposits found along both sides of the Mississippi River Alluvial Valley are a classic example of periglacial loess or loess of glacial origin. As glacial rocks grind against each other, fine silt (rock flour) is produced and this mixes with melt water. The great volume of silt gives the melt water a milky appearance, hence the name glacier milk (Figs. 7 and 8). Tremendous bed loads generally cause glacial meltwater to flow in braided channels that are part of an outwash plain. The silt (rock flour) is deposited throughout



Fig. 7. Glacier milk/rock flour in the Nisqually River flowing from Nisqually Glacier; Mount Rainier National Park, Washington; 7-6-81.



Fig. 8. Glacier milk/rock flour in glacial stream; Valley of Seven Glaciers; Banff National Park, Canada; 10-07. The fine silt (rock flour) from rocks grinding against each other as they are moved by a glacier has been deposited on the inside of a meander to form a point bar. Winds pick up rock flour and redeposit it as loess soil, as in the Mississippi River Valley.

the outwash plain and transported to larger-order receiving streams. Prevailing winds transport the silt and deposit it as loess.

Underlying the loess in the graben area is sensitive clay. These metastable clays are thixotropic in that certain external forces such as earthquake seismic waves cause them to liquefy. After liquefaction, the clays return to their original metastable condition. Quicksand behaves similarly. Drilling into quicksand can cause it to liquefy. Understanding the properties of sensitive clays is important to engineering geologists, in particular, when considering engineering projects in areas known to have such clays. Much of the damage in the 1964 Good Friday earthquake in Anchorage, Alaska was due to sensitive clays.

The origin of this graben is related to glaciers, sensitive clay, loess soil, and earthquakes. What are the connections between these seemingly disparate factors? Plate tectonics 750 million years ago created a triple junction in the supercontinent Rodinia. A triple junction is where the boundaries of three tectonic plates meet. One of the best-known examples of a triple junction is the junction of the Red Sea, the Gulf of Aden, and the East African Rift. Today, northwestern Tennessee lies within the New Madrid Seismic Zone, a remnant of the triple junction formed 750 million years ago. Periodically, some of the faults in this zone are reactivated, resulting in earthquakes and earthquake damage. During the Pleistocene Ice Age, winds transported large volumes of glacial silt to the Mississippi River Valley to form loess deposits. This loess is the soil we see today in northwestern Tennessee. Underlying the loess is sensitive clay. The 4.1-magnitude earthquake in November 1970 - associated with the New Madrid Seismic Zone - caused the sensitive clay to liquefy and flow. This liquefaction resulted in loss of support for the overlying loess, creating the graben.

Additional reading:

Kerr, P.F., 1963, Quick clay: *Scientific American*, 209: no. 5 (November, 1963), pp. 132-142.

Falls of the Ohio Event

August 6, 2012

Dear Geology Club Members

The Falls of the Ohio State Park and the Falls of the Ohio Foundation announce a *new event*. On October 13, **Earth Discovery Day** will highlight many aspects of geology through activities and programs. Visitors can *explore* our rich Middle Devonian patch reef packed with fossils on the riverbed at the Falls of the Ohio. We are participating in Earth Science Awareness Week and National Fossil Day through this event.

This year, we have an earthquake simulator (courtesy of the Indiana Geological Survey) where you can feel a 5.5 to 8.0 tremor. We offer guided tours on the fossil bed and have informational booths by several paleontology and geology clubs. This year's guest speakers include Drs. Molly Miller, Rebecca Freeman, David Meyer, and Walt Gray. Our children's activity area will feature on-going craft projects with geological themes. We have literature on-site about dozens of fossil parks and museums across North America.

A long-standing tradition continues, with local quarries donating fossil-bearing Silurian Waldron shale and Devonian limestone residuum. Dig for brachiopods, bryozoans, corals, crinoids, cystoids, snails, clams, and trilobites in our *Fossil Collecting Piles*. Search the mineral collecting pile from Rosiclare, Illinois for fluorite, sphalerite, barite, and more! Collecting is prohibited on the river bank and fossil beds, so we can direct your club to other places to collect fossils.

This would be an ideal weekend field trip. We hope members of your group will be able to attend this year!

Admission is \$2 age 2-12, \$5 age 19+. Event details can be found at the park's web site
www.fallsoftheohio.org/special_events.html
or contact me at
agoldstein@dnr.in.gov, 812-280-9970 ext 403.

Sincerely yours,
Alan Goldstein
Interpretive Naturalist / Earth Discovery Day Coordinator

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.

Sept 14-16, 2012, Eastern Federation of Mineralogical and Lapidary Societies Convention, and Central Pennsylvania Rock and Mineral Club Annual Show, Harrisburg. See p. 7. <http://www.rockandmineral.org/annualshow.htm> <http://www.amfed.org/efmls/conventionp.htm>

Sept 29-30, 2012, Franklin - Sterling Hill Mineral, Gem & Jewelry Show, by FOMS and Franklin Mineral Museum, New Jersey, at Franklin Borough School, 50 Washington Avenue.

October 6, 2012: Autumn Mineralfest by PESA, at Macungie Memorial Park, Poplar Street, Macungie, PA. Saturday only, 8:30- 3:00. <http://www.mineralfest.com/>

October 27, 2012: South Penn Rock Swap - AUTUMN SWAP by Franklin County & Central PA Rock and Mineral Clubs. South Mountain Fairgrounds, 1.5 miles West of Arendtsville, PA on Route 234. Sat only, 8 a.m. to 3 p.m.

November 3-4, 2012: Friends of Mineralogy, PA Chapter Symposium and Field Trip, at Franklin & Marshall College, Lancaster, PA. <http://www.rasloto.com/FM/>

November 3-4, 2012: Gemarama by Tuscarora Lapidary Society, at CFS The School at Church Farm, Exton, PA. <http://www.lapidary.org/GEMARAMA/Gemarama.html>

*

Geo-Sudoku Solution from page 4

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| I | E | D | M | N | G | A | U | T |
| U | G | M | T | A | D | E | I | N |
| A | T | N | I | U | E | G | M | D |
| N | D | I | G | M | A | T | E | U |
| E | U | A | D | T | N | I | G | M |
| G | M | T | U | E | I | D | N | A |
| T | I | U | E | D | M | N | A | G |
| M | A | G | N | I | T | U | D | E |
| D | N | E | A | G | U | M | T | I |

For sale / trade:
will return after we
update the listings.
Submissions are
welcomed.

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), 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

Dr. Bob Altamura (Vice-President) 814-234-5011 (h)
e-mail: raltamur@fscj.edu

John Passaneau (Treasurer) 814-231-0969 (h),
e-mail: jxp16@psu.edu

Ellen Bingham (Secretary) e-mail: emb22@psu.edu

OTHER CONTACTS

Field Trips: Ed Echler 814-222-2642
e-mail preferred: eechler@comcast.net

Junior Rockhounds: Dr. Andrew Sicree
814-867-6263 (h) e-mail: 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

Door Prizes: *volunteer needed!*
Facebook: Mike Zelazny e-mail: 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
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

NITTANY MINERALOGICAL SOCIETY



PENN STATE GEOSCIENCES CLUB

2012 PICNIC POTLUCK SUNDAY, AUGUST 26TH

6:00 PM - 9:00 PM

at the BINGHAM'S

145 GODDARD CIRCLE

RSVP to Ellen Bingham or Nate Stevens

814.360.3464, emb22@psu.edu

215.983.9054, nss5045@psu.edu

0 **Sunday, August 26th at 6:00 PM.**
Ellen and Stu Bingham's (just 3 miles from John's place)
145 Goddard Circle, Pa. Furnace, PA 16865
RSVP 814.234.4532 or emb22@psu.edu

0 Whitehall Road heading towards Fairbrook. Just after the only bend in the road, and just after Kocher horse stables: turn RIGHT onto Ramblewood, LEFT onto Brooklawn, RIGHT onto Goddard Circle. If you go as far as Tadpole Road you have missed Ramblewood II.

0 Streetside parking is acceptable, our block is used to it and we all do it. Whitehall Road on both sides of W. College/Rt. 26 is a good avenue for getting around PSU traffic. If you need a ride, let Ellen or Nate know.

0 **SUPPLIED:**
Grill, chairs, tables, place settings, utensils, cups, napkins, corn on the cob, butter, ice, iced tea, lemonade, and koolaid.

0 **BRING:**
Something to grill for yourself and a Side Dish or Dessert, or Chips and dip to share, or any other desired beverages.