

Nittany Mineralogical Society Bulletin

Nittany Mineralogical Society, Inc., meeting in State College, Pennsylvania
Contact information on back page

Editor (see back page):
David C. Glick

September, 2019

Visit our web site: www.nittanymineral.org

September 18th meeting: Central Pennsylvania during and following the Pleistocene Ice Age

by

Dr. Charles E. Miller, Jr.

Our September meeting is planned for Wednesday the 18th in room 114 (the large auditorium) Earth & Engineering Sciences Building on the west side of the Penn State campus in State College, PA. Maps are available on our web site.

6:45 to 7:45 p.m.: Social hour, refreshments in the lobby

7:45 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!*

See Dr. Miller's article in the May NMS Bulletin, as well as the **Addendum on pages 4-6** of this issue. *-Editor*



Figure 4b (May 2019 NMS Bulletin): Scree slope of Silurian Tuscarora Quartzite overlooking Bear Meadows, PA. Image by the author.

MEMBERSHIP RENEWAL TIME!

Members: a dues form has been mailed with this printed Bulletin or linked (on our web site) with your e-mailed Bulletin announcement. Your renewal will be welcomed! Mail it or bring it to the meeting; doing it this month is a great help in reducing our work load next month (October is the end of our membership year). Thank you!

-Editor

OFFICIAL NOTICE: Annual Meeting on October 16th Elections and Bylaws Vote **SEE PAGE 2**

ATTENDING THE SEPTEMBER MEETING?

Donations of a few high quality, labeled door prize specimens are invited.
Your donated snacks will be welcomed.
Bring a friend!



We had a great picnic on September 8th. **THANK YOU** to our hosts, Ellen and Stu Bingham. *D. Glick photo*

OFFICIAL NOTICE: Annual Meeting in October Elections and Bylaws Vote

by David Glick, NMS President

The October 16th meeting will be the **Annual Meeting of the Corporation**, and will include election of officers. In accordance with our bylaws (available on the web site), the Board of Directors, acting as the Nominating Committee, has set its recommended slate of officers. Volunteers and nominations were invited, but none were received, so the slate is the incumbent officers, who have all agreed to stand for election again:

- President - David Glick
- Vice President - Robert Altamura
- Secretary - John Dziak
- Treasurer - Stuart Bingham

The Board truly needs **additional volunteers** to get involved with running the Society, providing **new energy and fresh thinking** and some new names on future ballots. 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!**

The agenda will also include a vote on a change to wording in **Bylaws Article 10 (MEETINGS)** section 10.3. That section begins: "Other Business at Regular Meetings: Members have the right to add an item to the agenda of the next Regular Meeting by submitting it in writing or by e-mail to the President at least three weeks prior to that meeting." The remaining (second) sentence reads: "Decisions involving dissolution of the Corporation, financial commitments over \$500., actions outside the objectives and purposes of the Corporation as stated in the Articles of Incorporation or these Bylaws, shall require a mail ballot of all eligible members."

The Board proposes that the second sentence be changed to: "If such submissions involve dissolution of the Corporation, financial commitments over \$500., or actions outside the objectives and purposes of the Corporation as stated in the Articles of Incorporation or these Bylaws, then a two-thirds majority of all eligible members by mail ballot shall be required for passage."

The rationale is that (1) the Board now manages much more money than 12 years ago when this wording was approved, and as prices increase and possible projects cover a broader range, commitments over \$500 could become frequent; (2) Although these restrictions were probably intended to apply only to decisions proposed by regular members (per wording earlier in that section), an interpretation imposing the restrictions on Board decisions might be possible, and requiring a membership vote may prevent timely action by the Board; and (3) the preferred method for any action is for the Board to vote and execute it, per their charge "It shall be the duty of the Board to conduct the business of the Corporation..." in Article 6.2, thus, a high bar is appropriate for any other method of conducting business. *

FIELD TRIPPING

by David Glick, NMS President

Field Trip Chair Dale Kephart has been working on arranging a trip in October; those on the field trip notification list should have received an e-mail on September 11. Also, all members for whom NMS has a current e-mail address should have received a brief e-mail survey (from xidg@verizon net) concerning their likely level of participation in future trips. THANK YOU, Dale!

Geo-Sudoku

by David Glick

This puzzle contains the letters ADEIGNRST; one row or column includes a factor in entrenchment of meanders. As usual, if you've read this issue, you've seen it. 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.

E		A		T	D			
I	N	G		D	A			
				R				A
	G	S	E					
		N				S		
R			N	S				E
G		D		R			E	
A						G	R	
	T		A	G	E	I		S

US Postal Service Issues *T. Rex* stamps

T. Rex stamps were issued August 29. The USPS web site says, "Featuring lenticular printing, two of the four designs show movement when rotated. See the skeletal remains with and without flesh and watch as an approaching *T. rex* suddenly lunges forward." "Art director Greg Breeding designed the stamps with original artwork by scientist and paleoartist Julius T. Csatonyi."

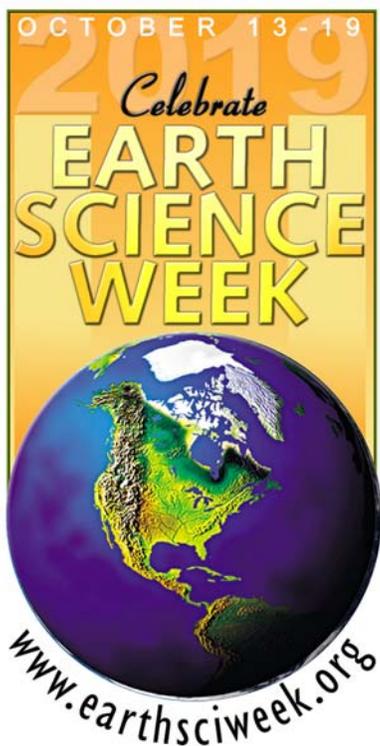
<https://about.usps.com/newsroom/national-releases/2019/08-29-fearsome-dinosaur-immortalized-on-forever-stamps.htm>





Earth Science Week! October 13 - 19, 2019

from <https://www.earthsciweek.org/about-esw>



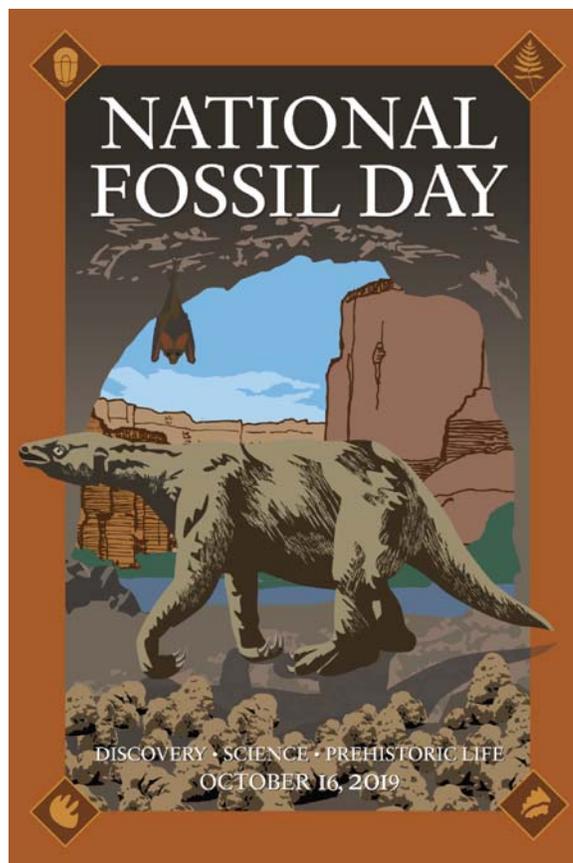
“This year’s Earth Science Week, organized by the American Geosciences Institute, will be held from October 13 - 19, 2019 and will celebrate the theme “Geoscience Is for Everyone.” The event will emphasize both the inclusive potential and the importance of the geosciences in the lives of all people. The... event will emphasize both the inclusive potential and the importance of the geosciences in the lives of all people.”

This year, an Earth Science Week Online Toolkit is found at <https://www.earthsciweek.org/online-toolkit> or go to <https://www.earthsciweek.org/materials> to order the traditional printed toolkit including activity calendar, posters, and fact sheets.

Tenth Anniversary of National Fossil Day™

from <https://www.nps.gov/subjects/fossilday/index.htm>

The National Park Service and the American Geosciences Institute host the annual National Fossil Day celebration during Earth Science Week in October. National Fossil Day is a celebration organized to promote public awareness and stewardship of fossils, as well as to foster a greater appreciation of their scientific and educational value.



Central Pennsylvania during and following the Pleistocene Ice Age

An addendum to the May NMS Bulletin Article

Dr. Charles E. Miller, Jr.

The May issue of the Nittany Mineralogical Society Bulletin (<http://www.nittanymineral.org/bulletin.htm>) includes an article by the author of the same title. This month's meeting presentation discusses that article but also includes numerous additional topics, some of which are mentioned here.

In the Susquehanna River southeast of Harrisburg there are huge diabase boulders (Figure 1), some weighing up to 100 tons. Despite such weight, some are overturned. In addition, the diabase is a very hard, resistant rock. Yet, carved into – not deposited on – it are asymmetrical ripple marks. How can this be explained? Usually these features are restricted to much softer, less-resistant rocks. Also consider that the boulders are located in a part of Pennsylvania that was unglaciated – meaning no glaciers advanced that far south (see Figure 1 in the original article).

A memorable scene in the 1994 Stephen King movie “The Shawshank Redemption” - starring Morgan

Freeman and Tim Robbins - is at a stone wall. This is where Red (Freeman) reads that “Hope is a good thing, maybe the best of things and no good thing ever dies.” Viewers are led to believe the setting is in Maine whereas it was actually in Ohio. What is the significance of the stone fence in regard to this month's talk? (Refer to the original article.)

Solifluction and gelifluction are types of slow-flowage mass wasting, common in central Pennsylvania during the Ice Age. They are associated with permafrost, indicating a much colder climate in this part of the State at that time. Until recent initiatives using remote sensing (Lidar), few examples were known in the study area. Geologists always suspected that solifluction lobes were nearly ubiquitous on most slopes in the central Appalachians. However, dense vegetation made identification difficult. This talk highlights the abundance of solifluction lobes in central Pennsylvania and addresses their role in forming relict block streams or linear boulder fields with names like “The Devil's Racecourse” or “The Devil's Potato Patch.” The talk also explains why these geomorphic processes do not apply to the well-known Hickory Run Boulder Field in Carbon County. Just across the Mason-Dixon Line, in Maryland, is one “Devil's Racecourse.” Why is it incorrect to characterize it as a “classic example of the results of moving glaciers?”



Figure 1: Large diabase boulders showing potholes. Conewago Falls of the Susquehanna River, southeast of Harrisburg.

During glacial advances (glacial maxima), world ocean levels fell 300-400 feet due to water withdrawn to form snow. Ergo, elevations in central Pennsylvania were higher by that number of feet. At the same time, central Pennsylvania was hundreds of miles farther from the moderating effects of the Atlantic Ocean. This is because lower ocean levels exposed continental shelf formerly under water. The east coast was, therefore, several hundred miles farther east than it is today. Did the combination of higher elevations and greater distance to the sea have any influence on weather/climate in central Pennsylvania during glacial maxima?

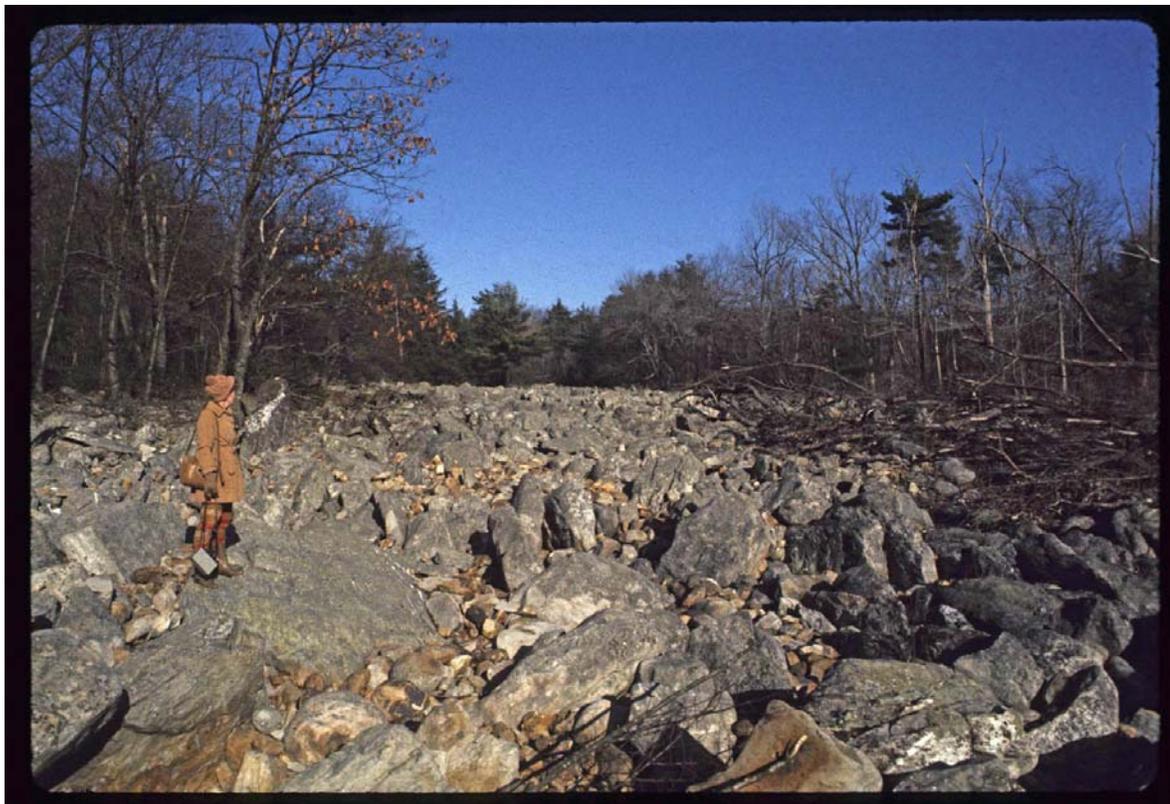


Figure 2: Devil's Racecourse at Raven Rock, MD. Image by the author.



Figure 3: Conspicuous meanders of Conococheague Creek in south-central Pennsylvania. The meanders are entrenched up to 100 feet. (Google image)

In central Pennsylvania, meanders of Conodoquinet Creek at Carlisle and of Conococheague Creek (Figure 3) near the Mason-Dixon Line are conspicuous. Not only do they appear as well-developed meander belts, but they are also entrenched or incised to depths up to 100 feet. This combination is paradoxical. When meanders begin, stream energy is mostly lateral – eroding on the outside of meanders, not vertically downward into the stream channel. One of the best-known examples of entrenched meanders is that of the San Juan River near Mexican Hat, Utah. They are known as “The Goosenecks” and are entrenched to 1000 feet. Flow dynamics of the San Juan River changed due to epeirogeny, or regional uplift. That increased the river’s gradient, enabling it to down-cut within preexisting meanders. The same explanation has sometimes been applied to the two referenced examples

in central Pennsylvania. However, the origin of those entrenched meanders is related to the Pleistocene ice age and not regional uplift. This is discussed in the talk.

The Internet is a great source of information. Unfortunately, there is also misinformation. An example applies to the “1000-steps hiking trail” (Figure 4) in Huntingdon County. This popular trail ascends Jacks Mountain. Some descriptions of scenery along the trail do not match scientific observations. Although much of that scenery is related to a much colder climate, none is directly connected to glaciers. This will be discussed in the talk. ❄️

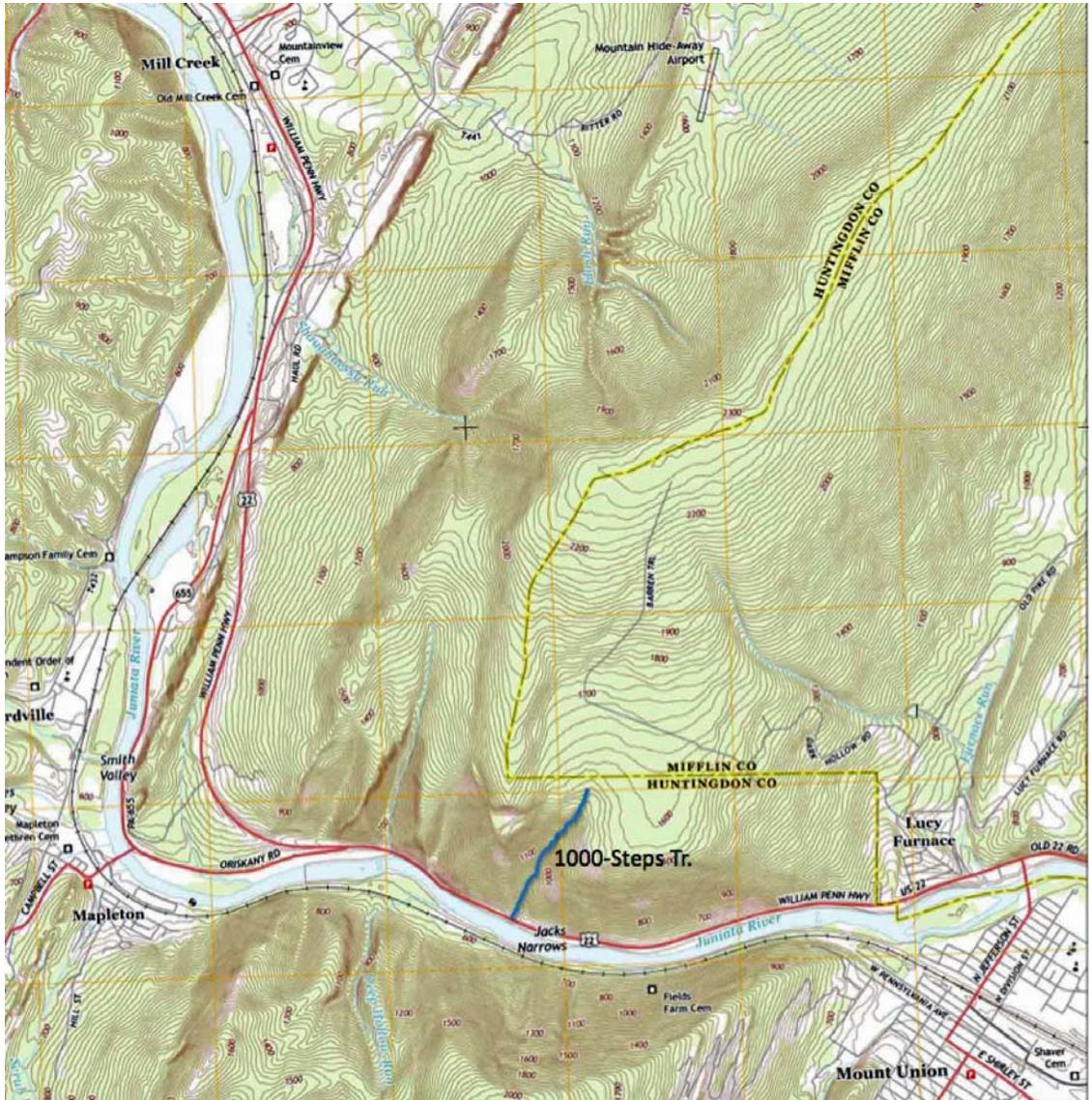


Figure 4: Topographic map showing “1000-steps hiking trail” in Huntingdon County.



FRIENDS OF MINERALOGY - Pennsylvania Chapter

SYMPOSIUM November 2, 2019 Lancaster, PA

FIELD TRIP November 3 Penn/MD Materials

Symposium for mineral enthusiasts on **Saturday Nov. 2, 2019**
 Talks by Expert Speakers on **Pennsylvania Mineralogy and Geology**
 Sales by Select Dealers - Silent Auction – Give-away Table – Conversation
 Hackman Physical Sciences Bld. (parking lot off Harrisburg Pike),
 Franklin & Marshall College, Lancaster, PA

For newsletters and field trips during the year, please join our chapter!
See “Join FM”

Registration: watch for registration form on our web site
 Professional Geologists: Professional Development Hours available for lecture attendance

Field Trip Penn/MD Materials Quarry, Lancaster County, PA. **Sunday Nov. 3** Open only to symposium registrants.
 Watch for details, registration form, changes and updates on our **web site: www.rasloto.com/FM**

FEDERATION NEWS

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. The **Federations and our Society strongly encourage all members to read the monthly Federation Newsletters, available on their web sites**, which are linked from our web site, www.nittanymineral.org. We present brief summaries here in order to encourage readers to see the entire newsletters. There's a lot there!

The EFMLS Newsletter is now being distributed electronically; a link is available on our web site www.nittanymineral.org. In the September issue, president David Nock begins by noting changes in EFMLS: "A new website, a new news outlet, a new field trip program and most importantly, some great new people to make it all happen for you our valued affiliates!" One big change is a new web site at <https://efmls.org/>; development and expansion of this site is continuing at this time. Another is the Eastern Field Trip Alliance, which EFMLS clubs can join to share field trips. This issue includes memorials to members who passed away recently, a Club Spotlight article on the Southeast Massachusetts Mineral Club, information on regional vice presidents and their upcoming election, and the note that EFMLS liability insurance policy rates are not expected to increase significantly, if at all.

EFMLS leaders want **you** - the club member - to see the **Newsletter**. Please see it at <https://efmls.org/newsletter> (linked from the NMS home page).

The **AFMS Newsletter** September issue should be on their web site soon. It reports that John Martin of the AFMS Conservation and Legislation Committee received the AFMS Recognition Award for 2019. It is followed by an article on the history of the American Lands Access Association, established by AFMS in 1992. The EFMLS show in Monroe New York and field trip to the Sterling Hill Mine in New Jersey are covered. The safety article asks whether we are less careful because we are wearing safety gear - remain mindful!

One article is much further from routine rockhounding: One postulated type of dark matter particle traveling through granite could melt it, leaving a visible straight "bar" of obsidian-like material when it cools. "The odds are vanishingly slim but not impossible, apparently." Rockhounds spend a lot of time looking at rocks, so if you see such an obsidian bar, Dr Starkman of Case Western Reserve University Physics Department wants to know about it!

-Editor

63rd Annual Franklin-Sterling Gem & Mineral Show

from

<https://franklinmineralmuseum.com/event/61st-annual-franklin-sterling-gem-mineral-show/>

September 28 @ 9:00 a.m. - September 29 @ 4:00 pm/

The Show will again be held at the Littell Community Center (formerly the Franklin Armory), 12 Munsonhurst Road, Franklin, NJ 07416

This 2-Day Show includes both indoor and outdoor dealers in minerals, fossils, gems, and jewelry.

INDOOR SHOW

Saturday: 9:00 a.m. – 5:00 p.m.

Sunday: 10:00 a.m. – 4:00 p.m.

OUTDOOR SHOW

Saturday: 9:00 a.m. – 5:00 p.m.

Sunday: 10:00 a.m. – 4:00 p.m./

Admission \$7.00 adults / \$4.00 children (ages 6-16)

see more at

<https://spmom3.wixsite.com/franklin-gem-mineral>

2019 Autumn Mineralfest mineral, fossil, and gem show

Saturday, 5 October 2019

8:30 a.m. to 3:00 p.m./

Macungie Memorial Park, Poplar Street, Macungie, Pennsylvania 18062 - southwest of Allentown

One hundred tables overloaded with minerals, fossils, gems, jewelry, crystals and geodes from six continents - and possibly from outer space

Mineralfest is the biannual mineral, fossil, and gem show sponsored by the Pennsylvania Earth Sciences Association

- Breakfast and lunch available in the building
- Plenty of free parking
- Held rain or shine

A family-oriented event - younger attendees encouraged

- Adult admission only \$2.00
- Free admission and mineral specimens for children under twelve
- Multiple door prizes awarded hourly
- Gold panning and sluicing demonstrations are favorites with kids

Download mineralfest flyer PDF:

<http://www.mineralfest.com/mineralfest.pdf>

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. See www.mineralevents.com for more.

Sept. 28-29, 2019: Franklin-Sterling Hill Gem & Mineral Show. Littel Community Center (formerly known as the Armory), 10 Munsonhurst Rd #12, Franklin NJ 07416. <https://franklinmineralmuseum.com/event/61st-annual-franklin-sterling-gem-mineral-show/>

October 5, 2019: Autumn Mineralfest, by PA Earth Sci. Ass'n. Macungie Mem. Park, Poplar St., Macungie, PA. One hundred tables overloaded with minerals, fossils, gems, jewelry, crystals and geodes from six continents, & more. Sat. only, 8:30-3. www.mineralfest.com

October 26, 2019: Ultraviolation: Fluorescent Minerals Show, by R&MC of Lower Bucks County PA. First United Methodist Church, 840 Trenton Rd., Fairless Hills PA 19030. Sat. only, 9-4. <https://sites.google.com/view/lowerbucksparocks/shows>

October 26, 2019: South Penn Fall Rock and Mineral SWAP & Sale: South Mountain Fairgrounds, 1.5 miles West of Arendtsville, PA. Sat. only, 8-3.

October 27, 2019: Gem, Mineral & Jewelry Show by Gem, Lapidary & Mineral Society of DC. Woman's Club of Bethesda, 5500 Sonoma Rd., Bethesda MD 20817 (Corner Sonoma & Old Georgetown Rds; free parking). Sunday only, 12-6. Timothyemorgan@mac.com, 301-325-3171

Nov. 2-3, 2019: FM-Pa Symposium & Field Trip; see p. 6. Saturday Symposium at Franklin & Marshall College, Lancaster, PA. Sunday Field Trip for Symposium registrants only. Please register in advance. <http://www.rasloto.com/FM/>

NMS BOARD MEETING NOTICE

NMS members are invited to attend Board of Directors meetings, which are generally held at 7:00 p.m. about two weeks prior to the general monthly meeting, although we do not meet every month. **The next date is Tuesday, November 5.** Members who would like to attend should contact president David Glick to verify time and place; those who would like to have their discussion item placed on the agenda should contact him at least one week in advance of the meeting.

Geo-Sudoku Solution

E	R	A	I	N	T	D	S	G
I	N	G	S	D	A	E	T	R
S	D	T	G	E	R	N	I	A
T	G	S	E	A	I	R	N	D
D	E	N	R	T	G	S	A	I
R	A	I	N	S	D	T	G	E
G	I	D	T	R	S	A	E	N
A	S	E	D	I	N	G	R	T
N	T	R	A	G	E	I	D	S

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 in as directed, or bring your dues to the next meeting.

We want to welcome you!

CONTACT INFORMATION

mailing address:

Nittany Mineralogical Society, Inc.
c/o S. Bingham, Treasurer
145 Goddard Cir.
Penna. Furnace PA 16865

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: raltamura@comcast.net
John Dziak (Secretary) e-mail: jjd264@psu.edu
Stuart Bingham (Treasurer)
e-mail: sebing145@comcast.net

OTHER CONTACTS

Field Trips: Dale Kephart
e-mail: beckdale2@comcast.net
Junior Rockhounds: Dr. Andrew Sicree
814-867-6263 (h) e-mail: aas132@psu.edu
Membership Chair: David Glick (see above)
Programs: Dr. Duff Gold 865-7261(o), 238-3377(h)
e-mail: gold@ems.psu.edu
Door Prizes: Dr. Bob Altamura (see above)
Facebook & Publicity: John Dziak: jjd264@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. Photographs or graphics are encouraged, but 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