

# 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

November, 2019

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

November 20<sup>th</sup> meeting:

## NASA Curiosity Rover... Seven Years of Exploration of an Ancient Martian Lake

by  
Dr. Christopher H. House

*Our November meeting is planned for Wednesday the 20th 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!*

*-Editor*

The Curiosity Rover has been on Mars since August, 2012. The rover has explored five distinct geological units including hundreds of meters of meters of mudstone from a lake system. Discoveries include hydrated clay minerals, organic material, atmospheric methane, and evidence for ancient sulfur redox chemistry. The rover has now completed its exploration of the iron-rich Vera Rubin Ridge, and is now traversing the clay-bearing unit. The Clay-bearing unit is a swale of mudstones and sandstones adjacent to the Vera Rubin Ridge. In the coming year, the rover is expected to encounter increasing sulfates as it climbs higher up Mount Sharp.



December 18<sup>th</sup>:

## Annual Holiday Dinner at Quaker Steak & Lube Restaurant Please join us!

On Wednesday, Dec. 18, 6:00 p.m., rather than our usual meeting and program, we'll have our **Holiday Dinner** at Quaker Steak & Lube Restaurant, 501 Benner Pike (across Benner Pike from the Nittany Mall), State College PA 16801 in their "Corvette Room." There is actually a real Corvette suspended from the ceiling above part of the Corvette room. The entire restaurant is decorated in automotive memorabilia making the place and our event a lot of fun.

NMS will pay for appetizer plates to be shared by all those present, then attendees can order and pay for their own dinners. We'll have some door prizes also.

We will continue our past tradition where members can have a table at the dinner to sell minerals / fossils/ gems / jewelry / rock crafts. Sellers need to collect PA sales tax. NMS will charge a commission fee at 10% of the vendor's pre-tax sales. If you are interested in selling, please contact Bob Altamura ([raltamura@comcast.net](mailto:raltamura@comcast.net) or 814-234-5011) as soon as possible to secure table openings.

### ATTENDING THE NOVEMBER MEETING?

Donations of a few high quality, labeled door prize specimens are invited.

Your donated snacks will be welcomed.

Bring a friend!

### Annual Meeting Voting Results

by David Glick, NMS President

Volunteers and nominations for new office holders had been invited, but none were received, so the incumbent officers were re-elected:

President - David Glick

Vice President - Robert Altamura

Secretary - John Dziak

Treasurer - Stuart Bingham

The change to wording in bylaws section 10.3 was passed, and has been incorporated into the current version available on the web site. *continued on page 2*

## Annual Meeting Results *continued*

Our Society would benefit greatly from **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 2020 Philadelphia Mineralogical Society Swap and Sell

Saturday, Jan. 11, 2020, 9 am to 12:00 pm, at Cathedral Village Center, 600 E. Cathedral Rd., Philadelphia (Andorra), 19128. Free Admission, open to the public. Contact: John Rateike, 215-576-0741 (jdrat@comcast.net)  
www.phillyrocks.org/swap-and-sell/

### 2020 Philadelphia Mineral Treasures and Fossil Fair

Saturday March 28, 10 am to 5 pm;  
Sunday, March 29, 10 am to 4 pm.  
Lulu Temple, 5140 Butler Pike, Plymouth Meeting, PA., (PA Turnpike, exit 333; or I-476, exit 20)  
Free Parking.  
Adults: \$6.00. Children under 12: \$1.00;  
Uniformed scouts and troop leaders free.

Special Features: On both days a line-up of distinguished professional speakers will be presented. The Academy of Natural Sciences of Philadelphia will present a display of minerals from its collection. In addition, there will be fossil and mineral displays, educational materials, door prizes and a food concession. Thirty dealers will offer fossils, minerals, crystals, and jewelry from all over the world, as well as books, decorative items, and other merchandise. Young visitors can enjoy the annual fossil dig for children, and the kid's corner with free mineral gifts.

Information: [www.phillyrocks.org/mineral-show/](http://www.phillyrocks.org/mineral-show/)  
Contact: Cheryl Leibold, [cleibold@verizon.net](mailto:cleibold@verizon.net).

## 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](http://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](http://www.nittanymineral.org). The November issue has a reminder of important dates leading up to the Convention in March. Volunteers for committee chairs and members are invited, the President's Message encourages volunteers as well. Some committees and programs are described, including the Uniform Rules Committee, the AFMS Endowment Fund, the annual EFMLS Auction, and Club Rockhound of the Year (CROY). Five CROY Honorees are introduced. Four-day classes to train AFMS accredited display case judges are to be held by the Northwest Federation in April 2020; participants from other Federations are invited. Thoughts on using social media to publicize shows and clubs are provided and more are invited.

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** October issue has an overview of Juniors Activities. The safety column covers staying hydrated while out on a sweaty collecting trip - drink up before thirst arrives! Rockhounds of the year are introduced.

The November issue invites entries of All American Club Award yearbooks (paper scrapbooks or digital) chronicling a club's activities. The Historian relates how rockhounding was credited as a low-cost activity that added value and meaning to the lives of its participants in the Depression years of the 1930s. The Bulletin Editors article encourages exchanges of articles, as we are doing in this issue on pages 4-7.  
*-Editor*

## Geo-Sudoku

by David Glick

This puzzle contains the letters CEHILNPSU; one row or column spells a part of a Jurassic fossil. 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.

N			U	C	H	P		L
	U			L				H
	P						U	
U			I	S			P	N
	N				L			I
					N	C		E
			L		C	I	H	
		U		H	S	E		
	H							

## Pennsylvania Amethyst



Quartz, variety amethyst and smoky quartz. Locality: Shaw and Esrey's Quarry, Chester Township, Delaware Cty, Pennsylvania. Size: small cabinet, 9.2 x 6.8 x 2.0 cm  
 Attribution: Rob Lavinsky, iRocks.com – CC-BY-SA-3.0, commons.wikimedia.org File:Quartz-rhqtz-68b.jpg

## 25 Years Ago in NMS

In November 1994, our program was The Fossil Plants of Pennsylvania, presented by Dr. Alfred Traverse of Penn State. Professor Traverse was the author of the textbook Paleopalynology, on fossil pollen and spores, and was a leading expert in the field.

In the previous month, ten club members completed a Mine Safety and Health Administration-approved eight-hour course held at Penn State, and received completion certificates.

## 20 Years Ago in NMS

“Lime and Lapis: Minerals in the Medieval Artist’s Palette,” was the program at Nittany Mineralogical Society’s November 1999 meeting. It was a full-featured presentation on the minerals and pigments used by Medieval artists and alchemists. Master John the Artificer and Master Brendan Brisbane (also known as John Rose and Robert Rich) made their presentation in costume appropriate to the period.

## Pennsylvania Copper



Copper. Locality: Greenstone Quarry, GAF Ruberoid Mill, Blue Ridge Summit, Adams County, Pennsylvania, USA (Locality at mindat.org). Size: small cabinet, 8.3 x 5.9 x 2.8 cm

“A very rare locality copper from the noted Steven Chamberlain Collection, acquired by him in 1982 from Carousel Minerals at the East Coast Federation show. The copper has been etched out of calcite to better expose it, and consists of minute arborescent crystals.”

Attribution: Rob Lavinsky, iRocks.com – CC-BY-SA-3.0, commons.wikimedia.org File:Copper-sf7b.jpg

## KEEP YOUR EYES DOWN WHEN YOU WANDER

Author: Mike Nelson csrockguy@yahoo.com

Pick & Pack, The Bulletin of the Colorado Springs Mineral Society, June 2018, Editor: Larry Jones  
2019 AFMS Bulletin Editors' Contest  
Original Adult Article Advanced Award, 4<sup>th</sup> Place Winner

*To be more childlike, you don't have to give up being an adult. The fully integrated person is capable of being both an adult and a child simultaneously. Recapture the childlike feelings of wide-eyed excitement, spontaneous appreciation, cutting loose, and being full of awe and wonder at this magnificent tile floor in the mall.*

— Apologies to Wayne Dyer

At times I have a little trouble with the correct (so they say) pronunciation of certain similar sounding words. I blame this fault on growing up in a small Kansas town where all the kids had a twang. For example, creek (a small stream) was pronounced "crick" that was also a noun referring to a stiff neck—"I left the window open and woke up with a crick in my neck." One of my bad problems was wonder and wander--there is only one letter difference so perhaps I could be forgiven?

Wander is a verb meaning "to move about without a fixed course, aim, or goal" (Merriam Webster Dictionary). Wonder can also be a verb "to feel curiosity." For much of my life I have been wondering while wandering, or is it wandering while wondering?

This verb duo hit me one day while visiting the Superstition Springs Mall in Mesa, Arizona, whilst returning home from the Tucson Show. Now, I am not a "mall person" but did mosey in to purchase a cup of coffee and check out the "good German fossils" that an unknown rockhound in Germany had suggested as a little field trip! He had emailed me since after reading my Blog and knew I was in Tucson and might enjoy some nice rocks and fossils.

At first, I just sort of blanked out as is my custom upon entering one of these shopping behemoths. Straight to the coffee shop and then find a bench, and so I did without any thoughts in my brain. But then my mind began to wander, and also wonder---where were the German fossils? So, I raised off my fanny and my legs began to wander while my brain kept wondering---perhaps there was some sort of a display of vertebrates in the courtyard? But wait, what was right in front of me? Could it really be? Yep, I was looking at the bottom of a shallow Jurassic sea with all sorts of wonderful marine creatures looking back. Well, they were not really moving around and looking but were encased in the beautiful polished limestone that was used as floor tile in this humongous building. I immediately thought what a wonderful place it would be to bring a group of young children and let them look at, and hear about, the wonders of nature.

So, I began to wander around in my one little corner and hallway taking a great interest, and several phone photos, of these beautifully preserved fossils. I was sort of wandering around in a typical rockhound style bent over and searching while perhaps 300 people ignored me, and many gave me a wide berth. Now, I was dressed in decent clothes, and had shaved that morning so as not to embarrass my accompanying companion, but several persons actually seemed scared of my actions. I was really hoping that at least one family with children would have asked, "Hey Mister, what are you looking at?" But, no such luck. Think what would have happened if my knees were good and I had assumed the stance rockhounds use when hunting for tiny peridot crystals? I would have been hauled off by Paul Blart, Mall Cop.

It turns out that I had seen this limestone before—in a museum, and in Germany. It is called the Jura Limestone or Jura Marble (from the Jurassic Period and Jura Mountains) and is quarried in great quantities from southern Bavaria in Germany. It is also packed with spectacular fossils of ammonite cephalopods, corals, sponges, echinoderms, worm burrows, amazing belemnite cephalopods, and many other creatures I could not identify in a short time span. It is my understanding that some vertebrates (fish and reptiles) have been found in the unit. The building stones/tiles also come in several different "color shades" but the most common are tans and grays (in the trade each color variety has a specific name).





The floor tiles are “full of” fossils representing marine critters, or their traces. The ‘white specks’ seen in many of the photos are probably some sort of single- celled foraminifera.

Why was this limestone being walked on in southern Arizona? It seems as if the rock is quite hard, takes a nice polish and is shipped around the world for use in heavy traffic areas as floor tiles, counter coverings, entrance ways in hotels, etc. Evidently my unknown friend in Germany had visited the Mall and wanted me to take a peek at good German Fossils.

In reality, the Jura Limestone is a trade name for this spectacular rock while the geologic moniker is the Treuchlinger Formation and is Late Jurassic in age (Kimmeridgian ~157 Ma--152 Ma). The Jura Limestone is quarried in the same general area as the slightly younger, and more famous, Solenhoffen Limestone (Tithonian, ~ 152 Ma--145 Ma) with its famous fossils, including “*Archaeopteryx*”. Both quarried building stones are products of the widespread Tethys Sea that covered Europe for much of the Mesozoic Era.

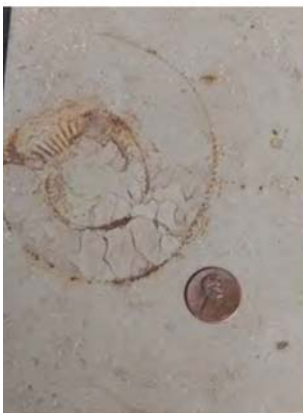
In looking at the accompanying photos note the wide variety of what appears to be remains of soft bodied animals. But, perhaps some of the “things” I thought to be body fossils may simply be “worm” burrows. The only two definitive identifications are the hard-bodied belemnites and the ammonites, both cephalopods. I can offer speculations on a couple of others. This limestone is so amazing with such a wide variety of fossils and other structures.



These three specimens may be sponges. I am fairly certain the photo on the right is a sponge of some sort. Note penny for scale.

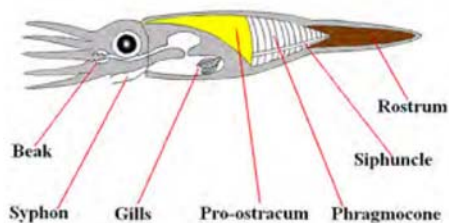


The above three photos—burrows? worms? crawling critters?



The above three fossils are ammonoid cephalopods perhaps of the genus *Progeronia*. Note penny on the left photo.





Belemnite Anatomy

A cartoon of belemnite anatomy courtesy of Phil Eyden at: [www.tonmo.com/pages/](http://www.tonmo.com/pages/)



The most amazing specimens in the floor tiles are the rostra of numerous belemnites (Cephalopoda) belonging to the genus *Hibolithes*. Belemnites range from the early Jurassic until extinction at the end of the Cretaceous.



This specimen is interesting but what is it? The upper part is cut off by the end of the floor tile. Is that an attachment structure at the "bottom" of the animal?



The above two specimens seem related as it appears hard parts are present. But what is it?

Unfortunately, I cannot, at this time (early April), locate a copy of Hans Bantz's 1970 book describing the fossils of the Jura Limestone from the Franconian Alps (*Der Fossilinhalt des Treuchtlinger Marmors (Mittleres Unter-Kimmeridge der Su'dlichen Frankenalb)*). Fortunately, I am writing this offering while camped at one of the most beautiful places in the U.S., Monument Valley in Navajo Tribal Park (southeastern Utah). Not only is Bantz's book unavailable, so are newspapers, television stations, internet service, telephone service and noisy railroads. What is available are fantastic sunsets and sunrises, amazing red rock scenery, crystal clear night skies with a full moon, and a real quietness. Life is good.



You name it!

### 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](http://www.mineralevents.com) for more.

**Jan. 11, 2020:** Swap & Sell, by Phila. Mineral. Soc. See p.2

**Mar. 7-8, 2020:** Earth Science and Mineral Show, by Delaware Mineralogical Society. Doubletree by Hilton, 4727 Concord Pike (Route 202), Wilmington DE 19803 <http://www.delminociety.net/marchshow/marchshow.htm>

**Mar. 27-30, 2020:** EFMLS Convention and Catawba Valley Gem & Mineral Club Show, Hickory, NC. <https://efmls.org/annual-convention>

**Mar. 28-29, 2020:** 51st Annual Gem & Mineral Show, by Che-Hanna Rock and Mineral Club. Wysox Volunteer Fire Company Social Hall, 111 Lake Rd., Wysox PA 18854 <http://www.chehannarocks.com/show.html>

**Mar. 28-29, 2020:** Philadelphia Mineral Treasures and Fossil Fair, by Phila. Mineral. Soc. & Delaware Valley Paleontological Soc. See p. 2

**Apr. 18-19, 2020:** Gem, Mineral & Fossil Show, by Monongahela Rockhounds. Skyview Hall, West Mifflin Volunteer Fire Co. #4, 660 Noble Dr., West Mifflin PA 15122. Sat 10-6, Sun. 10-4. <http://www.monongahelarockhounds.org/events.php>

**Apr. 23-26, 2020:** Rochester Mineralogical Symposium <http://www.rasny.org/MinSymp/>

**Apr. 25-26, 2020:** Gem & Mineral Show, by New Jersey Earth Science Association. Littel Community Center, 12 Munsonhurst Rd., Franklin NJ 07416. Sat 9-5:30, Sun. 10-5. <http://njesa.org/index.html>

### 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 Thursday, January 9, 2020.** 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

N	E	S	U	C	H	P	I	L
C	U	I	S	L	P	N	E	H
L	P	H	E	N	I	S	U	C
U	C	L	I	S	E	H	P	N
H	N	E	C	P	L	U	S	I
S	I	P	H	U	N	C	L	E
P	S	N	L	E	C	I	H	U
I	L	U	N	H	S	E	C	P
E	H	C	P	I	U	L	N	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](http://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.  
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145 Goddard Cir.  
Penna. Furnace PA 16865

### SOCIETY OFFICERS

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### OTHER CONTACTS

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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: Dr. Bob Altamura (see above)  
Facebook & Publicity: John Dziak: [jjd264@psu.edu](mailto: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](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. 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](http://www.nittanymineral.org)**