

# 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, 2021

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

September 15th meeting  
IN PERSON at BOAL HALL or via Zoom:

## Iris Agates and Cantor Dusts: The Textural Complexity of Agates

by Dr. Peter J. Heaney  
Dept. of Geosciences  
Penn State University



Our September meeting is planned for Wednesday the 15th in Boal Hall, 113 East Pine St., Boalsburg, PA. Maps are available on our web site.

7:15 to 7:45 p.m.: Social "hour." Please bear with us as we figure out how to safely get back to in-person activities. For this in-person meeting, we will not be serving refreshments. Feel free to bring your own non-alcoholic beverage. Current guidance in Centre County is to wear a mask indoors.

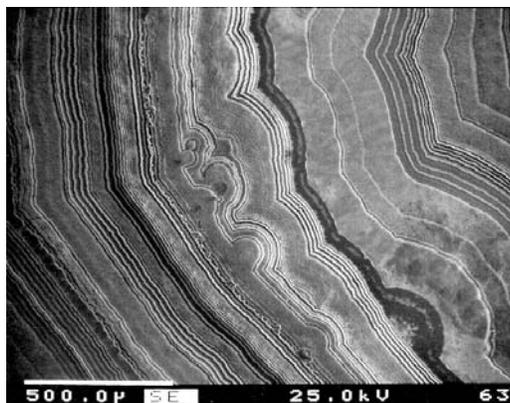
7:45 to 8:00 p.m.: announcements, questions, answers about 8:00 p.m.: featured program

The event has free admission, free parking (lot just east of Fire Hall along East Pine St.), and is open to all; **parents/**

*guardians must provide supervision of minors. Bring your friends and share an interesting evening!* -Editor

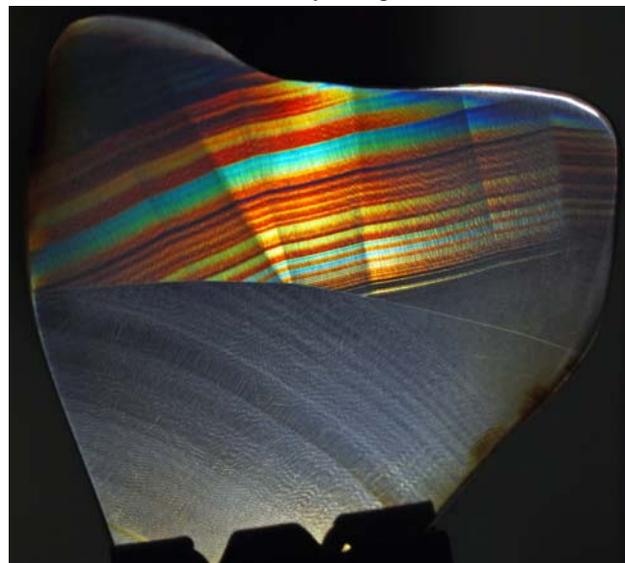
*Continued on page 2*

Agates are most famous for their concentrically colored bands, which often are geometrically intricate. Commonly, this polychromatic layering will enable a skilled collector to trace a given agate to its locality with high fidelity. Imprinted on these pigmented bands, however, is yet another type of pattern—a repetitive microfabric with respect to the quartz crystals that compose the chalcedony within an agate. Although this silica texturing is much subtler than the bright colors imparted by metal oxide inclusions, it gives rise to the diffraction effects responsible for the rainbows of iris agate. Moreover, the crystalline defects often occur as a hierarchical fabric characterized by the fractal qualities of a



so-called Cantor dust. This presentation will describe the curious nature of the Brazil twins that populate agates as oscillatory waves at length scales of nanometers, microns, tenths of millimeters, and centimeters. ✱

Scanning electron photomicrograph of an agate etched with hydrofluoric acid revealing the micron-scale banding that gives rise to iridescence.  
*Peter Heaney image*



Iris agate

Dave Ault photo

September 15<sup>th</sup> Meeting *Continued from page 1*

Please join us in-person or online for this presentation! This will be our first attempt to do both at once - please bear with us.

The Zoom link will be e-mailed to all paid members who receive our e-mails; others are welcome to request it by e-mailing <xidg@verizon.net>. Doors open for socializing at 7:15 p.m.; we can have informal discussions, then we can do any questions & answers and announcements at 7:45, and plan to start the presentation at 8:00 p.m.

We are fortunate to have Dr. Peter Heaney speak to us about agates, a topic of continuing research for him. He is Professor of Mineral Sciences in the Department of Geosciences at Penn State, past president of the Mineralogical Society of America, and an NMS member. Please join us for his presentation!

**ATTENDING THE SEPTEMBER MEETING?**  
 Donations of a few high quality, labeled door prize specimens are invited.  
 Bring a friend!

### Geo-Sudoku

by David Glick

This puzzle contains the letters AEGILMNOT; one row or column includes a less-well-known mineral in agate. 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.

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
|   | O | A | G |   | N |   | T |   |
|   | G | I |   | A | M |   | N |   |
| T | M |   | E |   |   |   |   | A |
|   | T | O |   | E | G |   |   | L |
| A |   |   | O |   |   |   |   |   |
|   | N | E |   |   |   |   |   | T |
|   | A |   |   |   | E |   | I |   |
| O | I |   |   | G | T |   |   |   |
|   |   |   |   | O |   | L |   |   |

## OFFICIAL NOTICE: Annual Meeting and Elections in October

by David Glick, NMS President

The October 20th meeting, to be held at Boal Hall in Boalsburg, will be the **Annual Meeting of the Corporation**. Business will include election of officers and a vote on bylaws amendments as described below. In accordance with our bylaws (available on the web site), the Board of Directors, acting as the Nominating Committee, met in early September and nominated the following slate of officers:

|                |                |
|----------------|----------------|
| President      | David Glick    |
| Vice President | Bob Altamura   |
| Treasurer      | Stuart Bingham |
| Secretary      | Barry Scheetz  |

### Bylaws vote

In order to ensure that any future votes conducted in electronic meetings are official, the Board proposes two amendments to the NMS Bylaws. One addresses Board of Directors meetings and the other concerns meetings of the membership. Please see the text of these changes on page 3.

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

## Dues Time Once Again

For NMS members, a dues form is included with this issue, either on paper or electronically. The form is also available on our web site at <<http://www.nittanymineral.org/mem.htm>>. If you bring your dues and form to the September meeting, or send them in during September, we won't need to send another form to you in October. We look forward to your continuing membership!

## Videos of Past Programs on Web Site

A video of last month's program and many others are available on our web site, on the main page and at <<http://www.nittanymineral.org/programs.htm>>. See photos on page 6.

**Nittany Mineralogical Society, Inc.  
Bylaws changes for vote at Annual Meeting  
October 20, 2021**

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**Vote for or against amending****Article 6. BOARD OF DIRECTORS**

6.3 Board Meetings: The Board shall meet at least three times per calendar year. Board meetings shall be held on the first Wednesday of the month or at such other time as decided by the Board, or as decided by the President if required.

6.4 Quorum: A majority of Board members, which must include a majority of the elected officers, present in person at any duly convened meeting, shall constitute a quorum of the Board.

**To read:**

6.3 Board Meetings: The Board shall meet at least three times per calendar year. Board meetings shall be held on the first Wednesday of the month or at such other time as decided by the Board, or as decided by the President if required. Electronic meetings conducted through use of Internet meeting services which support roll call voting and/or anonymous voting shall be valid meetings of the Board of Directors. Board members participating in such an electronic meeting shall be considered present at the meeting. An anonymous vote conducted through the designated Internet meeting service shall be deemed a ballot vote, fulfilling any requirement in the bylaws or rules that a vote be conducted by ballot.

6.4 Quorum: A majority of Board members, which must include a majority of the elected officers, present in person at any duly convened meeting, shall constitute a quorum of the Board.

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**Vote for or against amending****Article 10. MEETINGS**

10.1 Regular Meetings: Meetings of the membership shall be held at 7:30 p.m. on the third Wednesday of each month, August through May, unless decided otherwise at a regular Corporation meeting, or by the Board or Executive Committee if required, and announced to all members. The meetings shall be held at a location decided upon by the Board of Directors.

10.2 Annual Meeting of the Members: The October regular meeting shall be the Annual Meeting of the Members of the Corporation.

**To read:**

10.1 Regular Meetings: Meetings of the membership shall be held at 7:30 p.m. on the third Wednesday of each month, August through May, unless decided otherwise at a regular Corporation meeting, or by the Board or Executive Committee if required, and announced to all members. The meetings shall be held at a location decided upon by the Board of Directors. Electronic meetings conducted through use of Internet meeting services which support roll call voting and/or anonymous voting shall be valid meetings of the members, including the Annual Meeting of the members. Members participating in such an electronic meeting shall be considered present at the meeting. An anonymous vote conducted through the designated Internet meeting service shall be deemed a ballot vote, fulfilling any requirement in the bylaws or rules that a vote be conducted by ballot.

10.2 Annual Meeting of the Members: The October regular meeting shall be the Annual Meeting of the Members of the Corporation.

## Cave Day at Penn State Arboretum: Cool Science and Adventure on a Hot Summer Day

by David Glick

NMS was pleased to participate in the first Cave Day at Penn State's Arboretum on August 28. Our station exhibited limestone solution features from the area, a stalactite section, several illustrated posters, and maps and handouts provided by Pennsylvania Geological Survey. Some of the posters were based on material from the 82nd Field Conference of Pennsylvania Geologists pre-conference field trip guidebook (2017). Duff Gold provided this source for an illustrated discussion of geology in and around the Arboretum.

NMS extends thanks to all of the Arboretum staff and volunteers, especially for setting up tables and canopy tent, and for taking care of us; to Ann Dunlavy and her Lincoln Caverns group for enthusiasm and the invitation to participate; to Pennsylvania Geological Survey for providing display maps and handouts, and to all of the other groups present for an interesting day.



Lincoln Caverns station with kids' activities and educational materials  
*D. Glick photo*



NMS Secretary John Dziak and President David Glick at the NMS station at Cave Day.

*D.P. Gold photo*



Nittany Grotto Caving Club station *D. Glick photo*



Stalactite section



Slice through a stalactite similar to the one at left. Cave travertine ("Kokoweef Cave Onyx") 5.7 cm / 2.24 in. across (late Cenozoic; cave hosted in Paleozoic marine limestone; cave at Kokoweef Peak, Ivanpah Mountains, Mojave Desert, northeastern San Bernardino County, southeastern California, USA).

Photo by James St. John, CC by 2.0

<https://flickr.com/photos/47445767@N05/15518044498>

license: <https://creativecommons.org/licenses/by/2.0/>



Carbonate and Karst maps from Pa.G.S. *D.P. Gold photo*

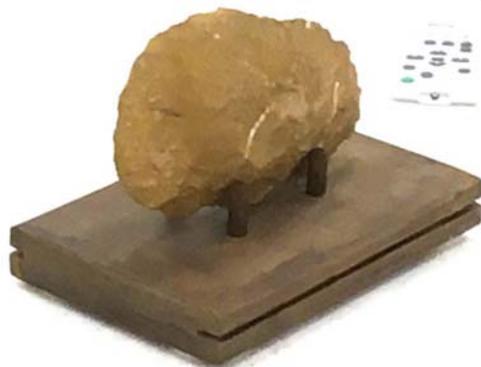


NMS karst & cave specimens

*J. Dziak photo*



At our August meeting, Jim Garthe showed a variety of interesting items, including these rock spheres that he made. The video is linked from our home page.



"Chopper" axe recovered from Millbrook Marsh; the source was the prehistoric jasper quarry near Beaver Stadium. Barry Scheetz spoke about how these jaspers occur locally; most are in the Nittany dolomite, but the reason for that is not obvious. *J. Dziak photo*



Mike Dunton discussed celestine from Mt. Pleasant Mills losing its color quickly in sunlight. *D. Glick photo*



Bob Altamura spoke on lapidary work, from small (earrings) to large (a clock slab sawn on a 36" saw).

## 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 AFMS News is linked from our web site, [www.nittanymineral.org](http://www.nittanymineral.org).

The AFMS September issue is available on their web site; it reports on the AFMS/RMFMS show and Convention in Wyoming. Results of the 2021 Bulletin Editors' Contest and Website Contest are reported. Other awards are the subject of more articles. Items from the June 17, 2021, Annual Meeting of AFMS, with President Judy Beck as Chair, are reported. Under New Business on page 12 is the following discussion of the status of the Eastern Federation:

The State of the Eastern Federation. Judy explained there has been a schism in the Eastern Federation. There are presently two groups each saying they were rightfully elected. It is pretty much havoc. The dues for the Eastern Federation had not been received and there was no communication to the AFMS. Judy had sent a certified letter to both factions of the Eastern Federation saying they were in a state of suspension. She asked for communication with them in 14 days. She heard from Ellery Borow, but did not hear from David Nock.

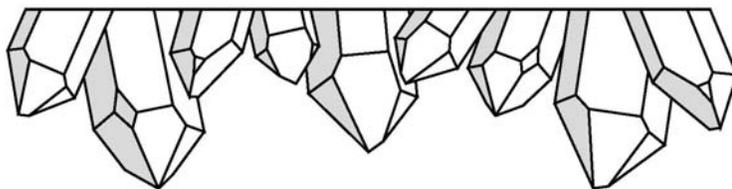
Judy had just received an e-mail from Pat LaRue that she had received the dues for the Eastern Federation on Saturday. The check was deposited on Monday.

As the AFMS we need to be inclusive. There was a problem in the Eastern that only selected people received information. Others did not receive the link for the meetings.

Roger Burford noted there was a new petition from David Nock to support him in not paying 2021 dues. Judy noted that we talked about this at length during the 2020 Virtual Meeting and everyone else paid their AFMS Dues. The AFMS conducted all the business we normally do. Judy said she was willing to mediate this difficult situation. Matt Charsky had sent out a survey to the clubs in the Eastern that favored continuing to be a part of the AFMS. Doug True suggested we ignore any e-mails from the Eastern Federation. It is their problem, not our business. Marty Hart had gotten a request to remove the direct link for the Eastern Federation. Only select club information had been included. The request was for a link to David's new website. There are presently two newsletters. David Nock presently owns the EFMLS.org domain name.

Margaret Kolaczyk moved to disable the link for the EFMLS.org and wait for more information. Liz Burford seconded the motion which carried with one dissenting vote.

Please see the AFMS Newsletters at [http://www.amfed.org/afms\\_news.htm](http://www.amfed.org/afms_news.htm). *-Editor*



# Autumn Mineralfest

mineral, fossil, and gem show

Over one hundred tables loaded with minerals, fossils, crystals, geodes, gemstones, and gemstone jewelry from six continents and outer space

**Saturday, 2 October 2021**

8:30 AM to 3:00 PM

**Macungie, Pennsylvania**

Macungie Memorial Park – 70 Poplar Street

FREE ADMISSION

Rain or shine - Over 50 vendors indoors, outdoor tailgate section weather permitting  
Family oriented - Younger attendees encouraged



mineralfest.com

Sponsored by the  
**Pennsylvania Earth Sciences Association**  
a 501(c)(3) nonprofit educational organization

PESA is a Lehigh Valley based group of mineral and fossil collectors, gemstone and lapidary artisans, and other earth science enthusiasts.



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## **FRIENDS OF MINERALOGY - Pennsylvania Chapter SYMPOSIUM November 13, 2021 Lancaster, PA FIELD TRIP November 14**

**Symposium** for mineral enthusiasts on **Saturday Nov. 13, 2021**

Hybrid Symposium - **ONLINE** or **IN PERSON** at

Bright Side Opportunities Center, 515 Hershey Ave., Lancaster, PA 17603

Talks by knowledgeable speakers on **Pennsylvania Mineralogy and Geology**

Sales by Select Dealers - Silent Auction – Give-away Table – Conversation

Registration: watch for registration form on our web site

Professional Geologists: Professional Development Hours available for lecture attendance

**Field Trip** Location to be announced. **Sunday Nov. 14** Open only to symposium registrants.

Watch for details, registration form, changes and updates on our **web site:**

**www.rasloto.com/FM**

For newsletters and field trips during the year, please join our chapter!

**See "Join FM" on the web site**

## UPCOMING EVENTS

Confirm details of events before attending.



**Sept. 25-26, 2021:** 55<sup>th</sup> Annual Gem, Mineral & Jewelry Show, by Central Penna. R&M Club Inc. Harrisburg Consistory, 2701 North Third St., Harrisburg PA 17110 (beside the Zembo Shrine). Sat 10-6, Sun 10-4. [http://www.rockandmineral.org/?page\\_id=37](http://www.rockandmineral.org/?page_id=37)

**Oct. 2, 2021:** Fall Mineralfest, by PESA. Macungie Memorial Park, Macungie PA. Sat. Only, 8:30-3:00 <http://www.mineralfest.com/>

**Oct. 9-10, 2021:** 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>

**Oct. 30, 2021:** South Mountain Rock Swap & Sale, by Central PA and Franklin County Rock & Mineral Clubs. South Mtn Fairgrounds, W of Arendtsville PA on Rt 234. Sat. only, 8-3. Contact: [tsmith1012@comcast.net](mailto:tsmith1012@comcast.net)

**Oct. 30, 2021:** Ultraviolet fluorescent mineral show, by R&M Club of Lower Bucks County. First UM Church, 840 Trenton Rd, Fairless Hills PA Sat. only, 9-4. <https://sites.google.com/view/lowerbucksparocks/shows>

### Geo-Sudoku Solution

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| E | O | A | G | L | N | M | T | I |
| L | G | I | T | A | M | O | N | E |
| T | M | N | E | I | O | G | L | A |
| I | T | O | N | E | G | A | M | L |
| A | L | M | O | T | I | N | E | G |
| G | N | E | A | M | L | I | O | T |
| M | A | G | L | N | E | T | I | O |
| O | I | L | M | G | T | E | A | N |
| N | E | T | I | O | A | L | G | M |

### 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.  
c/o S. Bingham, Treasurer  
145 Goddard Cir.  
Penna. Furnace PA 16865

#### SOCIETY OFFICERS

David Glick (President) 814-810-2116 (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)  
John Dziak (Secretary) e-mail: [jjd264@psu.edu](mailto:jjd264@psu.edu)  
Stuart Bingham (Treasurer)  
e-mail: [sebing145@comcast.net](mailto:sebing145@comcast.net)

#### OTHER CONTACTS

Field Trips: Dale Kephart  
e-mail: [beckdale2@comcast.net](mailto:beckdale2@comcast.net)  
Junior Rockhounds: Dr. Andrew Sicree  
814-867-6263 (h) e-mail: [aas132@psu.edu](mailto: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](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)  
425 Armagast Rd. phone: (814) 810-2116 (h)  
Bellefonte, PA 16823-9762

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 (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)**