

# ***Nittany Mineralogical Society Bulletin***

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

December, 2024

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

*Editor (see back page):*

*David C. Glick*

**December 18th:**

## **Annual Holiday Dinner at Quaker Steak & Lube Restaurant**

**Happy Holidays!**



We hope that you will join us! On Wednesday, December 18, 6:00 p.m., rather than our usual meeting and program, we will 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" at the back of the restaurant (just tell the host/hostess that you're with the group in the Corvette Room). The entire restaurant is

decorated in automotive memorabilia making the place and our event a lot of fun. There actually is a real red Corvette suspended from the ceiling above part of the Corvette Room.

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 door prizes also, and both NMS and members who have signed up will have items for sale.

**SELLING:** We will continue our past tradition where **members and NMS can have space on a table at the dinner to sell** minerals / rocks / fossils / carved 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. NMS will also have items for sale. NMS members who are interested in selling should contact Bob Altamura ([raltamura@comcast.net](mailto:raltamura@comcast.net) or 814-234-5011) by Dec. 16 to secure a space. -Editor

## **New Meeting Location in 2025**

Starting in January, our monthly meetings will be at the Centre LifeLink building off Puddintown Road near East College Avenue. Watch for details in January!

## **JUNIOR ROCKHOUNDS MEETINGS January - April**

Junior Rockhounds meetings are coming in the New Year! They are scheduled for 6:00 to 6:45 p.m. on Wednesdays: Jan 8, Jan 29, Feb 12, Feb 26, and continuing into March and April. The site is Boal Hall (Boalsburg Fire Hall), 113 East Pine St., Boalsburg PA 16827. Watch this Bulletin and the web site <http://www.nittanymineral.org/juniors.htm> for news and any updates.

## **Minerals Junior Education Day Set for April 5, 2025**

Minerals Junior Education Day is set to return on Saturday, April 5, 2025! We'll need about eight stations where students in grades 1-8 learn about some aspect of minerals, earth sciences or lapidary, and get specimens to take home. It's time to plan for what station you might present, or to volunteer to help at an existing station (we'll have more information about that coming soon). Donations of minerals, books, etc., for the sales table are also welcomed - please make arrangements in advance, so that we can get them organized and priced. Contact coordinator Frank Kowalczyk: [frank.j.kowalczyk@gmail.com](mailto:frank.j.kowalczyk@gmail.com) or 814-404-9854.



Part of last year's Junior Ed Day. D. Glick photo

## Geo-Sudoku

by David Glick

The puzzle below contains the letters ACLOPRSTY. One row or column spells a word for a volcano-related fragment. 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.

Y		T	S	C				A
				T			P	C
		P	A	O				
T	P					A		Y
S	Y	A				L	R	
	C	O	Y			S		P
		Y			A	P		T
	T	R	P					
						Y	A	R

## NMS Board Meeting Notice

David Glick, NMS President

NMS members are invited to attend Board of Directors meetings, which are generally held at 7:30 p.m., early in the month or as decided by the Board, although we do not meet every month. Members who would like to attend should contact president David Glick (see p. 8) 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.

We plan to have a very brief Board meeting at Quaker Steak & Lube on Dec. 18 after the dinner is over.

## Penn State Earth & Mineral Sciences Museum Exhibits

The Earth & Mineral Sciences Museum and Art Gallery has several relatively new exhibits; read about them at <https://museum.ems.psu.edu/current-exhibitions> and go see them in person on the ground floor of Deike Building. Nittany Mineralogical Society's exhibit, using fluorite as an example of specialization in mineral collecting, is there too!

-Editor

## 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. We encourage our readers to read their monthly newsletters, which are linked from our web site, <<http://www.nittanymineral.org>>.

In the AFMS December Newsletter, President JC Moore notes his trip to Oklahoma for the Rocky Mountain Federation, and encourages us to volunteer and accept positions in the Federations. Endowment Fund donations and ticket sales are covered (see the bottom of this column). Making a club public relations plan is described. Historian Jennifer Haley writes about "the record breaker" 1940 convention of the California Federation which drew 3,500 people. Cheryl Neary continues her series on North Carolina, site of the 2025 AFMS/EFMLS Convention. Fossil shorebird tracks are described in an article by a junior member.

The Eastern Federation's December Newsletter starts with ways we can support Federation Endowment Funds; see the bottom of this column. The President's message and news on Wildacres workshop are reprinted on page 3 of this Bulletin. Nominations for Each One Teach One and Club Rockhound of the Year awards are invited. The safety article concerns having an organized safety kit available at all times. EFMLS's week-long retreat featuring classes, fellowship, and relaxation in the beautiful North Carolina mountains is set for May 12-18, 2025; the detailed class schedule and registration form are provided. Speaker-in-Residence Martin D. Fuller, gemologist and appraiser, will share his passion for gems and jewelry. -Editor

**If you are interested in purchasing tickets for the AFMS Endowment Fund -**  
please contact Cheryl Neary via email at [ciervo.neary@gmail.com](mailto:ciervo.neary@gmail.com) or  
via text at 516-449-5341

**If you are interested in donating to the EFMLS Annual Auction,**  
to help raise funds for the EFMLS Endowment Fund,  
please contact Cheryl Neary via email at [ciervo.neary@gmail.com](mailto:ciervo.neary@gmail.com) or  
via text at 516-449-5341



## **EFMLS President's Message**

**from  
Andrew Rockhound**

**EFMLS News v. 71 no. 12  
November 2024**

Happy Holidays everyone! I hope everyone is happy, staying warm and full of turkey! First off, I need to announce a major change to the executive team. Brittany Martin has resigned her positions in the EFMLS as 2nd VP & Region 3 VP, due to taking a new job as a teacher, which will take most of her time. We wish her luck with her new career! I have appointed Jake Van Der Vliet to fill her 2nd VP position, which the board has approved by vote. Jake is an amazing educational resource! He and I have worked together locally here in Pennsylvania on geological outreach for the community through our Facebook group "Pennsylvania's Rock Hound Haven" and local club events. He has also joined the Social Media team to help me admin our social pages.

Also, I am happy to announce two amazing additions to chair committees, both of whom I greatly respect, you all know him as "Diamond Dan", Darryl Powell has been appointed to Youth Program Chair, bringing years of youth outreach experience to the team! I have also appointed the very talented and experienced founder of Geology 365, Ryan Klockner to the team as "Borders" chair. Wildacres has been led for many years by Steve Weinberger and we thank him greatly for his service. He has resigned and passed the torch on to the enthusiastic Helen Serras-Herman to succeed him, who I have officially appointed.

Welcome to the team Jake, Darryl, Ryan & Helen! Please check out all the changes to committees and chairpersons at the end of this EFMLS News!

We are proud to announce that after assessing the impact of Hurricane Helene on the Wildacres Retreat in N.C., the board voted to donate \$1,000 to help with their cleanup and repairs! They are expected to be ready to go for our 2025 classes, the info and registration are now available in this newsletter, and on the website!

We have received requests from multiple clubs now asking for higher liability insurance coverage being requested by quarries and show venues. I hear you, and I have spent the last two months auditing our insurance policy and renewal with Brown & Brown, and also worked closely with another very experienced insurance broker to shop around and make sure we are bringing the best deal

we can to all our members in 2025. You will see in this EFMLS News issue, and on the website, the updated insurance policy coverage, with its coverage extended to \$3 million per occurrence / \$6 million aggregate, and the slightly higher per-person rate of \$4.6316. This increase is very reasonable considering we tripled the coverage limits while insurance costs are rising across the board. However, to help our clubs even further, we have voted as a board to not charge dues for youth members.

That's right, youth members are now free in the EFMLS!!! Stay tuned, as I am continuing to recruit the best & the brightest talent, review and update things including the operations manual, and working on the new EFMLS Resources Package, highlighting many lesser-known benefits, programs and tools for clubs to use. So much more is on the way! Happy Holidays, and keep rocking it into an awesome 2025!

## **Wildacres – May 12-18, 2025**

**by Helen Serras-Herman,  
Chairman, Wildacres Committee**

Now is the time to start looking at the Wildacres class offerings. Next year, once again, there will be only one session--you don't want to miss it because you waited too late to sign up. Classes are assigned on a first-come, first served basis and a limited number of students are assigned to each class. Therefore, you don't want to register later and find that your first choice of a class was already full. Note that no registrations will be accepted before January 1, 2025. The list of classes and instructors for this session is in the December EFMLS News. About the cost. Yes, \$485 does seem like a lot of money. However, this fee includes your room, meals, class instruction, and the opportunity to go on a field trip, and daily lectures by a well-known speaker. All this plus being in a beautiful mountain top setting, being with fellow hobbyists, renewing old and making new friendships, and much more for an entire week. In addition, you get the priceless satisfaction that you learned a new skill (or improved an old one) and go away with more knowledge than you came with. Where else can you go for a week and spend just \$485? Hotels and meals will far exceed that amount. Class fees are for supplies you use in the class and are charged by the instructor. Instructors keep these costs at a minimum, usually at their cost or less. If you have any questions, contact Wildacres Director Mark Kucera (mark\_j\_kucera@yahoo.com) for questions about the classes or Registrar John Milligan (jmilligan@stny.rr.com) for questions regarding registering or accommodations. Come, join your fellow hobbyists on top of the mountain at Wildacres. We look forward to seeing you there.

**See Wildacres project examples on page 4.**





**Examples of past projects  
in Wildacres classes  
from Dec. 2024 EFMLS News**



## Charles P. Thornton and Penn State GSCI 309 Circa 1968

By Bob C. Smith, II

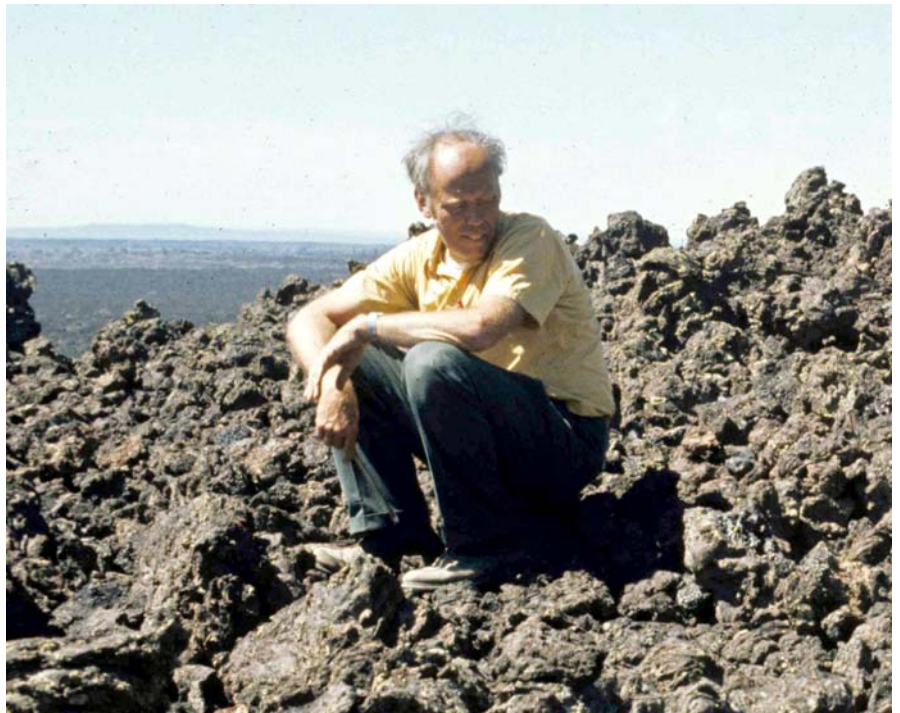
Reading the report by Robert Altamura (Nittany Mineralogical Society Bulletin, August, 2023, p. 4-6) on the field trip he led for the NMS brought back some fond memories. Specifically of field trips led on Saturday mornings by Professor Charles P. Thornton for a mid-level Penn State Geosciences class called GSCI 309 in the late 1960's. For additional information on Professor Thornton see the Newsletter for The Pennsylvania State University, Department of Geosciences (Alfred Traverse and Roger Cuffey, 2008): <https://www.geosc.psu.edu/sites/geosc/files/magazineissue/clone-geosciences-newsletter-2008/2008newsletter.pdf>.

The above is more reliable than what follows, but perhaps some of the following will resonate with a few NMS mineral collectors.

Arthur Montgomery of Lafayette College and then Art W. Rose of Penn State were certainly major influences on the track of the present author's various research interests. However, there is circumstantial evidence that several others such as Penn State's Earth & Mineral Sciences Professor Charles P. Thornton also had a significant impact.

Each GSCI 309 class began with a brief overview in a lecture hall in Deike Building, but the class soon loaded into cars and headed into the field. As a graduate student, the present author was hardly eligible to take that level class for credit and was asked to contribute to gasoline costs for those who drove private vehicles: a few dollars for trips in central PA, another for Adams County, and perhaps a few more for the central VA grand finale. After all, the price of gasoline was probably up to \$.39/gal. by then. Grades for formal students were dependent on short write-ups the students turned in the Monday after each field trip. As a graduate student guest, they were not required of me, but I thought they might help someone and so turned in my write-ups. I do not know if I would have passed or not.

My memory on parts of these field trips is a bit fuzzy, but I think the first trip was to mostly the west of State College and included the Scotia Iron Mines which did not impress me. It wasn't until the end of the millennium that it dawned on the author that some of these residual limonite deposits might be dated by K/Ar dating of the



Professor Charles P. Thornton on aa lava at Craters of the Moon National Monument, Idaho, 6-13-1974. Photo by Charles E. Miller Jr.; its contribution for this article is greatly appreciated.

mineral cryptomelane if it were present. The data in Bikerman et al. (1998) suggested to the present author that many such deposits formed during periods of intense weathering such as at 6, 12-15, 24, and 58 Ma. (Unfortunately, Bob failed to notice a trace of detrital illite in sample from Critchfield so the date that cryptomelane is far too old.) ... Then on to the Harbison Walker's Stormstown kaolinite and bauxite deposit where CPT (as most students respectfully referred to him) seemed to enjoy stumping the present author with the bauxite mineral gibbsite. Even after a clue or two. Possibly the deposit was the result of extreme weathering during one of the above mentioned times, but Mn that might have been present had been leached out. Typical Gatesburg Formation limonites do not tend to have gossan (residues of sulfide minerals such as pyrite) geochemical signatures, but Smith (1977, Appendix II) only sampled two from the Gatesburg Formation and they were in Bedford County. For more information on the Stormstown pit see J. W. Hosterman (1972, especially p B59 and B60).

From Stormstown, we went to perhaps 3 km NE of Waddle for some attractive native sulfur on planar fractures in limestone quarried on the SE side of the apparent SW end of the Valentine Member high purity limestone at the top of the Benner Formation. (Might the locality be at 40°51'07.8"N 77°54'50.7"W = 40.852157, -77.914077?) Being a native elements collector, Bob, as CPT implied at the time, collected too much but did manage to get nice macro pieces into a few institutional

collections. The Waddle native sulfur locality appears to be missing from Mindat, but its presence likely involved sulfate-reducing bacteria working on the infamous pyrite in Bald Eagle Formation sandstone (Smith, 1978, p. 209) along I-99. Hydrocarbon involvement cannot be ruled out because the underground mines for Valentine Limestone closer to Bellefonte encountered methane at times (Berkheiser, 1985). Certainly C.T. Illsley (1955) was onto something when he named a tributary flowing SE from Waddle Gap into Buffalo Run as "Zinc Run". More recently, sphalerite and galena were encountered in subsurface some miles to the SW of Skytop in angle drill holes in tectonically brecciated Tuscarora Formation quartzite on Bald Eagle Mountain. The purpose of the drilling was to evaluate the Tuscarora Quartzite for aggregate and the project was promptly abandoned. Finding sphalerite and galena was not too surprising considering the work of M. D. Krohn (1976). From the native sulfur locality, we headed NE to the Schad Prospect then on the E side of PA Route 144 in Milesburg Gap at 40° 55' 52"N, -77° 47' 03"W (Smith, 1977, p. 208-217). At the time, there was abundant galena, sphalerite, and barite on the mine dump. Curiously, trace native sulfur was verified on some samples of sphalerite. The end of that first GSCI 309 trip was probably to the southern end of Sinking Valley for some galena, sphalerite, and barite (Smith, 1977, p. 122-140 and Smith, 2010).

Like many field trips led out of Penn State, the view from Skytop was explained in terms of the intersection of the NW margin of the Valley and Ridge physiographic province, as it was then known, with the Plateau province. Whether standing there on the Tuscarora Quartzite had any influence on Bob's later work with Dave Herrick, Jim McNeal, and Art Rose on the Hares Valley, Zn-Pb occurrences (Smith et al., 1971) studies is uncertain. Likewise, it might have influenced Smith proposing the NW trending zone of mineralization in that report.

The second trip was to the east of State College, specifically within 15 miles of Bucknell University where CPT had taught for a while. In that area, we saw an unimpressive Illinoian sand dune, and what was then THE Winfield Quarry for some strontianite, celestine, sphalerite and galena. We probably also saw the secondary copper mineralization associated with plant fossils in the Upper Devonian Catskill Formation in an adit at the base of what is now Shikellamy State Park, an exposure of Tioga ash (Way and Smith, 1985), and the oolitic hematite and ferroan dolomite Clinton iron ore exposed on the west side of U.S. Route 15 near Allenwood, Union County.

The third trip was mainly to the South Mountain anticlinorium of Adams County to see some native copper in Catoctin Metabasalt (Fauth, 1978) and

piemontite in Catoctin Metarhyolite (Smith and Barnes, 2010). The latter was in piles along the road next to a peach orchard and CPT walked the edge of the orchard before we left to make sure we did not leave any rocks where they might mess up a mower. It was an unusually quick stop suggesting that there might have been a previous encounter of metarhyolite with a mower. Catoctin Metarhyolite can make an "A" on Smith's weapons grade scale so it would not have gone well for the mower.

The fourth trip was the grand finale and took us to the Mount Jackson, VA, quadrangle CPT (Thornton, 1953) had mapped for his Ph.D. from Yale years before. In that general area we were treated to the Eocene age Mole Hill volcanic plug (probably at ~ 38° 26' 53.1" N, -78° 57' 11.8"), a Late Jurassic age nephelinite dike on the NW side of VA Route 699 (probably at ~ 30° 20' 00"N, -79° 00' 21.8"W), and even a limestone-loving blooming prickly pear cactus (*Opuntia humifusa*) patch on the E side of U.S. Route 11 near Toms Brook, VA. It is likely that CPT's love of exotic, seemingly out of place volcanics had an influence on Smith's weekend and vacation project on the 432.6 Ma Clear Spring Olivine Melilitite in Washington County, MD, barely south of the Mason-Dixon Line. With help from Ken A. Foland of the Ohio State University, Richard P. Nickelsen of Bucknell University, Larry Heaman of the University of Alberta at Edmonton, and reviews by Rodger T. Faill of the Pennsy Survey, stratabound pyroclasts in the lower third of the Tuscarora were discovered, radiometrically dated by three independent methods, and mapped. What relation, if any, those ultramafic pyroclasts have to the felsic Thorn Hill Bentonites of NE Tennessee (Bergstrom et al., 1998) remains for future researchers to contemplate. Might they as a pair with the olivine melilitite suggest that the Silurian Thermal and Magmatic event of Smith (2010, 2006, and 2004) was more widespread and related to failed incipient rifting that initiated the Appalachian Basin as proposed by Smith et al. (2004)?

There were many other stops, but these are the ones that were most memorable and likely contributed to the present author's long term interest in the ages of iron and manganese ores, zinc and lead occurrences, volcanic ash beds in Pennsylvania including the  $350 \pm 0.5$  Ma Tioga Ash Bed B (Way, Smith, and Roden [Tice], 1986 and Roden [Tice] and Miller, 1989) and the  $416.79 \pm 0.1$  Ma Bald Hill Bentonites (Smith and Way, 1988; Jahan Ramezani, Sam Bowring Laboratory, M.I.T., personal communication 5/10/2006), Catoctin Metabasalt (Smith and Barnes, 2010) and the associate copper occurrence (mostly limited to one narrow belt plotted by Smith for J. L. Fauth's (1978) Iron Springs geologic map), piemontite, Catoctin Metarhyolite, very old quarries therein established by Native Americans, and the Eocene volcanics of VA and WV.



A year or two after Smith took GSCI 309, his wife Gloria thought she should learn something about what Bob and their friends Mike J. and Sonja Walawender, Dave C. Herrick, and Jim M. McNeal were talking about. Accordingly, she took CPT's introductory petrology class one summer. Part of the final exam was to identify a set of hand samples of common and uncommon rocks. Gloria studied diligently with whatever samples Bob could provide. Gloria passed the course with flying colors but when CPT next saw Bob he could hardly contain his laughter. She had gotten all the difficult rock types correctly, but had switched her answers for marble and granite!

Who might Bob Altamura's field trips be influencing in the future? What new research might those attendees conduct?

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## UPCOMING EVENTS

Confirm details of events before attending.

<https://efmls.org/events/>

See other show calendar links on our web site.

**Jan. 25, 2025:** Rutgers Geology Museum 57<sup>th</sup> Annual Open House; theme: New Jersey Geology. 43 College Ave., New Brunswick NJ 08901; also presentations and mineral sale in Scott Hall. See web site for admission and parking payment. <https://geologymuseum.rutgers.edu/annual-open-house>

**Feb. 15, 2025:** Tucson Mineral Symposium, Green Minerals. <https://www.friendsofmineralogy.org/call-for-papers/>

**Mar. 1-2, 2025:** Gem, Mineral & Fossil Show, by Delaware Mineralogical Society. DoubleTree by Hilton, 4727 Concord Pike (Rt-202), Wilmington, DE 19803. Sat. 10-5, Sun. 11-5. [www.DMSrocks.org](http://www.DMSrocks.org) , [www.facebook.com/DEMineralShow](https://www.facebook.com/DEMineralShow)

**Mar. 22-23, 2025:** Gem & Mineral Show by Che-Hanna Rock & Mineral Club. Wysox Vol. Fire Co. Social Hall, 111 Lake Rd., Wysox PA 18854. Sat. 9-5, Sun. 10-4. <http://chehannarocks.com/show.html>

**Mar. 27-29, 2025:** AFMS/EFMLS Convention, and Show by Catawba Valley Gem & Mineral Club, Hickory, North Carolina.

**Mar. 29-30, 2025:** Mineral Treasures and Fossil Fair, by Philadelphia Mineralogical Society. Lulu Temple, 5140 Butler Pike, Plymouth Meeting, PA 19462 (PA Turnpike, exit 333; or I-476, exit 20) . Sat. 10 am to 5 pm; Sun. 10 am to 4 pm. Information: [www.phillyrocks.org](http://www.phillyrocks.org)

## Geo-Sudoku Solution

Y	R	T	S	C	P	O	L	A
O	A	S	L	T	Y	R	P	C
C	L	P	A	O	R	T	Y	S
T	P	L	R	S	O	A	C	Y
S	Y	A	T	P	C	L	R	O
R	C	O	Y	A	L	S	T	P
L	O	Y	C	R	A	P	S	T
A	T	R	P	Y	S	C	O	L
P	S	C	O	L	T	Y	A	R

## 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 \$25 (regular member), \$10 (student rate), \$18 (seniors), \$35 (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

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## SOCIETY OFFICERS

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Publicity:

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.

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