

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, 2021

Visit our web site: www.nittanymineral.org

November 17th meeting
IN PERSON at BOAL HALL or via Zoom:

Tuxedo Agate & Fischer Stones: A nod to George W. Fischer

by Daniel Bontempo

Our November meeting is planned for Wednesday the 17th 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." 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 at public indoor settings.

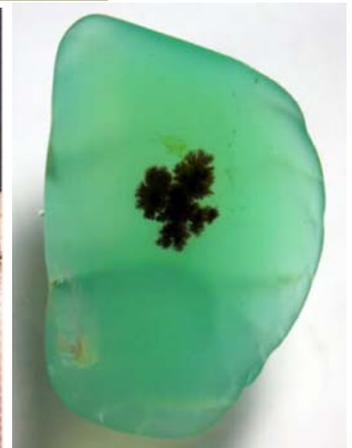
7:45 to 8:00 p.m.: Announcements, door prize drawing about 8:00 p.m.: featured program

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!

-- Our speaker will be presenting via Zoom from Texas, but we will meet in person at Boal Hall to socialize and then see Daniel's presentation on the big screen. We hope you will join us in person, but if you can't, 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>. -Editor

I have tried my hand at two of the treatments George Fischer describes in his book, Gemstone Coloration and Dyeing (1961, 1990: <https://www.ganoksin.com/article/gemstone-coloration-and-dyeing-table-of-contents/>): Tuxedo Agate and Fischer Stone. The first, Tuxedo agate, is a technique known in antiquity to produce high-contrast black and white banded agate by infusing a sugar solution into the stone's pore space and later using hot acid to strip off the hydrogen and oxygen precipitating pure black carbon into the pore space. The second, Fischer Stone, is a technique found and perfected by Fischer that uses electro-chemical displacement to grow copper or tin dendrites inside the crystal structure of porous agates that have been prepared by soaking in cupric-chloride or stannous-chloride solutions. Over the years I've tried my luck a few times with both techniques with mixed results. I'll present historical and technical information about each technique, and some images and accounts of my own experiments.

Moroccan banded agate before and after treatment.



Re-Discovering Fischer Stone, by Philip Stephenson, http://www.rarerocksandgems.com/articles/masters/rediscovering_fischer_stone.htm One of my most successful attempts. Small but nice.

Dec. 15th - Holiday Dinner- See page 2

ATTENDING THE NOVEMBER MEETING?

Donations of **one or two high quality, labeled door prize specimens** are invited.

Additional items can be placed on the giveaway table.

**December 15th:
Annual Holiday Dinner at
Quaker Steak & Lube Restaurant
Please join us!**

On Wednesday, Dec. 15, 6:00 p.m., rather than our usual meeting and program, NMS 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.” 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 space on 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. NMS will also have items for sale. If you are interested in selling, please contact Bob Altamura (raltamura@comcast.net or 814-234-5011) as soon as possible to secure table openings.

Geo-Sudoku

by David Glick

This puzzle contains the letters C E F G H I R S W; one row or column spells the agate author. 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.

C	E	W	R				I	
H	F		C	E		R		
			W	G				
					C			R
	C			R		F		S
S	H	R		W	E			
	G				W		C	I
		C			G			
	I	H	S	C		E		G

Voting Results from NMS Annual Meeting

by David Glick, NMS President

These officers were elected at the Annual Meeting in October:

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

The Bylaws amendments allowing electronic meeting and voting by the membership and by the Board of Directors both passed. The updated bylaws are available on the web site.

Fluorite Display, On Again



After delays from the pandemic, room renovations and the supply chain, Penn State’s Earth and Mineral Sciences Museum and Art Gallery expects to reopen in the foreseeable future. NMS is once again preparing the fluorite exhibit for our display case there. Shown above is a crystal group of fluorite with calcite from Cave-in-Rock, Illinois, an ex-J. Passaneau specimen. Photo by D. Glick.

Montana Agate—An American Gemstone Treasure

by Lynn Baldwin

From Ezine Articles.com Expert Lynn Baldwin
via The Opal Express, October 2021, vol. 24, #10, p. 4
AFMS Newsletter November 2021

Since the time Man descended from the trees, personal adornment in the form of jewelry has been part of every culture. Each person wishes to express herself or himself in an individual manner, and jewelry allows us one means to accomplish that goal.

Usually, when someone thinks about gemstones, the big four come to mind. These are diamond, emerald, ruby and sapphire. One might also consider opal, garnet, and a few others, but typically it would end there. Of the gemstones just mentioned, all but the opal would be cut as faceted stones, and allow little in the way of individuality.



Montana Agates Image: SAGemsGallery

The opal would be the only gemstone in the list to be cut cabochon. As defined by the American Heritage Dictionary, this means a highly polished, domed, uncut gem.

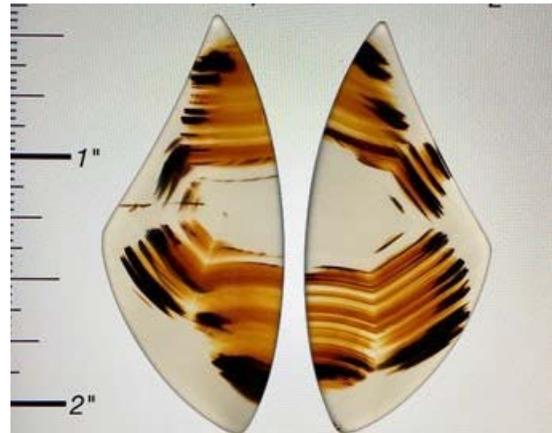
The opal is the only stone of the previously mentioned gemstones to offer much in the way of exclusivity, as no two opals are ever the same. This property alone allows an opal to be chosen to reflect its owner, and to assure a one of a kind piece of jewelry. Unfortunately opal has a big drawback. It is a fairly soft and brittle gemstone, and must be worn carefully or you risk breaking it.

So far, virtually everyone is aware of the previously mentioned gemstones. Something to consider though is that this barely scratches the surface of the potential gemstones available to be used in various ways as personal adornment. For instance, there are a great number of agates and jaspers (topics for another day) that are cut for use in jewelry about which almost no one knows. One of these that I would like to discuss is Montana agate.

Found only in America along the Yellowstone River and its tributaries in Montana and Wyoming, Montana agate is truly an American treasure. It was formed millions of years ago in holes left in lava flows. The lava has since weathered away and the agates are found in the gravel beds along the river.

With more variety in its colors, types, and figures than agate from any other known deposit in the world, Montana agate is especially wonderful for jewelry use. Historically it has typically been cut in standard sizes and shapes as cabochons and set as pendants, pins, rings, or bracelets.

There are, however, many modern lapidaries (a person who cuts, polishes, or engraves gems) who choose to cut these gemstones as free forms, as carvings, or even to facet them, which maximizes the potential and beauty of each stone. Just as in the opal, no two pieces of Montana agate are alike and this guarantees a totally exclusive and personal piece of jewelry from each one.



Montana Agates Image: HarmonAgates

Long a favorite of hobbyists and professional cutters alike because of the beautiful and highly variable patterns and durability, Montana agate is a very hard and tough stone that wears well in jewelry. A classic scenic agate, it produces luminous and lustrous gemstones with evocative scenes of lakeshores or mountains as well as figural gems. With many of these agates, in order to appreciate their subtlety, you will have to view them against the light. No two are ever exactly alike, not even matched pairs.

Agate, the Mystical birthstone for the month of September and the birthstone for the Zodiac sign of Gemini, is believed by many to possess unique properties that protect its wearer from dangers and promotes strength and healing.

Lynn Baldwin is the owner of <http://www.fine-find.com> and has been involved in collecting, cutting and carving fine gemstones, including Montana agate, for more than 30 years.

Article Source: http://EzineArticles.com/expert=Lynn_Baldwin,
http://www.cabbers.com/cabs/agates/montana_agate2.shtml
Image sources: Creative Commons

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, <<http://www.nittanymineral.org>>, and can be found at <http://www.amfed.org/afms_news.htm>.

The AFMS November issue is available on their web site. Incoming President Margaret Kolaczyk introduces herself. The procedures for Uniform Rules and Judging of competitive displays will be reviewed; clubs and members are invited to participate. The Juniors Program Chair writes on "In the Era of COVID, Two Words: Field Trips!" The Safety Chair's article on signs of trouble is reprinted on page 6 of this Bulletin. There's an update on commemorative stamps related to our interests. A feature article on Montana agate is reprinted on page 3 of this Bulletin.

Progress is being made toward bringing the EFMLS back together and back to functionality, including the web site. See the three articles starting on this page.

-Editor

EFMLS FIRST VICE PRESIDENT'S MESSAGE

We are pleased to announce that Heather Shields is back as webmaster and is in the process of updating, and later will revamp the look and functionality of, the website so it is easier to find things that are most important to our member organizations and committee members as well as the public. Some materials will be removed from the site, and we will be working to verify the contact information for current President Directors, liaisons and EFMLS committee members/chairs. If you are a current President of your club, club EFMLS liaison, field trip VP or editor of your newsletter, please email webmaster@efmls.org so that we may update the directory and the email directory as well.

If you would like to contribute to any of our committees, contact the committee chair (see last page of the newsletter. If no chairperson is listed, you can contact me, and I will see that it gets to the proper person. The nominating committee has activated and charged with excepting and vetting nominations for open offices on the executive board (see page 1). Although the remaining executive board members have largely agreed to serve another term if re-elected, myself included), all offices are open for nominations. If you are interested in serving, feel free to send you nomination to a member of the nominating committee (see page 1) or to webmaster@efmls.org and I will forward your nomination to the nominating committee or email me directly at bstephens@stephensenv.com.

We look forward to working with all our participating clubs and their members and in the future bright new opportunities. Please bear with us during this time of transition and as we engage you and your club with new opportunities including quarterly or more frequent open guest zoom lectures, field trip opportunities, improved website and social media functionality and the like. I'd also like to thank Eric Hoffman for his assistance during this transition period.

- Bill Stephens, EFMLS First Vice President

EFMLS PRESIDENT'S MESSAGE

WHO IS THE FEDERATION?

The Federation is made up of member clubs. Member clubs provide all the executive, special, general, and regional officers. They provide all the committee chairs and members and all the people that make the Federation work. EFMLS depends on a network of officers, committee chairpersons and committee members to run the day-to-day operations of the Federation.

A full Executive Board consists of 18 (yes, not three, not ten, not fourteen, but eighteen) volunteers. There are also 30 committee chairpersons and a bevy of committee members in the Federation. The Wildacres committee has nine (9) people on it, the Nominating Committee six (6), the Budget and Finance Committee three (3), etc. Overall, there are about eighty people serving the clubs of the EFMLS. These 80 people are dedicated, diverse in background, clever, opinionated, and knowledgeable in pursuit of keeping the Federation strong and making progress.

Member clubs vote on all the budgets, all the officers, all the bylaw changes, and all the major initiatives of the Federation. Judging by the founding documents, it has always been that way.

Similarly, clubs receive benefits--the insurance; use of the library and website; take advantage of the bulletin and website contests; the newsletter; website news; the safety tips; the Club Rockhound of the Year and Each One Teach One programs; visits to Wildacres, and access to the Directory of all EFMLS clubs. Another, less tangible, asset of membership in a federation is access to people--people who are knowledgeable about safety, shows, field trips, running meetings, organizing clubs, newsletters, public relations, and experts in the various aspects of the hobby.

The Federation people all volunteer and are new faces, long-time volunteers, educators, business owners, engineers, club presidents, webmasters, and come from all manner of backgrounds. What connects them all is a love for this great hobby, the people in it and serving member clubs.

Openings exist in committees and officer positions(see page 1). Committee positions include Historian, Conservation and Legislation, Supplies, Boundaries, and more. If you or someone you know might like to join the team to keep the EFMLS strong, please let me know. I will be happy to discuss the positions and offer detailed operating procedures to you.

The work of the Federation continues. The future is ours to create. **Do not wait for that future - help make it.**
- *Ellery Borow, EFMLS President*

EFMLS NEEDS YOUR HELP

An election for the officers and administration of the Federation for 2021-2022 will be taking place soon. The nominating committee members are Matt Charsky (matt2430@comcast.net), Bob Livingston and Betsy Oberheim (Aoberheim3@comcast.net). If you would like to nominate someone for one of the following positions, or you would like to serve in one of the slots, please let a member of the Nominating Committee know. If you would like a job description of any, or all, of the positions contact Mary Bateman (mbateman1@verizon.net).

The positions to be voted on are:

- President
- 1st Vice President
- 2nd Vice President
- Secretary
- Treasurer – Gary Bergtholdt is resigning as of 12/31/2021 (term ends 2022)
- Assistant Treasurer
- Newsletter Editor
- Nominating Committee (2 members)

NMS November Meeting Door Prizes



SYMPOSIUM & FIELD TRIP

Friends of Mineralogy - PA Chapter November 13-14, 2021 Lancaster, PA

Attend ONLINE -OR- IN PERSON at Bright Side Opportunities Center, 515 Hershey Ave., Lancaster PA 17603

Symposium for mineral enthusiasts on **Saturday Nov. 13** Doors open 8:30 a.m.; Symposium 9:00 - 4:00

Sales by Select Dealers – Silent Auction – Give-away Table – Meet Fellow Collectors

Talks by knowledgeable speakers on **Pennsylvania Mineralogy and Geology**, and more:

William Kochanov, PG	Ryan Kerrigan, PhD	Peter Heaney, PhD	Ron Sloto, PG	Bill Stephens, PG
Pa. Geol. Survey, Retired Revisiting G33: The Hummelstown Hematite Locality	U. Pitt. - Johnstown The Geology of Corundum Hill, Chester County, PA – Serpentinites intruded by Pegmatites	Penn State Iris Agates and Cantor Dusts: The Textural Complexity of Agates	West Chester U. of Pa. Minerals of the Silver Hill Quarry, Lancaster County, Pennsylvania	Stephens Environmental The Phoenixville Lead-Zinc Mines: World Famous Pyromorphite and other minerals

Registration (form on web site; or on-site, cash/check only): Current members \$ 15.00/person Non-members \$ 25.00 College Students \$ 5.00
Professional Geologists: lecture attendance qualifies for Professional Development Hours toward license renewal

Field Trip Sunday Nov. 14 Open only to symposium registrants, limited space. Register now!

Visit our web site for details, registration form, changes and updates: www.rasloto.com/FM

Safety Matters - the Signs

Ellery Borow, AFMS Safety Chair
November 2021 AFMS Newsletter

Signs? Safety means different things to different people. Safety can mean locking the doors, keeping a medical kit handy, or reading the instructions before using your new "rock desrtucto" tool. One of the issues with safety is reading the signs of a situation before it becomes a full-blown problem. If one sees a worn cord on one's lapidary equipment, a mushroom head developing on a chisel, a broken guard on a slab saw, or a tripping hazard at a gem show - those would be safety matter "signs".

Goggles hard to see through? Clean them or replace them. Mushroom head on a chisel? Grind off the dam-aged part. Worn electrical cord? Replace it. Those are relatively easy issues to address. If one sees a potential problem and addresses it before it become an active problem, one has correctly read the signs. What about the signs of someone's medical problems while participating in the hobby? Would one recognize the signs of a medical problem?

What if there were a member's diabetic sugar level problem, a dehydration issue on a dig, a sun burn from a member's being too focused on hole digging, heat stroke, or heart attack at a club activity? It is not likely everyone in a club will want to be an expert in all matters of medical emergency but a smattering of knowledge and being aware of certain signs can be a good thing.

Here are some common medical safety matters--heart attack, dehydration, heat exhaustion, heat stroke, poisoning, concussion, shock. To give any complete and comprehensive descriptions of these conditions is beyond the scope of this column. However, some basic knowledge may be beneficial.

- Heart attack--For one reason or another, the heart cannot do its job. Time of essence. Symptoms: severe pain or discomfort in chest region, often radiating to arms / neck, sometimes denied / dismissed because can feel like indigestion, if not breathing initiate CPR, seek medical attention ASAP.
- Dehydration--Insufficient water consumption. Symptoms: thirsty. Drink water.

- Heat exhaustion—Symptoms: weakness, faintness, sometimes headache and nausea, skin pale, wet, and clammy from perspiring. Move to cooler but not chilly place, lay down, drink fluids if tolerated. Follow-up care suggested.
- Heat stroke--more serious than heat exhaustion. Symptoms: mental confusion, staggering walk, delirium, skin flushed, dry, and hot. Person may mention being hot. Move to cooler but not chilly place, lay down with head elevated, sponge body with cool water. Seek medical attention.
- Poisoning--Can be by inhalation, ingestion, absorption or injection (bites). Symptoms: many and varied. Observe the situation and seek medical assistance immediately. If by ingestion of known source follow directions on container and seek medical assistance immediately.
- Concussion--Injury to head. Symptoms: depends up-on nature of injury, may have loss of consciousness, breathing or vision issues, inability to move certain body parts, headache, nausea, vomiting. Seek medical attention.
- Shock--A response to severe or sometime slight injuries including fright, severe burns, circulatory issues, blood loss, pain. Symptoms: altered consciousness; skin pale, moist, cool; rapid breathing and pulse; irritability or restlessness. Treat base cause then lay down feet elevated except with head injury, keep warm and airway clear, offer water. Seek medical attention.

Sometimes the signs are confusing or not easy to ascertain, but they are still worth noting. Rockhounding is a hobby where it is still best when all end their day safe, healthy and happy--a hobby where being part of the rock collecting family and knowing the signs is good thing.

The above is not meant to profess or prescribe current medical solutions. It is meant to convey the understanding that many medical emergencies have solutions that need quick action and club knowledge of solutions may be a part of a successful outcome. There is a huge number of emergency medical and survival guides. The American Red Cross (copyright) had a substantial number of up-to-date health and safety publications. Please encourage your club's safety committee to stay current with health and safety practices. Please consider encouraging an interest in safety being practiced by every club member. Your safety matters.

10 Years Ago in NMS

Our November 2011 program was “Kimberlites and Lamproites: Windows to the Upper Mantle,” by Dr Duff Gold. Junior Rockhounds were meeting, and we were preparing for our December Holiday Social. NMS members John Passaneau and Bob Altamura collaborated to help Discovery Space of Central Pennsylvania establish an exhibit of minerals and rocks which glow in the dark from ultraviolet fluorescence.

One month earlier, the photo at right and its accompanying text (below) were published.

Mineral Portraits

by
John Passaneau

Quartz
Brandberg Area
Brandberg District
Erongo Region
Namibia

This is a 4 x 8 x 3.3 cm quartz crystal cluster. It's a very busy specimen as it's smoky in parts, it shows hopper growth, and has a very hard-to-explain thin streak of amethyst running up through the center of the crystal to the termination. I've never seen anything quite like it. The smoky and amethyst color can be explained by aluminum or iron ions in place of a small number of the silicon atoms and a subsequent exposure to natural radiation. But how the narrow strip of amethyst got there takes some thought to explain. This photo was taken with a digital focus stacking technique to increase depth of field, with 17 images used.



Quartz, Brandberg Area, Brandberg District, Erongo Region, Namibia.
John Passaneau specimen (Q-78) and photo.

UPCOMING EVENTS

Confirm details of events before attending.

Nov. 13-14, 2021: Symposium and Field Trip, by Friends of Mineralogy - Pennsylvania Chapter. Saturday Symposium: Online or in person at Bright Side Opportunities Center, 515 Hershey Ave., Lancaster PA 17603. Sunday field trip, open only to symposium registrants: TBA. Register in advance or on-site (on-site cash or check only). See page 5.
See <https://www.rasloto.com/FM>

Nov. 26-28, 2021: Morris Museum Annual Rock and Mineral Weekend, by Morris Museum Mineralogical Society, 6 Normandy Heights Road, Morristown, NJ. Fri 10-5, Sat 10-5, Sun 1-4:30.
<https://morrismuseum.org/mineral-society/>

Mar. 5-6, 2022: 58th Annual Gem, Mineral and Fossil Show, by Delaware Mineralogical Society. Double Tree by Hilton Hotel, 4727 Concord Pike (Route 202), Wilmington, DE. Sat 10-5, Sun. 11-5.
www.DMSrocks.org

Mar. 26-27, 2022: Annual Show, by Che-Hanna Rock & Mineral Club. Wysox Volunteer Fire Co. Social Hall, 111 Lake Road, Wysox, PA. Sat 9-5, Sun. 10-4.
<http://www.chehannarocks.com/>

Geo-Sudoku Solution

C	E	W	R	H	S	G	I	F
H	F	G	C	E	I	R	S	W
I	R	S	W	G	F	C	H	E
G	W	F	I	S	C	H	E	R
E	C	I	G	R	H	F	W	S
S	H	R	F	W	E	I	G	C
R	G	E	H	F	W	S	C	I
F	S	C	E	I	G	W	R	H
W	I	H	S	C	R	E	F	G

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 has not been set. 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.

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:

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

SOCIETY OFFICERS

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Dr. Barry Scheetz (Secretary) 814-360-8241 (cell)
e-mail: se6@psu.edu
Stuart Bingham (Treasurer)
e-mail: sebing145@comcast.net

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
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
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