

Nittany Mineralogical Society Bulletin

Nittany Mineralogical Society, Inc.
P.O. Box 10664

State College PA 16805

Editor (see page 8):

David C. Glick

November, 2012

Visit our web site: www.nittanymineral.org

November 28th meeting:

Roadside Geology

Part 2: Pennsylvania and beyond

by Dr. Charles E. Miller, Jr.

Retired Geologist

Our November meeting will be held Wednesday the 28th in the room 114 auditorium of Earth & Engineering Sciences Building on the west side of the Penn State campus in State College, PA. Maps are available through our web site.

6:30 to 7:30 p.m.: Social hour, refreshments in the lobby

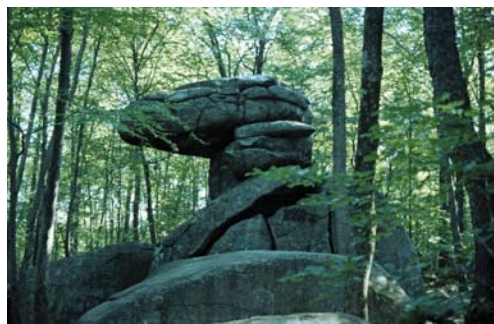
*7:30 to 8:00 p.m.: announcements, questions, answers;
door prize drawings*

about 8:00 p.m.: featured program

*The event has free admission, free parking, and free refreshments, and is open to all – **Bring your friends and share an interesting evening.***

"Roadside Geology - Part 2" concludes our traverse through Pennsylvania that began in Part 1 and then continues to Maryland, Virginia, Tennessee, and western states. Intrastate observations include: megaripples, sinkholes along I-81, headward erosion, a Triassic dike, Dinosaur Rock, Gettysburg Battlefield, dinosaur footprints, ringing rocks, rockfalls, slumping, and more. Sinkholes observed along I-81 between Carlisle and Hagerstown (MD) from 1970 to 1980 cost \$150,000 for evaluations and repairs. We will look at sinkholes developed on a fracture trace; the timing of one as determined from the surrounding corn crop; and one involved in a complaint against PennDOT but resolved through aerial photography. The geologic connection between an igneous dike at Carlisle, Dinosaur Rock, Devil's Den, and Ringing

Rocks State Park will be discussed. At the Gettysburg Battlefield, approximately one million people visit annually but virtually none know of the Triassic dinosaur footprints in the Plum Creek Bridge. Finally, in 1983 a spectacular rockslide killed two people and injured another on a road in Pittsburgh. Details of this are discussed.



Dinosaur Rock, Mt. Wilson Road (Rt. 3005); Lebanon County, PA; 7-14-77. This outcrop is an erosional remnant of diabase. During the Jurassic in southeastern Pennsylvania, a large mass of magma intruded into Triassic sedimentary rocks. The boulders are spheroidally weathered. Emplacement of the diabase here and elsewhere along the eastern U.S. coincides with rifting of Pangaea during the Triassic as the modern Atlantic Ocean began forming.

Continued on page 2

Junior Rockhounds Meet Nov. 28th

Junior Rockhounds will meet at 5:00 p.m. on the fourth Wednesday of November (the 28th), with December plans to be announced later. We'll meet in room 121 Earth & Engineering Sciences Building; from the parking lot, enter the lobby, take the hallway on the left and go all the way to its end.

Each month's Junior Rockhounds meeting has a new topic or topics with fun, hands-on learning for the kids. We encourage those who attend to become NMS members, but it's not required. Just \$7.00 covers a whole year (through October 2013) of student membership. Parents may get a lot out of the meetings, too! Check the web site for news, or contact Dr. Andrew Sicree (see page 8). - Editor

December 19th meeting: Holiday Social at Hoss's - Please RSVP by Dec. 8 -

by David Glick, NMS President

Our annual December meeting/ social event will be held Wednesday, December 19th at 6:00 p.m. in a private room at Hoss's Steak & Sea House restaurant, 1450 North Atherton St., State College PA 16803. Please RSVP to David Glick at 814-237-1094 (leave a message) or xidg@verizon.net by December 8, stating the number of people in your group. Guests, non-members and prospective members are welcome; please RSVP to Dave.

NMS will pay for some appetizers for the group. Individuals will then order their dinners from the menu; there will be separate checks which will include 18% gratuity. The menu should be as shown at (we'll have these links on our own web site, www.nittanymineral.org):

<https://www.statecollege.com/dining/613/hosss-steak--sea-house/> or <http://www.hosss.com/menu/> (Choose the various sections on the right side)

Almost all dinner entrees include Hoss's salad bar (it's extra with the sandwich menu).

ATTENDING THE NOVEMBER MEETING?

Donations of labeled **door prize specimens** are invited.

Your donated snacks and drinks will be welcomed at the

6:30 social hour.

Bring a friend!

Roadside Geology 2

continued from page 1



Headward erosion off I-81 at Shippensburg, PA; 1971. This type of erosion always progresses in a direction opposite flowing water. If this headward erosion continues long enough, it will cross the drainage divide at the top of the hill. Image by the author.



Rectilinear alignment of three sinkholes suggesting development on a fracture trace. Adjacent to I-81 at Carlisle, PA. Also note the sinkhole in the lower left. 1970. Image by the author.



Triassic diabase dike (dark) intruding Cambro-Ordovician limestone (light color); Exit 16 (New Exit 226) of PA Turnpike (I-76); Carlisle, PA; 1974. During late Triassic and, mostly, Jurassic time, diabase followed deep-seated fractures associated with rifting of Pangaea. Dike temperature was approximately 1100° C (2012° F) causing contact or thermal metamorphism.



Rockfall and incipient rockfall; I-81N. near Hazelton, PA; 7-73. Note the rock separation toward the top of the road cut. Image by the author.



Rockfall/rock slide; Saw Mill Road; Pittsburgh, PA; 2-16-83. This slide occurred just 10 minutes after workers set off 17 small explosive charges to clear rocks off slopes. Two people were killed and one injured. Did blasting loosen mud behind the large boulder just enough to cause it to topple to the roadway about 60 feet below?



Feeder dike and basalt flows; Dixie National Forest near Veyo, UT; 5-27-75. Series 3791-3793.



Basalt flows between which a paleosol (lighter color; paleosol) developed; 5 mi. south of CO/NM border; US 285, Three Rocks, NM; 6-3-75. Paleosols provide information on past climates, vegetation, and weathering.



En echelon normal faults offsetting a latite sill in the wall of Black Canyon at Hoover Dam on the Colorado River; Boulder City,



Petrified giant sequoia stump (right) and two other petrified trees (lower center); Specimen Ridge; Yellowstone National Park, WY-MT. The petrified forests of Yellowstone are the most extensive of their kind in the world and contain information about the climate and geologic history of the Rocky Mountain region some 55 million years ago. They are unique in that many of the trees are in original growth position; and that, at Specimen Ridge, the process of burial and petrification took place not once but 27 times.

Our western-states roadside geology includes Douglas Pass, Colorado - notorious for landslides; slumping and earthflows; I-40 at Rockwood, Tennessee that, prior to Skytop, was the most expensive stretch of U.S. highway; a paleosol (paleosol); an obsidian flow; en echelon faults at Hoover Dam; the world's largest petrified forest at Yellowstone National Park; radial dikes; a feeder dike and lava flow; a volcanic neck; fault scarps; and more. Douglas Pass has the distinction of being significant to geologists for two reasons: it is one of the best Eocene

Green River Shale insect- and leaf-collecting sites; and it is an on-going challenge for engineering geologists and highway engineers because it is one of Colorado's most active landslide areas. Slope failures include earthflows, debris flows, rockfalls, and a variety of rotational and translational landslides. At Yellowstone we will see 27 petrified forests on top of each other as a result of super volcano eruptions approximately every 100,000 years which covered living forests with ash. The petrified trees are in original, vertical growth position. Over 3.5 million tourists visited Yellowstone in 2010. Probably 99.5 percent have never heard of Specimen Ridge. ❄

Annual Meeting and Elections Held on October 17th

by David Glick, NMS President

The Annual Meeting of the Corporation was held during the 7:30 business meeting time slot at our regular meeting on October 17, 2012. The President briefly reviewed the past year's activities and a few that are planned. The Treasurer reported that our finances are in good condition, and we expect to close the fiscal year on October 31 with a gain of a few hundred dollars. The incumbent officers were re-elected by acclamation (there had been no other nominations or volunteers):

President: David Glick

Vice-President: Robert Altamura

Treasurer: John Passaneau

Secretary: Ellen Bingham

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NEWS FROM THE FEDERATIONS

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 present brief summaries here in order to encourage readers to see the entire newsletters.

The **EFMLS Newsletter** is available through the link on our web site www.nittanymineral.org or remind Dave Glick to bring a printed copy to a meeting for you to see. The November issue starts with new President Cheryl Neary introducing herself, her interests, and her background as club and federation officer and professional geologist (see p. 7 of this Bulletin). Frances Sick is recognized by our neighbors in northeastern PA's Che-Hanna Rock & Mineral Club as their Club Rockhound of the Year. Safety Chair Ellery Borow urges club members to write about safety, particularly issues specific to the local club activities or collecting areas, in their bulletins (see p. 6). The Junior Activities column is about tailoring our teaching to the various ways in which kids learn.

The **AFMS Newsletter** is available by the same methods. The November issue opens with an overview of the management planning process for public lands managed by the Bureau of Land Management and the US Forest Service. President Don Monroe writes on getting younger people, and newly-retired people with time and energy, involved in our clubs and federations (see page 6 of this Bulletin). The safety article discusses hurricane preparedness as well as hazard recognition in our work and everyday environments. The Juniors article discusses fluorescent minerals and teaching about them using fluorescent paints. The 2013 web site competition is described by new chairman Dan Imel.

Please see the web sites for the complete Newsletters. There's a lot there!

- Editor

Tax-Deductible Donations Welcomed

by David Glick, NMS President

As a 501(c)(3) nonprofit organization, the Nittany Mineralogical Society would welcome your year-end cash donations in any amount, and will provide a receipt. These donations fund our various programs, such as specimens to hand out at our Minerals Junior Education Day and honoraria for invited speakers at our monthly meetings.

Please make checks to 'NMS,' mark as 'donation' and send to

John Passaneau, NMS Treasurer

2231 W. Whitehall Rd

State College PA 16801

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Geo-Sudoku

by David Glick

This puzzle contains the letters AEFHLORTW, and one row or column spells one of the types of slope failure at Douglas Pass, Colorado (see *Roadside Geology* on page 3). 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	E						
F	L		E					H
	R	H		W	L			O
	E		H				A	F
			R			H		
	H				W		R	E
	W		L			A	F	R
	F	L		R			H	
E		R			F	L		W

10 Years Ago in NMS

In November, 2002, we held our Minerals Junior Education Day (it was a Fall event back then), Joe Sbaffoni of Pennsylvania DEP spoke on the Quecreek Mine flooding and rescue, and we had field trips to Hanson's Pine Creek Quarry (Lycoming County, PA) and the Upper New Street Quarry (Paterson, NJ).

- Editor

EFMLS Convention and Show, Harrisburg, PA, September 2012



photographs by David Glick

The first activity at the convention was a trip to a reception at the new Masters Mineral Gallery at Elizabethtown College. EFMLS president R.J. Harris speaks to the group.



Mineral specimens from across Pennsylvania are shown in one of the new displays at the Masters Mineral Gallery.



A silent auction raised funds to benefit EFMLS.



Discussions and bulletin award presentations took place Sunday morning at the Editors' Breakfast.



A display case at the Show held specimens from the collection of Ed and MaryAnn Charles which had been photographed to create the Central Pennsylvania Rock & Mineral Club's color poster of Rocks, Minerals and Fossils of Pennsylvania.

ALL IN THE SAME BOAT

by Don Monroe, AFMS President
AFMS Newsletter, Nov. 2012

Functioning as the President Elect of AFMS has given me the opportunity to attend the annual meetings of a couple of Federations and really given me an insight into their activities. I have learned quite a few things and I am very surprised to find out that most of us have similar problems.



All non-profit operations including our federations, as well as churches, clubs, and most of those activities we enjoy share many of the same issues. We are competing for people's entertainment dollar. At this point in our lives many of us suffer from a shortage of disposable income. In our families there is competition between the various family members for money to do those things that they want to do. In some cases there is a lack of employment opportunity or a shortage of transportation.

To draw a fine point let's focus on our clubs and our federations. Everywhere I look I see a lack of members. We particularly lack members who are willing to take jobs or positions and work for our organizations. It is not always easy to recruit new people and to attract young people is sometimes nearly impossible. I say this and yet we all feel that the future of our hobby is really dependent on young people.

Is there a solution? Do we have any ideas? I must confess that I do not have the answer and I do not see this as a new problem. For years I have pondered these issues, not only in our organizations but in the other activities that we enjoy and want to see prosper. I only have a couple of ideas that I see used at various times in various places.

My first thought is that we need to recruit workers prior to retirement. Observing what has happened to many of my friends I see that as soon as the word gets out that they may retire it is like a feeding frenzy with every organization looking for their help. Often the first vulture that gets there is the one who scores. My other thought is that we must strongly encourage our members to line up potential successors. We sometimes literally ride our horses right into the ground simply because they do a good job for us and really do not consider that we are not being fair to them. Sometimes maybe we should move our horses around and give them a different job or a change of scenery.

I know that I have not solved any of our problems but maybe I have provoked a little thought.

Don

SAFETY MATTERS

by Ellery Borow, Safety Chair

To Write or not to Write

Eastern Federation of Mineralogical and Lapidary Societies conventions always provide inspiration in many forms. The 2012 convention recently held in Harrisburg was no exception. During the convention's Editors Breakfast, Mr. Don Monroe, President-elect of the American Federation of Mineralogical Societies, made a comment about possibly having a contest category for safety articles in future Bulletin Editors Advisory Committee contests. Well, I thought, that was an interesting idea, but why not spread the idea a little farther.

To write or not to write is often not the question. Most folks with good ideas, inspirations, safety tips or techniques choose not to write about their ideas. They may share an idea with a fellow club member or mention it in passing at a meeting, but good ideas often do not make it into print where many more folks might perhaps benefit by the idea's understanding and implementation.

So, this good idea, inspired by Mr. Monroe's comment, is to suggest or encourage club editors and club safety committee chairpersons to get together and urge their club members who have safety ideas, suggestions or specific safety comments to write about their ideas – and then publish them in their club's bulletin. Encouraging safety ideas to be spread amongst the membership seems like a good idea to me. Perhaps a club editor might even like to offer a contest of some sort for the best safety idea of the year. It's something to think about.

The reason for promoting local safety ideas is a simple one. I can step up on my soap box and spout safety rules all day long and indeed one may find generic, cover all the bases, safety guidelines all over the place, but sometimes a club may have unique-to-themselves quarries, pits, local mineral cleaning, home-made equipment/machinery safety tips which could benefit their club members. The club membership may benefit although there might not be a strong need for the idea to go national, because the idea is local in scope and not national.

How many great unique-to-a-specific-club safety ideas are out there? I don't know – but you as safety chairpersons and editors may be able to find out. So if the question is whether to write or not to write – please give writing down those safety ideas some thought, or at least encourage your members to do so.

Remember, your safety and your safety ideas matter. ❄

And so the Journey Begins!

by Cheryl Neary, EFMLS President
EFMLS Newsletter, Nov. 2012

As you may have realized I have been elected as President of this great organization. I hope our journey together is as if we are sailing on calm waters (maybe a few wakes...).

So, how did I get to this position in the organization? It started out simply by visiting an EFMLS convention in Bristol, CT. A few members of my clubs were interested in bidding for a show on Long



Island. So our quest began three years ago. We were informed that we needed to speak to Matt Charsky, an extremely active member of the EFMLS and now 2nd VP of the American Federation, as well. Matt is responsible for the Convention Shows. (If your club is interested in hosting the function- speak to Matt) Anyway, Matt is also on the Nominating Committee- so you probably figured out by now the association! He is very persuasive! The rest is history! This brings me to my history- and who I am!

I have always been attracted to the natural beauty and art of nature- rocks, seashells and plants. As a child (many moons ago), I often wandered to the rock which glistened in the sunlight. I was mesmerized by the beauty - later to be amazed by the geology of the structure, which I seemed to become fond of instantly and thus added to my collection- a never ending collection of time caught in a moment (of course geologically speaking!). I also grew up with Jacques Cousteau entertaining and enticing me to want to learn more about the oceans and its inhabitants. I watched in awe as he descended to the ocean floor and found the urge to want to study this spectacular area of the earth. In my teens I was determined to become a Marine Geologist. Needless to say, that did not happen. But geology was a very strong possibility and I attended a great State University which offered a terrific program (and still does!) In my last year of high school I had an English teacher who influenced me to ponder a profession in Criminal Justice. In my sophomore year of college I undertook an independent study for psychology and volunteered in a minimum security prison. It was an extremely rewarding experience which had me convinced-geology was the way to go!

I graduated from the State University at Oneonta (New York) with a Bachelor of Science in Geology. The

plan was to work for a major oil company. Upon graduating and interviewing with the major oils, I was informed that although I had the degree in Geology, I was lacking business and computer courses. So, back to school for accounting and computer classes- yep- I learned to program in Cobalt and FORTRAN, punching the cards (really dating myself now!) and working for a fortune 500 company, who paid for my Masters in Business Administration. I worked for many years in the accounting department of various organizations, until fate placed me into the company I presently work for- an environmental contracting company. I started out as a staff geologist, to senior geologist and presently handle Compliance for Petroleum and Chemical Bulk Storage.

Throughout my time working in accounting I was active with my local rock and mineral clubs. Quite a few times in the history of the Island Rockhounds (Long Island) I have held the positions of Treasurer, Vice-President and President (currently). I also belong to the Suffolk Gem & Mineral Club and have been a director for quite a few years. Over the years and presently I also belonged to the Long Island Mineral and Geological Society and New York Mineral Club. Recently I just joined the Syracuse Gem and Mineral Club.

When you have a profession and hobby which you love, it is important to stay in touch with the many aspects of the field. I am presently the Treasurer of the Long Island Association of Professional Geologists and a Board Member of the New York State Council of Professional Geologists (NYSCPG). One of the main functions of the NYSCPG is to seek licensure for geologists. New York State has not joined the 31 other states which have recognized the important role of geologists by requiring a license to enforce the practice.

I have had the pleasure of working with many fine individuals within this organization. I would like to meet many more!

I have found out in the past few years that many clubs are not really active in the Federation. Our Federation can provide so many tools for you to utilize. In addition, the Federation allows you to participate in an assortment of activities, which have been and will be promoted in future newsletters!

What is the possibility of more active clubs? You tell me- why is there a lack of participation?

Where will our journey take us?

Cheryl

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.

March 2-3, 2013: 50th Annual Gem, Mineral & Fossil Show, All That Glitters Is As Gold, by Delaware Mineralogical Society, Delaware Technical & Community College, Stanton, Delaware.
<http://www.delminsociety.net/marchshow.htm>

March 23-24, 2013: Rock & Mineral Show by Che-Hanna Rock & Mineral Club, Athens Township Volunteer Fire Hall, 211 Herrick Ave., Sayre, PA.
<http://www.chehannarocks.com/show.html>

April 6-7, 2013: Philadelphia Mineral Treasures and Fossil Fair, by Philadelphia Mineralogical Society and Delaware Valley Paleontological Society, Lulu Temple, 5140 Butler Pike, Plymouth Meeting, PA.
<http://www.philamineralsociety.org/>
<http://dvps.essentrix.net/>

April 18-21, 2013: Rochester Mineralogical Symposium
<http://www.rasny.org/MinSymposium/MineralSymp.htm>[city.org/](http://mincity.org/)

May 18-19, 2013: World of Gems and Minerals - Jewelry, Bead, Mineral and Fossil Show, by Berks Mineralogical Society. Leesport Farmers Market, Route 61, Leesport, PA. <http://www.berksmineralsociety.org/>

June 1, 2013: Spring Mineralfest by Pennsylvania Earth Sciences Association. Macungie Memorial Park, Macungie, PA. Saturday only 8:30 - 3:00.
www.mineralfest.com

June 1-2, 2013: Eastern Federation of Mineralogical and Lapidary Societies Convention, and Suffolk Gem and Mineral Club Annual Show, Plainview, New York. EFMLS Meeting May 31.

Sept. 20-22, 2013: American Federation and Southeast Federation Conventions, Jacksonville, Florida. *

Geo-Sudoku Solution

W	O	E	F	T	H	R	L	A
F	L	A	E	O	R	W	T	H
T	R	H	A	W	L	F	E	O
R	E	W	H	L	T	O	A	F
A	T	O	R	F	E	H	W	L
L	H	F	O	A	W	T	R	E
H	W	T	L	E	O	A	F	R
O	F	L	W	R	A	E	H	T
E	A	R	T	H	F	L	O	W

For sale / trade:
Submissions are welcomed.

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 to

Nittany Mineralogical Society, Inc.

P.O. Box 10664

State College, PA 16805

or bring your dues to the next meeting.

We want to welcome you!

SOCIETY OFFICERS

David Glick (President) 814-237-1094 (h)

e-mail: xidg@verizon.net

Dr. Bob Altamura (Vice-President) 814-234-5011 (h)

e-mail: raltamur@fscj.edu

John Passaneau (Treasurer) 814-231-0969 (h),

e-mail: jxp16@psu.edu

Ellen Bingham (Secretary) e-mail: emb22@psu.edu

OTHER CONTACTS

Field Trips: Ed Echler 814-222-2642

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Junior Rockhounds: Dr. Andrew Sicree

814-867-6263 (h) e-mail: sicree@verizon.net

Membership Chair: David Glick (see above)

Programs: Dr. Duff Gold 865-7261(o), 238-3377(h)

e-mail: gold@ems.psu.edu

Door Prizes: *volunteer needed!*

Facebook: Mike Zelazny e-mail: maz166@psu.edu

The **Bulletin Editor** will welcome your submissions of articles, photos, drawings, cartoons, etc., on minerals, fossils, collecting, lapidary, and club activity topics of interest to the members. Please contact:

David Glick E-mail: xidg@verizon.net

209 Spring Lea Dr. phone: (814) 237-1094 (h)

State College, PA 16801-7226

Newsletter submissions are appreciated by the first Wednesday of the month. If you include photographs or graphics, 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