

Nittany Mineralogical Society Bulletin

Nittany Mineralogical Society, Inc.

P.O. Box 10664

State College PA 16805

Editor (see page 8):

David C. Glick

October, 2010

Visit our web site: www.nittanymineral.org

October 20th meeting:

Mine Drainage Sediments as a Resource

by

Dr. Carl S. Kirby
Bucknell University

Our October meeting will be held Wednesday the 20th 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,
Juniors meeting in room 116 at 6:45

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 enjoy the evening.** -Editor

Iron oxides have been used as pigment for millennia. Naturally-occurring oxides and hydrated oxides of iron, concentrated by the weathering process are mined for red/yellow/brown pigments on a small scale because specific colors are the desired resource, and the weathering horizons in which the desired colors are found are much smaller than deposits of iron mined for steel manufacture. The utility of pigments depends upon chemical composition, mineralogy, color, tinting strength, oil adsorption, grain size and shape, and chemical impurities.

Acid mine drainage (AMD) is a significant source of pollution and also a potential resource due to its high metal loading. Cleanup costs for Pennsylvania alone are estimated at \$15 billion for abandoned mines, assuming no materials can be recovered as resources. Mine drainage sediments from treatment facilities are currently considered a waste material which must be disposed of. Mine drainage sediments are rich in Fe, which gives rise to the ochreous colors, and these sediments may represent a large untapped resource if they can be recovered economically in a usable form. If not independently economical, such recovery and utilization of a resource could subsidize the remediation of mine drainage. The potential mass of ferric oxide recovery is high. Assuming the solid precipitate to be $\text{Fe}(\text{OH})_3$, a drainage of 10^6 L/day and 25 mg Fe/L Fe will yield 17 metric tons of $\text{Fe}(\text{OH})_3$ per year.

Junior Rockhounds Meet October 20th

Junior Rockhounds meetings are scheduled for Wednesdays this Fall. In October and November, the meeting will be held at 6:45 p.m. on the third Wednesday (Oct. 20, Nov. 17), during the social hour for the regular meeting. The location will be room 116 Earth & Engineering Sciences Building; after entering the door from the parking lot, go all the way to the other end of the lobby and turn left. Plans for December will be announced later. -Editor

Elections in October

by David Glick, NMS President

The Annual Meeting will be held at the October 20th regular meeting. As announced, the slate of candidates consists of the incumbent officers:

President: David Glick;

Vice-President: Robert Altamura;

Secretary: Ellen Bingham;

Treasurer: John Passaneau.

We are also looking for members to coordinate refreshments and publicity (see the August Bulletin). Please volunteer!

ATTENDING THE OCTOBER MEETING?

Donations of door prize specimens are invited.

NMS will provide ice, soft drinks, and water;
your donated snacks will be welcomed.



Carl Kirby with a VW van painted with acid mine drainage-derived "yellow boy" pigments. Photo courtesy of Carl Kirby

If a DUES FORM is enclosed, we have not yet processed your dues payment. We may have received a few which have not yet been processed, and we apologize for the delay. If you have not yet paid, please mail in your form and payment, or bring them to the October meeting, as our membership year ends on October 31. Thank you for your prompt response!

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.ems.psu.edu/nms/ or remind Dave Glick to bring a printed copy to a meeting for you to see.

The October issue continues the series on compiling an application for the All-American Club award. Loren Patterson notes the importance of behaving well on field trips to maintain a good public image; the AFMS Code of Ethics is a useful guide. Mary Bateman discusses ways for a club bulletin to make a good first impression. Many additional attractions near the July 2011 Convention in Syracuse, NY, are described. The Fall Wildacres session is covered.

The **AFMS Newsletter** is available by the same methods. In the October issue, Wendell C. Mohr notes new initiatives to encourage the US Postal Service to issue birthstone commemorative stamps; see www.amfed.org/stamps.htm. Emerson Tucker reports on his year as President and thanks those who worked with him. Club Rockhounds of the Year are introduced. The upcoming web site contest is described. Owen Martin follows up last month's safety story. John Martin reports on a proposed 20,000 acre wilderness initiative in Tennessee. Dick Pankey, ALAA President, reports on the America's Great Outdoors Initiative.

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

- Editor

FoM -PA Symposium

The Friends of Mineralogy-Pennsylvania Chapter has announced that its annual symposium will be held in Lancaster, PA, November 6-7, 2010. The Saturday symposium will feature speakers (including Joe Dague, Ron Sloto, Jay Parish, and Peter Leavens), a tour of the Franklin & Marshall geology labs by host Prof. Stan Mertzman, a general membership meeting, silent auctions, and a give-away table.

The Sunday field trip is open to symposium registrants only. Full safety gear (hard hat, safety glasses, steel/hard toe shoes, etc) is required on this trip.

Please pre-register by October 31; details and registration form are available at www.rasloto.com/FM/.

- Editor

Ultraviolation

All-Fluorescent Mineral Show

OCTOBER 30, 2010

The Rock & Mineral Club of Lower Bucks County presents its annual all-fluorescent mineral show at First United Methodist Church, 840 Trenton Road, Fairless Hills, PA. Saturday only, 9-4. This interesting show is run with alternating periods of room lights off so that the fluorescent specimens can be seen, then on for transacting business. It works well! See page 8.

- - Editor

Lapidary rough to be sold by NMS

Nittany Mineralogical Society has received as donations a variety of lapidary rough. In order to reduce our storage requirements and get the material to people who can use it, plans are being made to sell some of it. If you are interested, please contact Dave Glick (see page 8).

- - Editor

NMS at

Spring Creek Day Family Festival

Bob Altamura reports that the NMS station which he organized for Clearwater Conservancy's Spring Creek Day Family Festival went well. Good weather and a good location, being the first station at the entrance from the parking lot, lead to good attendance. At least 100 people stopped to see the displays and demonstrations of mineral hardness and how it affects the grinding and polishing of gemstones. Equipment including vibratory and rotary tumblers, a lapidary wheel, and a faceting machine were demonstrated. Give-aways of tumbled stones and minerals used to demonstrate hardness were popular, especially the small but gemmy clear pink topaz crystals. The next day, the local Centre Daily Times newspaper carried a photo of Bob demonstrating gem carving to a 7-year-old. H



Behind the table, Willard and Bob show hardness and general lapidary procedures, while Steve and Sarah demonstrate the faceting of gemstones. D. Glick photo.



Dave Snell in 1992 with his favorite specimen from the Mineral Museum collection, an amethyst from Uruguay. *J. Dague photo.*

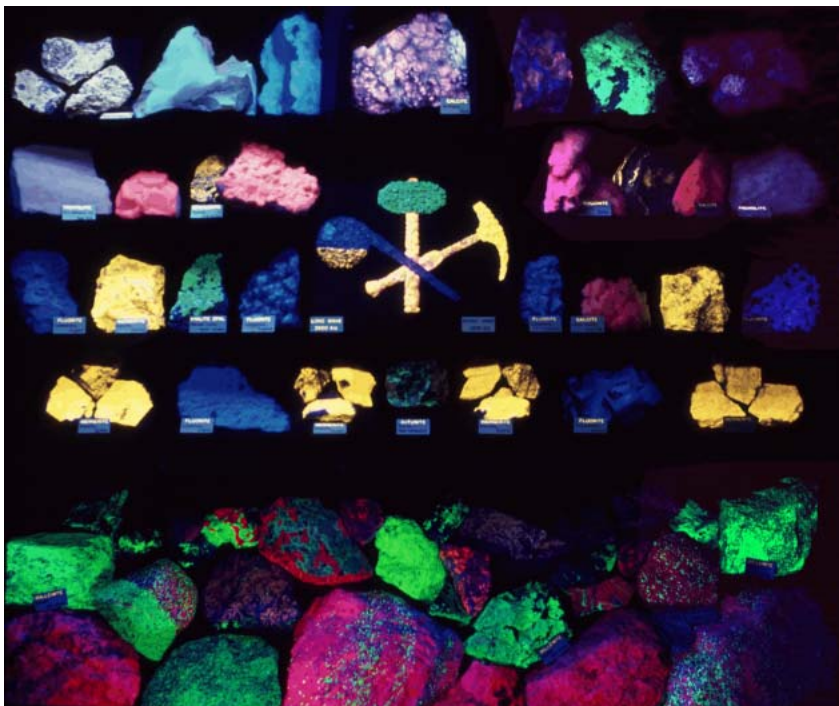
In Memoriam: David E. Snell

by David Glick

Long-time Penn State Mineral Museum curator Dave Snell passed away on September 29, 2010; he was 82. Dave grew up in Weatherly, PA, near Hazleton in Carbon County. He spent his career from the early 1950s through the early 1990s at Penn State's Mineral Museum, which had displays in the central gallery of the Mineral Industries Building as well as lining many of the building's extensive hallways. During that period, the building was renamed to honor Edward Steidle, Dean of the School of Mineral Industries, who had expanded and promoted the museum during the 1930s-50s. The museum was toured by generations of school children, as well as other visitors, alumni, students, and employees, and much of what they enjoyed was the result of Dave's work. (The museum is now located on the ground floor of Deike Building.) Because of this encouragement of interest in minerals in our area, Nittany Mineralogical Society and its members owe Dave a debt of gratitude.

One of his specific interests within mineral science was the fluorescence of minerals. He set up two rooms full of displays of fluorescent and luminescent minerals and other materials, some of them impressively large. These memorable displays received a lot of attention from tour groups and other visitors.

Also among his more noticeable creations were many automated exhibits of the properties of rocks, minerals, and gemstones. The visitor would push a button, and motors and lights in the display case would come to life, moving specimens in to position to show aspects of their optical or physical properties, or to quantify those properties with real, working scientific instruments. All of this was accomplished by imaginative application of equipment from a wide variety of sources, without a large budget. Dave took these exhibits to mineral shows in the region, making many friends and gaining recognition for the Museum. Some displays are still in the College of Earth & Mineral Sciences, such as the flexible sandstone exhibit in Deike Building. Many others have been refurbished and are on display at the Geotech Center of the Sterling Hill Mining Museum, Ogdensburg, New Jersey.



The largest (about 6 feet across and quite tall) of several fluorescent mineral displays assembled by Dave Snell while curator of Penn State's Mineral Museum. *D. Glick photo*

Dave was an active and well-liked member in the Nittany Mineralogical Society, along with his family. He once presented a meeting program about collecting fluorescent specimens at Franklin/Sterling Hill and using homemade ultraviolet lamps to display them.

Dave is survived by his wife Joann and son John. Nittany Mineralogical Society extends our deepest sympathies to them at this difficult time. The family plans to hold a memorial service, expected to be at Koch Funeral Home, South Atherton Street, State College.

Some material here comes from NMS member Joe Dague via personal communication and his article on the history of the museum, Penn State's "Well-Nigh Priceless Collections," in the Nov. 1992 issue of State College's *Town & Gown* magazine.



Automated display of piezoelectricity in a tourmaline crystal, now at Sterling Hill Mining Museum. *D. Glick photo*

IT'S EASTERN'S TIME TO SHINE IN 2011

by Cathy Patterson, Show Chair

July 9-10, 2011
Gems Along the Erie Canal -
A Diamond Celebration
Gem & Mineral Society
of Syracuse (Host Club)
www.gmss.us

*from the September 2010
Eastern Federation Newsletter*

The pendulum swings the maximum as the big get-together in our hobby shifts from California to New York. Next July the focus once again will be on Syracuse, site of the 2004 combined American and Eastern Federation annual convention and show. Syracuse and the Erie Canal region of the state have so much to offer our out of town guests. We hope you'll take advantage of all there is to see and do in our part of the state.



Over the next several months we will give you the low down on everything we can squeeze in regarding the big event we are calling "Gems Along the Erie Canal- A Diamond Celebration." After all, those coveted Herkimers are only a little over an hour east of Syracuse.

The meetings and food events will be at the headquarters hotel – the newly remodeled Ramada Inn on 1305 Buckley Road in Syracuse, NY (Exit 36 off New York Thruway, I-90) where we are holding a large block of rooms. The special rate is \$99 per day and includes a hot breakfast buffet. When reserving, mention that you are with the American or Eastern Federation convention and gem show group. Their phone number is 315-457-8670 or <www.ramadasyracuse.com> for more information and photos. Other hotels are available in the area as well as camping space at the fairgrounds for you RVers. In the coming months you can go to the EFMLS website <www.amfed.org/efmls> to download information and forms you'll need if you want to get a jump on reservation. It is still early yet.

Complete listing of times and locations forthcoming in future articles. For your planning purposes, all events except the show will be at the Ramada. The preliminary 2011 schedule is as follows:

Wednesday July 6
AFMS Rules Committee Social
Thursday July 7
AFMS annual meeting
AFMS Scholarship meeting
Luncheon
AFMS/EFMLS Cracker Barrel
Friday July 8
Exhibit set up (at the show)
EFMLS Annual Meeting
Saturday July 9
Show opens 10 AM – 6 PM
Awards Banquet
Sunday July 10
Breakfast with the Editors
Show opens 10 AM – 4 PM.

The show building is air conditioned and will include 50+ retail dealers and 11 wholesalers. It is located in the huge Center of Progress Building at the New York State Fairgrounds in Syracuse, Exit 7 off I-690 overlooking Onondaga Lake.

For kids there will be a straw draw, sluice mining, soapstone carving, beading, and gem tree making and wire wrap for the older kids. We have geared up for 100 educational displays and look to clubs and individuals around the country to share their wonderful collections of mineral and fossil specimens and jewelry creations for everyone to enjoy.

Next time we will tell you why you should not miss this exciting show and convention in an area of the country new to many of you. We will also let you in on more of what you can expect to find here at the show and the beautiful surrounding country side. Summer in Upstate New York State is stellar, not to be missed! In the meantime, dig around and decide what it is that you will bring to show off for your club and/or yourself to share for the benefit of all our visitors. We feel our club brings to Syracuse a unique "gift" of a weekend of the finest mineral and fossil exhibits to be found in one location in the east.

We're proud to be the host club in 2011!



Along the Erie Canal

Gems Along The Erie Canal

by Cathy Patterson, Show Chair

*from the October 2010
Eastern Federation Newsletter*

A Diamond Celebration

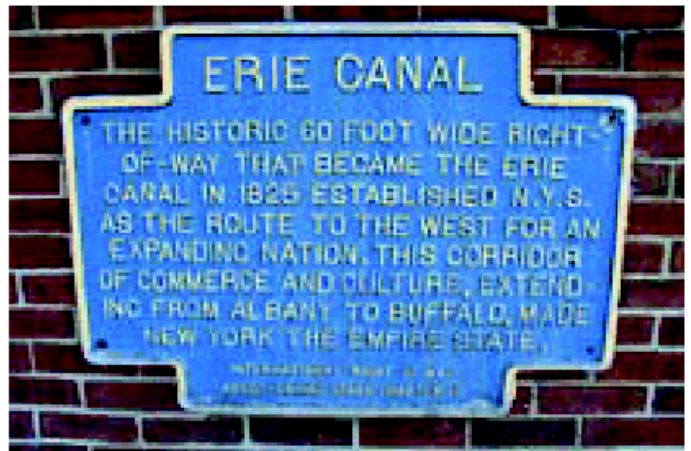
The Gem & Mineral Society of Syracuse welcomes you in 2011! This is our second installment of getting the word out to you. Last month we told you when and where the show is and when and where the meetings are. We tried to give enough information for the early birds to think about a hotel reservation at the headquarters Ramada Inn on Buckley Rd. in Syracuse. Complete package details will be coming in the near future at the American Federation website. Stay tuned!

This time we will tell you what's available for you to enjoy in our area of the state before and after the show and convention festivities. Plan to take some extra time to enjoy the sights and pleasures of Central New York (upstate) for extra bonuses.

- Erie Canal Museum in Syracuse featuring a full size packet boat right on Erie Blvd where the boats carried families and cargo.
- Boxing Hall of Fame (Canastota) is 25 minutes east from your hotel.
- Also nearby – the world class Turning Stone Casino in Verona, NY.
- Herkimer diamond hunting opportunities at several locations 1 ½ hours east along the Erie Canal route.
- Baseball Hall of Fame in Cooperstown 2 hours to the east.
- St. Lawrence Seaway and 1000 Islands are 2 hours north near Canada. Boat trips and a tour of New York's Bolt Castle.
- Learn all about industrial garnet production and collect there, 3 hours north at North Creek, NY in the beautiful Adirondacks.
- Taste your way through the beautiful Finger Lakes Wine Country (25+ wineries). Just 1 ½ hours to the west.
- Historic glider and aviation museum and glider trips aloft, 2 hours south and west.
- Museum of Glass, Corning, NY. See world famous Steuben crystal made at the museum. 2 ½ hours to the south in Ithaca.
- Museum of the Earth in Ithaca, NY just 1 ½ hours south.
- Enjoy a dinner cruise on one of the nearby Finger Lakes.

- Niagara Falls is just 2 ½ hours to the west!
- IMAX Theater at our Museum of Science and Technology in downtown Syracuse.
- Eastman Kodak Museum in Rochester 1 ½ hours to the west.
- Mammoth, 3 story, Carousel Mall just a couple miles from the host hotel.
- Salt Museum (Syracuse got its start pumping and evaporating salt) 2 miles from the hotel.
- Stickley, collector-grade furniture factory and showroom 20 minutes east.

The weather is ideal, sunny and warm, and there's so much to enjoy, lots to see, photo opportunities galore to snap and share back home. The welcome mat will be out for YOU. You just can't lose unless you fail to come and be part of the 2011 great gathering of super people – Rockhounds!



Gemarama Show outside Philadelphia

Saturday, November 7, 2009 - 10am to 6pm
Sunday, November 8, 2009 - 10am to 5pm

from their web site

2010 will be the 41st year that Tuscarora Lapidary Society has hosted its annual fine gem, jewelry and mineral show Gemarama. In addition to vendors you would expect at any gem show, a third of the show houses over 30 instructional and competitive cases and a large lapidary arts demonstration area where visitors can see live the cutting of stones, jewelry making, beading, chain making, wirewrapping, and other arts and sciences associated with lapidary. See www.lapidary.org for a fuller account of all there is to do and see at Gemarama.

**Popular Mineralogy will return next month.
We apologize for its absence.**

**South Penn Rock Swap
Saturday, October 30, 2010**

from the CPRMC web site,
www.rockandmineral.org/

The 26th Annual South Penn Rock Swap will be held Saturday only, October 30, 8 a.m. to 3 p.m. The location is South Mountain Fairgrounds, 1.5 miles West of Arendtsville, PA on route 234. General admission is \$1.00, tables for swappers are \$10.00. The event is sponsored by The Central Pennsylvania and Franklin County Rock and Mineral Clubs.

**10 Years Ago in NMS:
Geological disasters**

Our October 2000 program was presented by NMS member and geologist Charles Miller, on Geological Disasters. The program covered a 1958 Alaskan landslide and subsequent 100 mph, 97 to 130 mph wave in Lituya Bay; the 1959 Knox Mine disaster in Luzerne County, PA, in which the Susquehanna River flooded the mine; the flooding of a Louisiana salt mine under Lake Peigneur; a 1983 sinkhole, 25 feet deep and 250 feet across, which formed overnight on a road over a salt dome near Houston; a flood control dam in Colorado where housing developments have been built on the spillway so it can't be used; the 1970 Reelfoot Lake earthquake in northwestern Tennessee; and the great 1868 Peruvian earthquake with eleven tsunamis.

A local event, an exploding water well in Spring Mills, PA, was also covered. Dr. Miller wrote: "In 1970, Penn State professors Duff Gold and Richard Parizek investigated a private water-well explosion in Spring Mills, PA. The explosion that created a crater 25 feet in diameter and 12 feet deep was equivalent to 200 pounds of TNT and activated the seismograph at University Park. The force was so great that the pump, weighing more than 200 pounds, cleared adjacent trees and power lines and landed 179 feet away. Gasoline was found in the well after the explosion. As little as 2.5 gallons of gasoline would have been necessary to provide the power of this explosion." -Editor

**15 Years Ago in NMS:
Eastern Russia: A mineral Collector in Siberia**

At our October 1995 meeting, NMS member Mike Sheasley spoke about traveling and collecting in Dalnegorsk, Siberia. Sulfide minerals collected there included sphalerite, pyrrhotite, and galena, along with fluorite and calcite. Photographic slides and many specimens made for a very interesting talk.

Geo-Sudoku

by David Glick

This puzzle contains the letters EFGIMNPST, and one row or column includes the useful category of materials which will be discussed by our speaker this month. 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.

T						G	I	N
	E	G		S				
		P		M		E		F
						I	G	E
	I			F	G	N	T	
	T	E	N					
						F		
M	G	F			E			
			F			S	E	I

**Crystal Matrix Crossword
solution for September issue:
Arsenic**

A	C	C	O	M	P	A	N	I	E	S		G	A	
R	O	C	K		H	O	O	D				A	L	P
S	A	D		E	O		R	E	A	L	G	A	R	S
E	L		I	R	S				A				N	T
N		S	T	A	P	H	Y	L	O	C	C	O	C	C
O	B	O	E		H	U	A					G	E	O
C	O	D		D	A	M	N			O	A	R	S	L
L	A		B	I	T			G		B	Y	E		E
A		C	A	G	E			T	U	B	E		S	E
S	O	O	N					Z	R	L		G	I	L
I	R	I	D	A	R	S	E	N	I	T	E	S		E
T		N					E			G	U	M		A
E	N	A	R	G	I	T	E			A	B		S	D
		A	G	A				A	L	O	T		S	K
		G	E			L	O	E	L	L	I	N	G	I

From the Top!

by Loren Patterson,
EFMLS President

from the October 2010
Eastern Federation Newsletter

The AFMS Code of Ethics: Your Field Trip Guide

In my closing weeks as EFMLS president, I want to deliver an important message concerning collecting on "Field Trips". How important is it? For many of our EFMLS clubs with declining membership, field trips are a make or break issue. Many members see field trips as the essence of rockhounding, without which there is one less reason to belong to a club with little field trip potential. In the current atmosphere of government legislation driven by environmentalists and promoted by well meaning groups that would preserve everything as Wilderness, there are fewer places to collect every year as more and more locations are closed. If we do nothing, we may have to take future field trips in each other's basement or driveways.

We need to ask ourselves, "Are we doing enough of the right things to improve our public image or are we part of the problem?" Are you a good rock hound or a not so good rockhound? It is possible that if you do not follow the AFMS Code of Ethics (www.amfed.org/ethics.htm) or have never read it in your club bulletin you may not know what it takes to promote your club image as a responsible rockhound. The American Federation of Mineralogical Societies suggests that the Code of Ethics be read at one club meeting a year at least. Since many club members don't attend every meeting, I think having printed copies of the AFMS Code of Ethics available at club meetings and reminding members that they are important is a minimum. This is one small step to help alter and improve our public image. Let's not give those forces trying to close our public lands any extra help by not doing the right thing. We all need to be aware that it doesn't require a lot of effort to follow the AFMS Code of Ethics and be a real rockhound.

Another small step would be for clubs to join the American Lands Access Association (ALAA) <www.amlands.org>. ALAA's mission is "to promote and ensure the rights for amateur fossil and mineral collecting, recreational prospecting and mining, and the use of public and private lands for educational and recreational purposes; and to carry the voice of all amateur collectors and hobbyists to our elected officials." By joining ALAA, you can make your membership aware of legislation that may restrict your rights concerning field collecting and you can become an active part of the solution and not part of the problem. Membership in ALAA is only \$25 for individuals and \$50 for clubs.



As this is my last message as EFMLS President, I want to thank several people for their fine efforts in the name of the Federation. I especially wish to thank Mary Bateman for her excellent work as BEAC chair and for her advice and guidance. I commend my fellow officers for having done an excellent job in their assigned tasks. I'd also like to thank the many committee chairs and Regional Vice Presidents who make this organization all that it is. I would also like to give extra special thanks to Carolyn and Steve Weinberger for their continuing support and advice. They made it possible for me to be successful in spite of myself! Finally I wish to thank the many fellow EFMLS members who helped me find my way during the past year. It has been a privilege and an honor serving as your EFMLS President.

We are all in this together!
Loren



In the field, Montana, August 2009

AFMS Code of Ethics

- I will respect both private and public property and will do no collecting on privately owned land without the owner's permission.
- I will keep informed on all laws, regulations of rules governing collecting on public lands and will observe them.
- I will to the best of my ability, ascertain the boundary lines of property on which I plan to collect.
- I will use no firearms or blasting material in collecting areas.
- I will cause no willful damage to property of any kind - fences, signs, buildings.
- I will leave all gates as found.
- I will build fires in designated or safe places only and will be certain they are completely extinguished before leaving the area.
- I will discard no burning material - matches, cigarettes, etc.
- I will fill all excavation holes which may be dangerous to livestock.
- I will not contaminate wells, creeks or other water supply.
- I will cause no willful damage to collecting material and will take home only what I can reasonably use.
- I will practice conservation and undertake to utilize fully and well the materials I have collected and will recycle my surplus for the pleasure and benefit of others.
- I will support the rockhound project H.E.L.P. (Help Eliminate Litter Please) and Will leave all collecting areas devoid of litter, regardless of how found.
- I will cooperate with field trip leaders and those in designated authority in all collecting areas.
- I will report to my club or Federation officers, Bureau of Land management or other authorities, any deposit of petrified wood or other materials on public lands which should be protected for the enjoyment of future generations for public educational and scientific purposes.
- I will appreciate and protect our heritage of natural resources.
- I will observe the "Golden Rule", will use "Good Outdoor Manners" and will at all times conduct myself in a manner which will add to the stature and Public "image" of rockhounds everywhere.

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.

Oct. 30, 2010: "ULTRAVIOLATION" All-Fluorescent Show. First United Methodist Church, 840 Trenton Road, Fairless Hills, PA. Saturday only, 9-4.

Oct. 30, 2010: South Penn Rock Swap, by CPRMC & Franklin County RMC. South Mountain Fairgrounds, 1.5 miles W of Arendtsville PA on Rt 234, NW of Gettysburg. Sat. 8-3.

Nov. 6 - 7, 2010: Fall Symposium and Field Trip by Friends of Mineralogy- PA Chapter. Sat.: Symposium at Franklin and Marshall College, Lancaster, PA; Sun.: field trip. www.rasloto.com/FM/

Nov. 6 - 7, 2010: Gemarama. Exton, PA. Sat 10-6, Sun. 10-5. Dealers, lapidary displays, activities. www.lapidary.org

Nov. 20 - 21, 2010: 3rd Annual Show and sale, "Gem Miner's Holiday Festival" by MAGMA - Mid-Atlantic Gem & Mineral Association. Jewelry, minerals, fossils; 40-plus vendors. Lebanon Expo Center, Rte. 72 and Rocherty Rd., Lebanon, PA. Sat. 10-5, Sun. 11-4. www.gem-show.com

2011: EFMLS & AFMS July 7-10, Syracuse, NY. Conventions July 7-10, show July 9-10.

2012: EFMLS Sept.16-17, Harrisburg, PA H

For sale / trade: Equipment & Materials

For sale: Large mineral collection; will sell all or part. Tumble polisher with three 12-lb. and one 6-lb. drum plus grits, polishes and pellets. My phone number is (570) 672-2325. Leave a message if I'm not in.

For sale: Jade in various types & colors; mostly rough, plus some slabs; some fine Coober Pedy opal. Also equipment and jewelry making supplies from jewelry studio and production shop. Contact Daniel G. Reinhold in Mill Hall, PA; phone 570 726-8091 after lunch every day, or e-mail: dreinhold1@comcast.net H

GeoSudoku Solution from page 4

T	M	S	P	E	F	G	I	N
F	E	G	I	S	N	T	P	M
I	N	P	G	M	T	E	S	F
P	F	N	M	T	S	I	G	E
S	I	M	E	F	G	N	T	P
G	T	E	N	P	I	M	F	S
E	S	I	T	N	P	F	M	G
M	G	F	S	I	E	P	N	T
N	P	T	F	G	M	S	E	I

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). Your dues are used for programs and speakers, refreshments, educational activities, Bulletins, and mailing expenses. Please fill out a membership form (available on the web site), 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

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

Membership Chair: David Glick (see above)

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

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:

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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.

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