March 21st meeting opens at 6:00 p.m.:

**Geode Night**

presented by Jeff Smith

“The Geode Guy”

*Our March meeting will be held Wednesday the 21st in the lobby and in the room 114 auditorium of Earth & Engineering Sciences Building on the west side of the Penn State campus in State College, PA. Maps may be found on our web site.*

6:00 to 7:10 p.m.: Purchasing & opening geodes in the lobby

about 7:15 p.m.: featured program on Mexican Geodes

The event has free admission and free parking, and is open to all. No purchase is necessary; you can just watch geode cracking and attend the program. We don’t plan to have door prize drawings or refreshments this month, but they will resume in April. *Geode Night is great fun for “kids of all ages,” as they say. Don’t miss it!* - Editor

NMS is very happy to welcome back Jeff Smith, “the Geode Guy,” to present Geode Night to our club. Starting at 6:00 p.m. in the lobby, various sizes of whole geodes will be available for purchase at $5 and up. After you buy, Jeff will crack them open for you and you’ll be the first person ever to see the crystals inside. If yours turns out to be solid, you can pick another at no charge. Halves of opened geodes and nodules (some sawn and polished) from Mexico and Indiana will be $3 and up.

Jeff will have Mexican geodes from locations such as Las Choyas and Trancas. In addition, there will be polished halves and larger opened geodes, including some from Mexico.

**Junior Rockhounds**

*will meet March 21st before Geode Night*

Junior Rockhounds will continue to meet at 5:00 p.m. on the third Wednesday of the month in room 121 Earth & Engineering Sciences Building. That’s the same night as our regular meetings; this month it’s March 21st, and we’ll talk about geodes. The meeting will end around 6:00 as Geode Night is starting in the lobby, so juniors and their parents can buy geodes and have them cracked open (see article at left). Juniors are also welcome to attend Jeff Smith’s talk at 7:15 about the geodes and their origins in Mexico.

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 2012) 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).

**Minerals Junior Education Day March 31**

Advance registration required

Please register by March 28 - $5 per child

Spread the word!

Our annual Minerals Junior Education Day is fun and rewarding for kids and parents who attend, as well as NMS volunteers who present the event. We can always use a few more volunteers (see page 2). The event is held at Earth & Engineering Sciences Building, along White Course Drive on the west side of Penn State’s University Park campus. Please register in advance for the time (between 9 and 1) that you will arrive (see below).

Students in grades 1-8 and their parents are invited to come and learn about minerals, crystals, gemstones, and fossils. At this event, kids get an empty egg carton when they check in, then go to a series of stations, each concerning a different aspect of mineral properties, rocks or fossils. They learn about the topic from a demonstration or discussion, and receive a properly labeled specimen related to the topic, so they gather a whole collection in their egg carton. The following stations are planned:

- Gold panning
- Fossil shells
- Natural glass in rocks
- Fossil bones
- Earthquakes
- Fossil plants
- Sphere grinding machine
- And others

– plus a sales table at kid-friendly prices.

**PLEASE tell your friends and relatives and their kids!**

**Continued with REGISTRATION INFORMATION on page 2**
Geode Night  Continued from page 1

Indiana. The Las Choyas geode deposit was described in Jeff’s extensive, illustrated article in the March-April 2010 issue of Rocks & Minerals magazine. This NMS Bulletin (available on our web site, www.nittanymineral.org) carried articles about geodes in the December 2011 and January 2012 issues, and Rock & Gem magazine’s February 2012 issue included “The Hector Carrillo Family: the human story behind Mexican lapidary treasures,” by Brad Cross.

At about 7:15 p.m., after the geode cracking has been completed, Jeff Smith will present a program on geodes in the auditorium, room 114. He and his family have visited the geode mine in Mexico, and he has slides, good stories and video of the long trip out to the mine and then going underground to mine a few geodes themselves. It’s fascinating! The program is family friendly and very interesting!

It’s Show Season!

Several Pennsylvania shows take place in late March; see the listings and links on page 8:

March 24-25:
Sayre PA, by Che-Hanna Club
Chambersburg PA, by Franklin County Club

March 31-April 1:
Plymouth Meeting, PA: Philadelphia Mineral Treasures and Fossil Fair

Also note the Franklin County / Central PA Rock & Mineral Clubs’ Swap rescheduled from snowy October 2011 to May 12, 2012.

Friends of Mineralogy - PA Chapter Symposium November 3-4, 2012

Friends of Mineralogy - Pennsylvania Chapter will hold their Symposium at Franklin & Marshall College in Lancaster, PA, on November 3, with a field trip on November 4. Members get a reduced rate; those joining now will get the benefits of the quarterly newsletter, field trips during the year, as well as the Symposium. More information will be coming on their web site, http://www.rasloto.com/FM/

Rochester Mineralogical Symposium April 19-22

The Program and Registration Forms for the 2012 Rochester Mineralogical Symposium are available at: www.rasny.org/MinSymposium/MineralSymp.htm

Junior Education Day  Continued from page 1

Register in advance, by March 28:
BY E-MAIL
Please register by e-mail if possible, as described on the web site www.nittanymineral.org - that’s the easy way for us to get your information correctly. We will have a PayPal payment option there.

OR BY TELEPHONE
Call John Passaneau at (814) 231-0969 between noon and 8 p.m. to reserve a starting time slot of your choice at the event (each half-hour from 9:00 a.m. to 1:00 p.m. on March 31). He will ask for names and addresses of the students so that checking in on-site will go quickly (we will also enter them in our door prize drawing and send them an announcement next year).

THEN send $5.00 per student (check payable to “Nittany Mineral. Soc.” or simply NMS) to:
Nittany Mineral. Soc.
2231 W. Whitehall Rd.
State College PA 16801

Registration is limited so that we may provide a collection of specimens for each student. Parents come along for free, but don’t get the specimens. Any spots open after March 28 (there might not be any!) will be $6.

Penn State’s Earth and Mineral Sciences Museum will be open especially for this event, 1:00 p.m. to 3:00 p.m. on March 31. It’s in the center of the ground floor of Deike Building; you can leave your car at the Junior Ed. Day event and walk over (we will provide directions). It’s free and there are many interesting displays to see in two big rooms.

We are seeking volunteers for publicity, set-up (7:30 a.m.) and clean-up (3:00 p.m.), and helping to present the stations; contact Dave Glick (see page 8). We welcome advance donations of identified minerals, tumbled material or fossils which can be sold at child-friendly prices. As always, we are grateful to our co-sponsors who provide crucial support in various ways: Bald Eagle Chapter of the Gold Prospectors Association of America, Junior Museum of Central Pennsylvania, and the Penn State Earth & Mineral Sciences Museum.

For updates, directions and maps, see www.nittanymineral.org

PUBLICITY NOTE: We appreciate your helping us publicize this event - PLEASE be sure to include “advance registration required” and our web site, www.nittanymineral.org Thank you!!
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 March issue describes the 2012 Wildacres Workshop sessions, April 10-15 and September 3-9; class lists and a registration form are included. President RJ Harris discusses running a club (or a federation) and getting new people to start participating. The AFMS Scholarship Foundation and the Eastern Foundation Fund are described, donors are acknowledged, and donations are requested. The Each One Teach One and AFMS Club Rockhound of the Year (ACROY) awards are described, and nominations are invited. The Junior Activities article talks about various Internet resources for junior collectors to use. Ellery Borow’s safety article points out that “just a moment is all it takes to have an accident ... Our job with rockhound safety is to minimize the risk, know the hazards, keep our attention on the task at hand and always be prepared for emergencies.” AFMS Endowment Fund Drawing tickets are available for $5 each or 5 for $20; this year’s drawing includes four pieces of valuable lapidary equipment.

The AFMS Newsletter is available by the same methods. The March issue describes the “Celebration of Agates” symposium which will take place on Thursday, July 26, along with the AFMS convention in Minnetonka, Minnesota, July 26-29. Federation meetings take place throughout those days, and the host club’s show in the 27th-29th. The Endowment Fund Drawing is covered, and contacts for purchasing tickets are listed on page 3. AFMS club rockhounds of the year are introduced. Avoiding West Nile Virus while collecting is the topic of a safety article. The Bureau of Land Management plans for regulating access in the area around Quartzsite, Arizona, are being formulated. At the big annual Rockhounds Pow-Wow there in January, the American Lands Access Association affiliate of AFMS hosted a meeting with BLM officials; an article by Shirley Leeson describes the steps for rockhounds and others to submit their requests to BLM for areas and roads to remain open for recreational uses.

Please see the web sites for the complete Newsletters.

There’s a lot there! - Editor

President’s Letter
Thank You for Supporting Collectors from David Glick

The biggest news this season is that National Limestone Co. and its Mount Pleasant Mills and Middleburg Quarries are up for sale. Nittany Mineralogical Society and a long list of other clubs and collectors owe a huge thank-you to owner and operator Eric Stahl for his years of collector-friendly operation. It would be wonderful if new owners would continue that policy!

William & Mary Department of Geology receives $500,000 collection

Geology.com’s news section on minerals <http://geology.com/news/category/minerals.shtml> reports that the college of William & Mary in Williamsburg, Virginia, received a collection of display specimens valued at just over $500,000. Dimitri Georgiadis purchased a collection from Dorothy Sturm in 1970, and expanded it over the years. Georgiadis now lives in Virginia, and his recent donation was recognized and celebrated at a reception last month. See the full story at http://www.wm.edu/news/stories/2012/geology-receives-world-class-mineral-collection-123.php

Geo-Sudoku by David Glick

This puzzle contains the letters ABDINORSU, and one row or column includes a creature that lived when the Morrison Formation was being deposited (see article on pages 4-5). 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.
Collecting in the Morrison Formation
by Dr. Charles E. Miller, Jr.
Retired Geologist
photographs by the author

On March 5, 2011, members of the Nittany Mineralogical Society visited the Carnegie Museum of Natural History in Pittsburgh. While touring the Museum, the writer recognized a petrified log (fig. 1) in the Hall of Dinosaurs. In April 1997 the writer was part of a Carnegie Museum-sponsored expedition to Bureau of Land Management land near Hanksville, Utah, for the purpose of collecting the referenced 1200-pound petrified conifer log from the Jurassic Morrison Formation. A Museum volunteer had discovered the log the previous year. Figure 2 shows the log as it appeared in the field.

In recent decades, the Morrison has gained further notoriety for its prolific dinosaur tracks, such as at the Purgatoire River track site in southeast Colorado (Nittany Mineralogical Society Bulletin, 2/2002). There, over 1200 dinosaur tracks have been described. This site provides the first-ever evidence of social behavior of dinosaurs.

Also found in the Morrison are other fossils, including fish, frogs, lizards, crocodiles, clams, mammals, and petrified wood. Although less spectacular than large dinosaur bones, these other fossils are important for paleoecological considerations. Finally, the Morrison also yields uranium, the importance of which cannot be overlooked.

Sediments of the Morrison represent Late Jurassic swampy lowlands, lakes, river channels, and floodplains deposited in Wyoming, Colorado, Montana, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Texas, New Mexico, Arizona, Utah, and Idaho as well as areas of Canada. These deposits eroded from precursors to the Front Range of the Rocky Mountains. Figure 3 shows cross-bedded sandstone overlain with conglomerate and figure 4 shows an overview of the eroded Morrison landscape at the collecting site. The cross bedding in the former is the result of water transport in a river channel.

The Morrison Formation is known worldwide, largely for its prolific dinosaur bones. Sauropod dinosaurs from the Morrison are frequently exhibited in museums and it is this formation that one sees at Dinosaur National Monument (Colorado-Utah). Other famous dinosaur bone quarries in the Morrison include Como Bluff and Bone Cabin, both in Wyoming; and Dry Mesa and Garden Park, both in Colorado. It was this formation that brought fame to paleontologists Othniel Charles Marsh and Edward Drinker Cope during the Bone Wars in 1877.
The absence of vegetation and eroded nature of the landscape is conducive to finding fossils. Figure 5 shows another petrified log.

Figures 6 and 7 show a 7-inch diameter, 3-foot long dinosaur bone exposed in Morrison sediments. A low degree of induration (hardening) of the sediments made digging easy. In fact, digging was possible using only fingers. This contrasts with much of the Morrison where induration is so great, as at Dinosaur National Monument, that jackhammers are needed to remove bones. However, the situation was complicated because the bone-bearing boulder rested precariously on a steep slope. Digging out the complete bone would have required digging under the overhanging boulder, with the possibility of being crushed. Alternatively, the bone was broken, with the idea of rolling the boulder down slope and then extricating the rest of the bone. However, the boulder came to rest on top of the bone. Even using a heavy metal pry bar would not budge the boulder.

Figures 8-10 show work preparing the 1200-pound petrified log for transport to the Carnegie Museum in Pittsburgh. The brittle nature of the log required using Paleobond (fig. 8) and Plaster-of-Paris (fig. 9) to stabilize and protect it. The log had to be winched hundreds of feet (fig. 10). This work took approximately eight hours.

Figure 5. Another petrified log at the site.

Figure 6. Dinosaur bone.

Figure 7. Dinosaur bone.

Figure 8. Stabilizing the log with Paleobond.

Figure 9. After coating with Plaster-of-Paris.

Figure 10. The log was winched out for transport.
March is Women's History Month. To celebrate this, here is a story of a Washingtonian who almost became a mineralogist.

Matilda Coxe Evans Stevenson was born around 1850 in San Augustine, Texas. While still a baby her parents moved to Washington, DC. With the Civil War raging all around the Capital, Tilly, as she was known, went with her parents to Philadelphia and there attended one of the city’s most prestigious female academies, Miss Anable's English, French and German school. Anna Anable had progressive ideas about what a young girl should be taught. She wanted her students to be exposed to subjects that went beyond those that prepared them to be wives and mothers. These ideas included training in the sciences.

In 1868 the family returned to Washington. As was traditional in those days, Tilly continued her education by studying with her father who was a lawyer. Her father knew some important people in Washington, one of whom was Joseph Henry, the Secretary of the Smithsonian Institution. Henry was a mentor to a young man named William M. Mew. Henry gave Mew chemical training at the museum. Tilly's parents always encouraged their daughter. Her father, through Henry, saw that his daughter would continue her education by working in Mew's laboratory which was located in Ford's Theater.

Bright and ambitious Tilly now set her sights on a career. She wanted to become a mineralogist. As so often happens in life, plans alter. Not infrequently the agent of alteration is love. Tilly met James Stevenson. Stevenson was the Executive Officer of Ferdinand V. Hayden's Geological Survey of the Territories. He was a self-educated geologist and a competent ethnologist. The couple was probably introduced by a mutual friend, Congressman John A. Logan, one of Hayden's staunchest supporters in Congress. On April 18, 1872 they married.

In those days the story would have ended with Tilly assuming a woman's traditional role and indeed she did. But she was also set on pursuing her scientific interests. She did so in an unconventional way; she went with her husband on some of the explorations of the West. She was not the first woman to do so but there was a difference with Tilly. She was an active participant in the scientific investigations. Her interests shifted. She became an anthropologist and ethnologist and soon began a lifelong investigation of the lives and culture of the Zuni Indians. She also began to work at the Smithsonian Institution. Her publication on the religious life of Zuni children is considered a unique and important work.

Tilly died in 1915. She was a founder of the Women's Anthropological Society of Washington and belonged to many other scientific societies.

References:

Miller, Darlis. *Matilda Coxe Stevenson: Pioneering Anthropologist*, University of Oklahoma Press. 200
Bonseki
by Jennifer Zimmerlee, Klamath Rock & Arrowhead
From: Dusty Rocks, 5/2010
(10th Place – AFMS Original Adult Articles)

One of our newest members, Herb Bastuscheck, was kind enough to come to our show and the March meeting to demonstrate the lost art of Japanese Bonseki. Bon means tray and Seki means rocks, so Bonseki means tray with rocks. You may be more familiar with Bonsai or tray planting (Sai means planting). Bonseki, a lost Samurai art, is similar to the tea ceremony where meditation accompanies a learned pattern of actions. It was developed at the Ryuanji Temple in Kyoto. The art form is now mainly performed by women and is endangered because unlike other art forms, it is not taught in schools.

Herb went to Japan to teach English and stayed for 23 years. Down from where he lived was an art shop, and there he met his sensei, Masa Saito, who was designated as “Living National Treasure” in Japan. Herb had 16 years of lessons with her and is the only non-Japanese Bonseki master.

His greatest memory is going to the Ryuanji Temple and creating the scene in front of him with a master showing him techniques where Bonseki was started. Herb has been to 24 countries but still misses good ramen and the people of Japan.

Learned in increments by mastering individual features before combining them, Bonseki is a journey and follows some ceremony. Created by gypsum, feathers, spoons and sieves, each step furthers the depth of the scene being created. At our meeting Herb created a beautiful waterfall, starting with a water base of sand, then he laid out big rocks that built the 9 layers of gypsum, followed by the moon element, the mountain then the clouds. The Gypsum is screened from large chunks down to fine powder that looks like powdered sugar. Once created, the finished Bonseki trays were placed in the little alcoves below the hanging scrolls in family tea ceremony rooms, or are wiped away and started all over again. Some choose to mix powdered glue with the gypsum and set it by using a tea kettle with a rubber hose to create just the right amount of steam to set the glue. Others use water color pigment to add color to a permanent scene. The final scenes, whether they be permanent or temporary, are breathtaking in the simple beauty they portray.
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.


May 12, 2012: South Penn Rock Swap - SPRING SWAP by Franklin County & Central PA Rock and Mineral Clubs. South Mountain Fairgrounds, 1.5 miles West of Arendtsville, PA on Route 234. Sat only, 8 a.m. to 3 p.m. See map at http://www.rockandmineral.org/


June 2, 2012: Spring Mineralfest by Pennsylvania Earth Sciences Association. Macungie Memorial Park, Macungie, PA. Saturday only 8:30 - 3:00. www.mineralfest.com


October 27, 2012: South Penn Rock Swap - AUTUMN SWAP by Franklin County & Central PA Rock and Mineral Clubs. South Mountain Fairgrounds, 1.5 miles West of Arendtsville, PA on Route 234. Sat only, 8 a.m. to 3 p.m.

Visit us at www.nittanymineral.org