

The Danburite

The Danbury Mineralogical Society, Inc.

P.O. Box 2642, Danbury, Connecticut 06810-2642

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PAGE 1

NEXT REGULAR MEETING **THURSDAY, FEBRUARY 2, 2012**
DOORS OPEN AT 7-ish PM (hobby crafting, etc.) - MEETING STARTS AT 8:00 PM
(SOME MEMBERS MEET FOR SUPPER AT ELMER'S DINER AT 6:00 PM)
THE MEETING WILL BE AT THE **BROADVIEW MIDDLE SCHOOL**
72 Hospital Avenue, Danbury CT 06810

In case of inclement weather; a Danbury school closing means that we will not meet. In case of doubt, err on the side of safety, and/or call a club officer.

DMS WEBSITE <http://www.danburymineralogicalsociety.org>
AFMS WEBSITE <http://www.amfed.org/> EFMLS WEBSITE <http://www.amfed.org/efmls/>

Happy New Year !

President's Message

Well, I don't think I'm ready to be president of this august body yet, and having to write something each month, but here goes:

Yours truly is someone who has loved rocks and minerals from an early age. Unfortunately, I never got the chance to collect much, so my assortment of "things that gather dust" is mainly one which is purchased, rather than self-collected. When I graduated from high school, I decided to attend the Colorado School of Mines for a bit (it was between that or the New Mexico Institute of Mining and Technology).

Circumstances beyond (and within) my control caused me to only complete maybe 1½ years of credits in 3 years of residing in Golden, CO (home of Coors beer). I was pursuing a Geological Engineering degree, but with all the calculus, chemistry, and physics involved before I even began to get to the rocks and minerals classes, I had had enough.

I have found my true love for the science lies in the study of volcanology, plate tectonics, and planetary geology, but I still love, more than anything, to collect and display beautiful specimens of rocks and minerals. There is nothing else like it (other than maybe homebrewing!).

I believe one of my first acts as president would be to try and re-institute an officers meeting, possibly at my house in Brewster (better check with my bride first). Non-officers would be invited also, of course, to discuss matters of importance to the club. In that way

valuable time could be saved at the regular member meetings.

I hope all of you had a very pleasant holiday season, and are ready for a new year of enjoying the beauty of the geologic world.

Dan

Birthstone(s) of the Month(s)

Wikipedia verse for January:

By her who in this month is born
No gem save [garnets](#) should be worn;
They will ensure her constancy,
True friendship, and fidelity.



Grossular garnet photo by Rob Lavinsky

Garnet comprises a group of minerals, only a fraction of which are gem quality. Most are mined for industrial purposes (we'll talk about that later). The most popular gem color is a deep fiery red, although green garnets such as tsavorite turn up fairly frequently at the jewelry counters as well. Crystals in the garnet family come in a range of colors from yellow-green and green, to orange, brownish reds and oranges, and red.

According to USGS publication SP-14-95, "Garnet is a family of minerals having similar physical and crystalline properties. They all have the same general chemical formula, $A_3B_2(SiO_4)_3$, where A can be calcium, magnesium, ferrous iron, or manganese, and B can be aluminum, ferric iron, or chromium, or in rare instances, titanium." Another handy thing about their fact sheet is that it lists garnet occurrences in the U.S., by state.

<http://minerals.usgs.gov/minerals/pubs/commodity/gemstones/sp14-95/garnet.html>

A search on the mindat.org site for "garnet" gave up 28 matches (names including "garnet"), none of which were recognized as mineral species. Thanks a lot, mindat! They do have pages for the various particular gem varieties such as andradite, grossular, spessartine, pyrope and almandine, where we can learn that "garnet" is a silicate material, and its hardness seems to range from 6.5 – 7 (andradite and grossular) to 6.5 – 7 (uvarovite) and 6.5 – 7.5 (spessartine) to 7.5 (pyrope) and 7 – 7.5 (almandine) range.

Garnet crystals are isometric, that is, their facet faces are all the same. At least, I think that's what it means.



5.33-carat garnet from Taita-Taveta



One of my favorite types of garnet is one of the African varieties: a color change garnet! Found in East Africa and Madagascar, this gem changes from reddish under incandescent light to blue-green in daylight or fluorescent light. Image courtesy of http://www.palagems.com/color_change.htm.

In the Adirondack Mountains of New York, you can tour Barton Garnet Mine at Gore Mountain, NY, and see the red glitter of garnet all around you. One would need to do more research to find the current situation for field trip planning, however there are apparently places there where one can find nice gemmy crystals, as well as the industrial stuff which is what I (Lizzie) saw when we were there some years back.

Mindat somewhat redeems itself by having this to say about the Barton locality:

Garnet (abrasives) mines operated by Barton Mines Company, LLC, first on Gore Mountain (until 1983), and then Ruby Mountain, which is currently being mined. Henry Hudson Barton began mining garnet on Gore Mountain for use as abrasives in 1878. Tours of Pit #1 of the Gore Mountain mine are conducted for a fee and some collecting is permitted.

Garnet on Gore Mountain occurs in both garnet amphibolite and olivine meta-gabbro. On Ruby Mountain the rock is garnet-rich gabbroic anorthosite. The garnets can have some gemmy portions, but unfortunately cleavage planes divide the crystals into thin (few mm) slices. Nevertheless, in 1969, the then Governor of New York, Nelson Rockefeller, made the Barton garnet the New York State Gem Stone.

<http://www.mindat.org/loc-16747.html>

The Mineral Information Institute's website, mii.org, has some helpful summaries of the industrial uses of garnet, including: "Garnet is ground to a variety of sizes to be used as an abrasive. Garnet sandpaper was the original application of this mineral. It is also used to make a number of similar products, including sanding belts, discs, and strips. Today, the vast majority of garnet is used as an abrasive blasting material, for water filtration, in a process called water jet cutting, and to make abrasive powders."

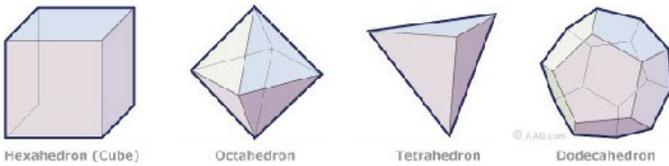
Regarding crystal structure, well, I thought this looked neat but I still don't get it. Copied from the website cited at the end of this last section.

Closed Isometric Forms

There are several crystal forms in the *cubic* crystal system that are common in [diamond](#), [garnet](#), [spinel](#) and other "symmetrical" gemstones. These forms include:

- Hexahedron (*Pyrite*)
- Octahedron (*Diamond, Spinel*)
- Tetrahedron (*Tetrahedrite*)
- Dodecahedron (Rhombic - *Garnet*)
- Hexoctahedron (*Diamond*)

A *hexahedron* (cube) has eight points, six faces, and twelve edges that are perpendicular to each other, forming 90 degree angles. An *octahedron* has two four sided pyramids lying base to base, and is totally symmetrical with no top, or bottom and has eight faces. A *tetrahedron* has four equilateral triangular faces.



A *dodecahedron* has 12 faces and there are four types of *dodecahedrons* listed in order of descending symmetry: 1. Symmetrical pentagonal (five edged polygons) dodecahedrons, 2. Asymmetrical (tetartoid) pentagonal dodecahedrons, 3. Delta (four edged polygons) dodecahedrons, and 4. Rhombic dodecahedrons. A Hexoctahedron is a multi-faceted dodecahedron with 48 triangular faces.

www.allaboutgemstones.com/crystal_forms.html

Brad Smith's BenchTips

SHARP KNIVES FOR CUTTING MOLDS

Cutting molds is easier and more precise with a sharp blade. A new Xacto blade is sufficient for cutting RTV molds but is usually not sharp enough for vulcanized rubber. For that it's best to use scalpel blades available from most jewelry supply companies. The #11 blade is triangle shaped, and the #12 is hawksbill shaped. I find the hawksbill is particularly nice for cutting the registration keys of the mold.



USE YOUR THUMB

When using multiple bits in your Freedom, you often have to deal with several different shaft sizes - the usual 3/32 inch burs, the larger 1/8 inch shafts sizes and of course many different drill sizes. For some reason I really dislike having to turn the key multiple times to open or close the jaws of the handpiece chuck.

There's nothing you can do to avoid multiple key turns when opening up the jaws, but there's a neat trick to close the jaws around a smaller shaft. Hold the new bit in the center of the open chuck jaws, put your thumb lightly onto the outer toothed collar of the chuck, and gently start up the Freedom. As the chuck turns, it will naturally tighten the jaws around the shaft of the bit. Then all you have to do is a final tightening with the key.

More BenchTips by Brad Smith are at groups.yahoo.com/group/BenchTips/ or [facebook.com/BenchTips](https://www.facebook.com/BenchTips)

December DMS Meeting

We were fortunate to host author and engineer George E. Smith at our December meeting. He had books and maps and stories about the history of mining, mostly in the American Southwest, but also some stories from around the world. He gave a tip of the hat to Michener's Centennial, which some folks might find an enjoyable read during these long dark evenings (sez I), and had copies for sale of his books Red Treasure and Gold, Silver, and Guns.

<http://www.george-e-smith.info>

Notes from Other Clubs ...

Shale Mail

Orange County Mineralogical Society is getting ready for the Geology Fair at the Hudson Highlands Nature Museum, February 4.

Bulletin of the New York Mineralogical Club.

The NY [City] club's bulletin was packed as usual with interesting stuff, from the news that Roland Scal and his "Synthetic and Enhanced Gemstones" lecture would be featured at their January 11 meeting, and that they will be having a special mineral sale on January 15, to coverage of Elizabeth Taylor's estate gems as well as information about significant diamond mines around the world, to mineralogical information including the new mineral "wassonite" discovered in an Antarctic meteorite and Dan Schechtman's winning the Nobel Prize in Chemistry, and a solid little piece about the mineral property "hardness."

The Rock Slab News, journal of The Searchers Gem & Mineral Society, Anaheim CA

RSN is not a local publication, however their write-up on Tanzanite was so wonderfully succinct last month that I felt moved to share it.

Tanzanite is the blue/purple variety of the mineral zoisite (a calcium aluminum hydroxy silicate) which was discovered in the Mererani Hills of Northern Tanzania in 1967, near the city of Arusha and Mount Kilimanjaro. It is used as a gemstone. Tanzanite is noted for its remarkably strong trichroism, appearing alternately sapphire blue, violet and burgundy depending on crystal orientation. Tanzanite can also appear differently when viewed under alternate lighting conditions. The blues appear more evident when subjected to fluorescent light and the violet hues can be seen readily when viewed under incandescent illumination.

Tanzanite in its rough state is usually a reddish brown color. It requires artificial heat treatment to 600°C in a gemological oven to bring out the blue violet of the stone. Tanzanite is a rare gem. It is found mostly in the foothills of Mount Kilimanjaro. The mineral is named after Tanzania, the country in which it was discovered.

You can view the January RSN, including information and photos about garnet, at <http://www.searchersrocks.org/bulletins/RSN%20Jan%202011.pdf>

... and other Publications

EFMLS News (including AFMS news)

Wildacres is coming!

<http://efmls-wildacres.org/>



There's a scholarship available for first-timers. Download an application from <http://www.efmls-wildacres.org/resources/Scholarship-app.pdf>

Current spring courses lineup:

Cabochons, Basic: Bernie Emery

Cabochons, Intermediate: Bernie Emery

Copper Etching: Pat Baker

Enameling, Beginning: Mia Schulman

Faceting: Steve Weinberger

Glass Engraving & Etching: B. Jay Bowman

Lampwork Beads OR Loop n'Loop: Pat Baker

(Only one of these classes will be taught. Whichever one receives the highest enrollment will be held and the other dropped.)

Silversmithing, Basic: Richard Meszler

Silversmithing, Intermediate: Richard Meszler

Wirewrapped Jewelry, Basic: Jan Stephens

Wirewrapped Jewelry, Basic Plus: Jan Stephens

Wildacres "Wild": Virginia Meador

Roadside Geology and Photography: Virginia Meador

And a look ahead to the planned **FALL** courses:

Beading, Bezeled Cabochons & More: Cheryl Brown

Beading, Embroidery Plus: Cheryl Brown

Cabochons, Basic: Al DeMilo

Cabochons, Opal Cutting: Al DeMilo

Faceting: Reivan Zeleznik

Fused Glass, Advanced: Becky Edmundson

Fused Glass, Basic: Becky Edmundson

Gem Trees, Basic: Suzie Milligan

Micromounting: Carolyn Weinberger

Pewter Fabrication: Bruce Gaber

Silversmithing, Session 1: Pat Baker

Silversmithing, Session 2: Pat Baker

Soapstone Carving: Sandy Cline

They are also looking for donations to the AFMS Scholarship Fund. Reivan Zeleznik reminds us of the Rambam's wisdom:

- To give sadly is the lowest level
- To give gladly, but less than a fitting amount, is more virtuous
- Higher yet is to give, but only when asked
- Yet higher is to give before being asked
- Even higher is when the donor does not know who the recipient is
- Higher is when the recipient does not know who the donor is
- Still higher is when neither the donor or the recipient knows the other
- But the highest form of giving is when the donor helps the recipient find work so that the dignity and self-respect of the recipient is maintained.

And that, my friends, is what the AFMS Scholarship Fund is about. Through an anonymous plan of giving to a yet-be-determined scholarship recipient, a needy student is assisted to a lifetime of work.

<http://www.amfed.org/scholar/histschl.htm>

Darryl Powell, aka Diamond Dan, is the Eastern Federation's new youth program professional, and he has a nice column in the January bulletin. Some of what he says we already know & do, and some of it we can't address because our youth attendance is spotty, however that doesn't make the column any the lesser. Have a look:

Don't Be Cheap or Generosity Pays Great Dividends

by Darryl Powell, EFMLS Junior Activities Chair

The very first time I visited a mineral club meeting, the club regulars had donated specimens for the end of the meeting door prizes. Door prize tickets were given out, not purchased. By the end of the evening I had won a rather nice specimen, one worthy of adding to my collection. Over time, the club members must have used up their better duplicates. Before long, the door prizes were not even good enough to be called leaverites.

Now, imagine you are little Johnny and Jane and Mom and Dad have taken the time to check out the local mineral club (that is, your mineral club) and little Johnny wins a sharp calcite dogtooth crystal cluster from the Brushy Creek mine and Jane wins a gem-quality "Herkimer Diamond" quartz crystal on matrix. You can be assured little Johnny and Jane (along with their very impressed and very pleased Mom and Dad) will be back the next month. This single experience of generosity can set the stage for a lifetime of love for minerals and perhaps even a career in Earth Sciences.

Let me present my point very directly: please be extraordinarily generous to the children in your mineral club or society; it will pay off with great rewards for them and for you. Mr. Jim Brace-Thompson has been one of the most active and dynamic forces in the AFMS for educating young collectors and encouraging our commitment to Juniors' programs in our clubs and societies. He single-handedly created the AFMS patch program for Juniors. (If you do not use this program, do so immediately. It is interesting, fun, flexible and FREE . . . a benefit of being an AFMS club or society.) Jim did a most amazing thing recently. At the annual Ventura Gem & Mineral Society annual show, Jim personally funded an award for the best display presented by a Junior from their Society. The prize was \$200 (from his own resources) and a high-quality specimen from his personal collection.

This kind of investment in our Junior members is inspiring, exciting, encouraging, and rewarding, for the Juniors and for our hobby. I hereby challenge each club and society of the Eastern Federation to invest, generously and significantly, in your young members. Follow Jim's example and establish a generous prize for a display at your show. Establish an annual

scholarship for your local High School (example: \$200 scholarship given each year to an outstanding High School graduate who plans to pursue an education and career in a branch of geology and/or environmental sciences). Give door prizes at your meetings (especially for the children) that are not leaverites, but are quality specimens. Take your youth to a significant museum, even if that means traveling and staying overnight somewhere, and pay the cost of the event for them.

For those who already invest significantly – in treasure and time – in your Junior members, thank you! I am confident you see on a regular basis the return on your investment.

Blessings to all.

Mineral News

In the December issue of MN, Tony Nikischer reviews Robert J. Lauf's Collector's Guide to the Beryl Group, which is likely of interest to many Connecticut rockhounds. Only \$19.99 plus shipping from www.schifferbooks.com.

Mini Miners Monthly

Lots of fun stuff about Arizona minerals, including a crossword puzzle and 2 crystal-growing activities. MMM continues to be highly recommended for the young rockhound and educators of all ages.

Fossil News is going to online only as of 2012. You read that aright; they are not folding after all, but will continue under a shared leadership format.

31st Annual S.C.R.I.B.E. Meeting & Editors' Get-Together. Saturday, 21 January 2012, 9:00 am MST.
Senior Citizens' Center, Moon Mountain Road, Quartzsite, AZ.

S.C.R.I.B.E. (Special Congress Representing Involved Bulletin Editors), the international organization of bulletin editors of amateur gem, mineral, and earth science societies, invites all editors to share ideas, techniques, successes, problems, and concerns with your fellow bulletin editors at its annual workshop and get-together in Quartzsite, Arizona.

Editors are invited to bring copies of their bulletin; original articles, poetry, or puzzles; and write-ups of information or ideas helpful to club editors (50 copies of each item, please) to share with one another. There will be pins, patches, and extra copies of our CD for sale. We'll also have S.C.R.I.B.E. bookmarks and cards.

New editors are especially invited to attend to learn more about S.C.R.I.B.E. and to meet other club and federation editors. "Retired" editors are also urged to attend to share their experiences with the other editors.

A \$2 registration fee per person, payable at the door, will be used to cover expenses. Registration will begin at 8:30 am (Mountain Standard Time), but someone will probably be at the hall between 8:00 and 8:15 am. So if you are an Early Bird, come early, get registered, have coffee, and visit. The meeting generally ends shortly after noon.

This year's speaker will be California Federation of Mineralogical Societies Public Lands Advisory Committee Chairman John Martin.

For additional information regarding this event, please send e-mail to: [Doug Arnold, President \(oldjasper@verizon.net\)](mailto:oldjasper@verizon.net) or [Bob Hughes, Treasurer \(bjhughes@ellijay.com\)](mailto:bjhughes@ellijay.com) or [Patty Amos, Secretary \(packrats2@msn.com\)](mailto:packrats2@msn.com).

~~ Fun Stuff ! ~~

Interactive fun at the Smithsonian Institution's website includes

Smithsonian Kids www.si.edu/Kids,

IdeaLabs www.smithsonianeducation.org/students,

Secrets of the Smithsonian

www.smithsonianeducation.org/students/secrets_of_the_smithsonian/secrets_of_the_smithsonian.html,

and the ambitious touring app *GoSmithsonian* at www.gosmithsonian.com/.

200 Years of Geology in the Northeast

**The Geological Society of America Northeastern
Section Meeting
18-20 March 2012 • Hartford, Connecticut**

Learn about new developments in your region, share your research, connect with colleagues and friends, and gain professional inspiration. Read on for summaries; find details at the links.

Registration:

[Click here](#) to register securely online. The early registration deadline is Monday, 13 February 2012.

Hotel:

Discounted GSA hotel rates will expire Friday, 24 February 2012. Space will go fast at the Hartford Marriott Downtown, so make your reservation early. [[More information](#)]

Looking for a roommate Use the GSA Meetings Bulletin Board. You can connect with colleagues for rides, roommates, get-togethers, whatever! The service is free, but you must register to use it. [Log in](#) to the GSA Bulletin Board.

Important Information:

The Student Travel Grant deadline is Monday, 13 February 2012. [[More information](#)]

Check out the Student Mentor Programs at Lunchtime. [[More information](#)]

Professionals: If you are interested in mentoring or have questions about these events, please contact [Jennifer Nocerino](#).

Please be sure to check out the web site for [additional meeting information](#), or you may contact General Chair [Jean Crespi](#), or Technical Program Co-Chairs [Mark Evans](#) or [Michael Wizevich](#).

Write for Us, or for . . . Send material to lizzie@lizziewriter.com. Write for *Mineral News!* Go to their website at www.mineralnews.com or email Editor Mitch Portnoy (mitchpnyc@aol.com) or Publisher Tony Nikischer (tony@mineralnews.com). Kids can write or draw pictures for publication in *Mini Miners Monthly*. Contact Diamond Dan at diamonddan@rochester.rr.com or visit the family of DD websites at www.diamonddanpublications.net.

You can submit artwork to Mike Fredericks at *Prehistoric Times!* Mike's email is pretimes@comcast.net and the magazine website is www.prehistorictimes.com.

Bruce Museum

Greenwich, CT

<http://brucemuseum.org>

203-869-0376

Bijoux: The Origins and Impacts of Jewelry

July 16, 2011 - February 26, 2012 *Ending Soon!*

The Children's Museum

West Hartford, CT

(<http://thechildrensmuseumct.org/>)

860-231-2824

Dinosaurs Alive—Jurassic Treehouse Opens January 14 at The Children's Museum

Did baby dinosaurs climb trees? Visitors to The Children's Museum will find out when the new exhibit *Dinosaurs Alive-Jurassic Treehouse* opens on Saturday, January 14.

An immersive experience awaits children and parents alike as they walk through dramatic multimedia scenarios featuring animatronic dinosaur families of various species including Stegosaurus, T-Rex, Parasaurolophus and Apatosaurus. Children get a Pterodactyl's eye view of these prehistoric families as

they make their way through the Jurassic treehouse overlooking the dinosaurs. The exhibit will run through the end of May.

Their website has a handy link to NASA's Ask a Scientist page: <http://science.nasa.gov/ask-a-scientist/>

The Children's Museum has a variety of exhibits and programs, too many to list here.

Connecticut Science Center
Hartford, CT
(<http://ctsciencecenter.org>)

Saturday Science Sessions!

Saturdays just got more fun! Come to the CT Science Center and take a journey to the Sun, see things on a smaller scale, or make new animal friends. Each new 90 minute adventure has hands-on activities for kids to enjoy. Admission is \$15 / \$10 members. Ages 8 and up; those 8-18 must be accompanied by an adult.

January 14: Roaming Robots!

Robotics Engineers (That's YOU!) will learn the fundamentals of Robotics as your team programs real microprocessor-controlled Robots. Program your robot to perform a variety of challenges and tasks. This is a hands-on experience in the practical application of artificial intelligence and the first steps into the World of Robotics which will be a major part of our future.

February 11: What's Your Game?

Using computer programming software, write and design your own computer game or application! Create your own characters and missions and then write the code to make it all happen. Laptops provided.

March 10: Solar Astronomy

You know that you shouldn't look at the sun, but here at the Science Center we have special telescopes that can! During this workshop you'll be able to view the sun through our Hydrogen Alpha telescope and a solar filter equipped 10 inch telescope to see the sun like you never have before. You'll also learn a little about the night sky and be able to build your own telescopes, not for use on the sun of course. Even if the weather is poor we will have other great activities. A \$10 material fee for the telescopes is required.

April 14: CO2 Racers

Investigate force, friction and air resistance by designing and building your very own super fast dragster that's powered by carbon dioxide. You will also race it on our +60 foot long track and yes, you get to take the dragster home! A \$12 material fee for the dragster is required.

Exhibits to be enjoyed at the CSC include Exploring Space (Mars Flyover, Apollo to Orion, Back from

Space, Black Holes & Supernova); Kid Space (Water Play, Magnetic Ball Wall & Reading Nook); Forces in Motion (incl. Maglev Test Bed!); Invention Dimension (incl. Chain Reactions!); River of Life (all sorts of stuff about the Connecticut River); Planet Earth; Energy City; and much more !

The Institute for American Indian Studies
(www.IAISMuseum.org)
note new website!
860-868-0518

For the months of January and February IAIS is proud to present the wampum jewelry of **Allen L. Hazard Sr.** and **Craig Spears Sr.** both members of the Narragansett Nation. Allen, who learned the craft from his mother and sister, is one of the remaining few traditional Wampum bead makers within the Eastern Woodland Nations. His beautiful wampum jewelry is created from raw quahog shells cut, shaped and drilled into unique handcrafted pieces. Craig, a master stone mason by trade, started working with wampum 20 years ago. His unique ability to bring feathers, eagles and bears alive from quahog shells had placed Craig as a one of a kind wampum artist.

Calendar selections below. Full calendar and more information usually available at their website.

Winter Film Festival. Sat. 1/14 & Sun. 1/15

2:00 pm *Included in regular museum admission. \$5 Adults; \$4.50 Seniors; \$3 Kids; IAIS Members Free*

In 1918, although still not allowed to become citizens of the United States, Choctaw enlistees of the American Expeditionary Forces were asked by the government to use their language as a powerful tool against the German Forces in World War I. In Choctaw Code Talkers, learn about America's Original Code Talkers who blazed a trail for the use of Native languages as an effective military war time code. Run time: 57 minutes

Artifact Identification Day. Sun. 1/22 1 pm – 4 pm

Included in regular museum admission. \$5 Adults; \$4.50 Seniors; \$3 Kids; IAIS Members free.

Winter Survival Walk. Sat. 1/28 12:30 – 2:30 pm

With Jamie Leffler. Space is limited; please call for reservations. *\$8 Adults; \$6 IAIS Members; \$4 Kids.*

Medicine Wheels, Animal Totems & New Years Manifestations. Sun. 1/29 1:00 – 3:00 pm

With Lupu Passero. Space is limited; please call for reservations. *Fee \$20; \$15 IAIS Members.*

Winter Film Festival. Sat. 2/ 4 & Sun. 2/5

2:00 pm *Included in regular museum admission. \$5 Adults; \$ 4.50 Seniors; \$3 Kids; IAIS Members Free*

Explore the issues of racial identity among Native and African Americans in “Black Indians: An American Story”. Often ignored by mainstream America, these minority peoples have shared a common past. This documentary examines the coming together of these two groups in American history. Run time: 60 minutes.

African Beat: Ancient Musical Instruments. Sat. 2/11 1:00 – 2:00 pm

With African musician Mark Ingram. Please call for reservations. *\$10 Adults; \$5 Kids.*

Kids Adventure Day! Sat. 2/18 12:30 – 2:00 pm

A Woodland Adventure! After learning about the materials Native Americans would have used to make tools, weapons & toys, join IAIS Educators for an afternoon of outdoor family fun and a scavenger hunt along our woodland trails. We'll end the afternoon roasting marshmallows around the fire in our outdoor Algonkian village.

Limited space! Please call for reservations. Fee: \$6 Kids; \$5 Adults (regular museum admission)

Return of the Native: Mountain Lions in Connecticut. Sun. 2/19 1:00 pm

With Bill Betty. *Space is limited; please call for reservations. Fee: \$10 Adults; \$8 IAIS Members; \$5 Kids.*

Puppets & Parables. Mon. 2/20 12:30 – 2:00 pm

Limited space; please call for reservations. *Fee: \$8 Kids; \$5 Adults (regular museum admission)*

Learn to Play the Indian Love Flute**Sat. 2/25 1:00 – 2:00 pm**

With Allan Madahbee. Limited space; please call for reservations. *\$25 Adults; \$20 IAIS Members.*

IAIS is proud to carry work by exhibiting artists in the museum gift shop. For more information about these and other events, please call (860) 868-0518 or see <http://iaismuseum.org/calendar.shtml>.

New York State Museum, Albany NY

<http://www.nysm.nysed.gov/>

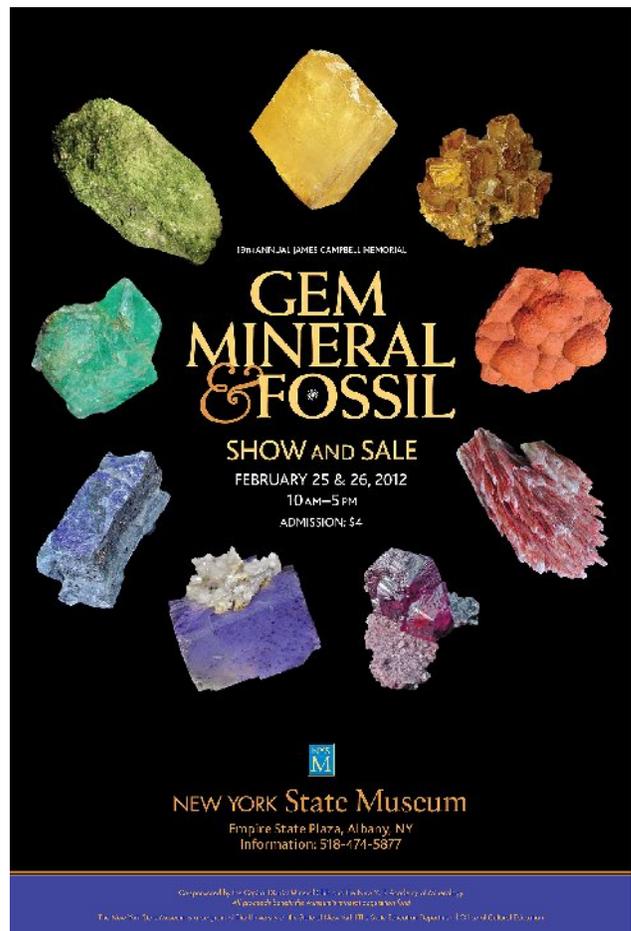
(518) 474-5877 *Free Admission !! closed Sundays*

The Museum offers approximately 12 new exhibitions each year on a wide range of subjects. Exhibitions are often developed with our own extensive collections or traveled from renowned museums across the country. Current exhibitions include:

[Shadow and Substance: African American Images from the Burns Archive](#) (ends 3/31/2012)

[Marking Time: Voyage to Vietnam](#) (ends 2/25/2012)

[From the Collections](#) (ends 4/1/2012)



And of course the James Campbell Memorial Gem, Mineral & Fossil Show & Sale is coming up February 25 and 26!

Dinosaur State Park

Rocky Hill, CT

<http://www.dinosaurstatepark.org/>

860-529-5816

Hudson Highlands Nature Museum

Cornwall, NY

www.hhnaturemuseum.org

845-534-5506, ext. 204

Geology Fair

Saturday, February 4 at the Outdoor Discovery Center from 10am-2pm

Cost: Adults \$7 Children \$5

Members: Adults \$5 Children \$3

http://www.hhnaturemuseum.org/index.php/for_all_ages/upcoming_event_information/geology_fair/

New York State has some of the most fascinating geology in all of North America. Come for a day of rockin' fun and facts with Orange County Mineral Society. Enjoy geology exhibits, rocks, minerals and fossils. There will be special presentations in Geology and Paleontology, and minerals and fossils available for purchase. Children can excavate their own rock specimens in the geo-pit or make a fossil casting to take home. Refreshments will be available for purchase. For more information call 845-534-5506, ext. 204.

Dominic & Lizzie went to this one last year and it is a nice little show. Also there is a sweet farm shop barely a stone's throw down the road: The Shops at Jones Farm <http://www.jonesfarminc.com/>

Rutgers Geology Museum, New Brunswick NJ

(<http://geologymuseum.rutgers.edu/>)

(please note that there is no "www" in their URL)

732-932-7243 museum@rci.rutgers.edu

44th Open House ! Saturday, January 28. FREE

Programs include

"The Search for Oil: Fact vs. Fiction" presented by Dr. Martha Oliver Sithjack.

"New Discoveries from the Age of Fishes: Explorations in the Late Devonian of North America" presented by Dr. Ted Daeschler

"The Paleocene of New Jersey: Impact, Extinctions, Recovery and Methane Bursts" presented by Dr. Kenneth Miller

"Cannibalism in the South Pacific: The Bioarchaeological Evidence" presented by Dr. Rhonda Quinn.

Mineral Sale in Scott Hall Rm 135, 9 am – 4 pm

Hands-on activities for kids 8+ in Scott Hall

And much, much more !!

Want More Museums? Check out the US Museums by State website. Here is the link to their Connecticut page: <http://www.museumlink.com/connecti.htm>

Tucson !!

A few of us will be lucky enough to be in Tucson this winter, but most of us will be relying on the vicarious thrill of tales told afterwards.

You can also follow some Tucson happenings online, and here are some links to help with that.

Some folks will be Tweeting and blogging from Tucson. Check your usual links for plans of increased

activity or links thereto. Here, for example, is a blog that will be live from the shows this winter: <http://tucsongemshow.blogspot.com/>. Oh my gosh, it's our friend Robyn Hawk. I can't keep up with her! On Twitter also, and Facebook, of course.

I get Pala Gems' e-newsletters (www.palaminerals.com/), and people are certainly gearing up for the 2012 adventure; for example Edward Swoboda: "A Life of Gems & Minerals" at the Westward Look on February 5: Notoriously shy, this pioneer and legend of the mineral collecting world has graciously accepted our invitation to come and present a brief overview of his experience and life in, "A Life of Gems & Minerals."

<http://www.westwardminerals.com/sun.html>

Check out the cool floor plan for AGTA:

<http://www.floorplangenic.com/events/agta/gft2012/public/fphtml.aspx>

Visit the Pala Gems website to sign up for their interesting newsletter. <http://www.palagems.com/>

~ Events Calendar ~

January 2012

1 Jan – 28 Feb, Quartzsite, AZ – The Desert Gardens International Rock, Gem & Mineral Show. Free parking, Free admission, Food court. Hours 8 am – 5 pm daily. Retail & wholesale. Contact us at: dggemshow@ureach.com for vendor sites or call (928) 927-6361 for show information.

6 – 15, Quartzsite, AZ – Rock & Gem Show at Tyson Wells Shows Grounds, 100 W. Kuehn St. Dust controlled, packed surface for selling, parking, and camping in the beautiful desert setting of Arizona's La Posa Valley. Easy access in and out of show. 396 selling spaces. To be a show dealer, fill out an application [here](#). For a current Rock & Gem Show flyer [click here](#). [Click here for a Show Map](#)

22, Moosic, PA - Annual Auction sponsored by the Mineralogical Society of Northeastern Pennsylvania. Moosic Presbyterian Church, 625 Main St; Moosic, PA.

28, New Brunswick, NJ – Annual Geology Open House Rutgers University. Mineral sales, lectures, mineral identification.

February 2012

1 – 5, Quartzsite, AZ – 15th Annual Quartzsite Hobby, Craft & Gem Show. Daily 9 am – 5 pm. 700 S. Central. FREE Admission to the Public. Free Parking. Live entertainment.

www.quartzsiterivshow.com/craft/craft-general-info/

4, Cornwall, NY – Geology Fair at the Hudson Highlands Nature Museum, Outdoor Discovery Center. See info in museums section above.

18, Upper Marlboro, MD – 22nd Annual Jewelry, Mineral, and Fossil Show, organized by the [Southern Maryland Rock and Mineral Club](#). Demonstrations, Exhibits, Door prizes, Kids' crafts. Admission \$3, children 6 and under FREE. The Show Place Arena (14900 Pennsylvania Avenue). Saturday only, 10 am – 5 pm. (Same day as the Gun Show.) Website: [Southern Maryland Show](#)

25-26, Albany, NY – Campbell Memorial Gem, Mineral & Fossil Show. New York State Museum, Empire State Plaza. Hours 10 – 5 both days. Admission \$6 (includes NY in Bloom Flower Show and Museum Admission). Children under 12 FREE. Guided tours of State Museum Mineral Gallery. Contact Michael Hawkins (518-486-2011). (Note: Dominic and Lizzie attended this one last year, and maneuvering can be a bit tight; not recommended for scooters and wheelchairs, although the facility is theoretically accessible, with elevators, etc.)

March 2012

3 – 4, Manhattan, NY. Spring New York City Gem & Mineral Show hosted by the New York Mineralogical Club and Excalibur Mineral Corporation. Holiday Inn, 440 W 57 St. 10 - 6 Sat; 11- 5 Sun. Admission \$6; kids under 12 FREE. Lectures, 20 top dealers, retail and wholesale. Contact Tony Nikischer 914-739-1134 or see www.excaliburmineral.com.

3 – 4, Newark, DE. “Metals from Earth & Beyond” 49th Annual Earth Science Gem & Mineral Show at the Delaware Technical & Community College, I-95 Exit 4B, Churchmans Road (Rte 58). Hosted by the Delaware Mineralogical Society. 10 am - 6 pm Sat. & 11 am - 5 pm Sun. Contact Wayne Urion at 302-998-0686; e-mail gene@fossilnut.com, or visit www.delminsociety.net.

10 - 11, Clifton, NJ - 23rd Annual North Jersey Gem & Mineral Show sponsored by the North Jersey Mineralogical Society. Pope John Paul II Center; Clifton, NJ. nojms.webs.com/annualspringshow.htm

17 - 18, Gaithersburg, MD - 48th Annual Gem, Mineral & Fossil Show sponsored by the Gem, Lapidary & Mineral Society of Montgomery Co. MD. Montgomery Co. Fairgrounds, 16 Chestnut St. <http://www.glmsmc.com/show.shtml>

24 - 25, Sayre, PA - The 43rd Annual Che-Hanna Rock & Mineral Club Rock & Mineral Club. Athens Twp. Vol. Fire Hall, 211 Herrick Ave. The club will be celebrating their 50th Anniversary and will have special displays and activities commemorating the event. Adults \$3, students \$1, under 8 FREE. Contact Bob McGuire 570- 928-9238 www.chehannarocks.com

24 – 25, Hamburg, NY - 44th Annual Gem, Mineral & Fossil Show sponsored by the Buffalo Geological Society. The Fairgrounds, Grange & Market Bldgs., Hamburg, NY. <http://www.bgsny.org/>

24 – 25, Holyoke, MA – Western Mass Mineral, Jewelry & Fossil Show. Hosted by the Connecticut Valley Mineral Club at the Holyoke Hotel & Conference Center, I-91 Exit 15. Sat. 9:50 – 5; Sun. 10 – 14. Adults \$4; Kids 12 and under FREE. <http://www.cvmineralclub.org/>

31 – April 1, Plymouth Meeting, PA - The Philadelphia Mineralogical Society and the Delaware Valley Paleontological Society Present a joint show and sale at the LuLu Temple, 5140 Butler Pike. Sat. 10am to 5pm and Sun. 10am to 4pm. Fossils, Minerals, Gems, Speakers, and Exhibits; Kids' Fossil Dig & Mineral Corner. Food, door prizes and Scouting Merit Badge information. Admission: \$5.00; \$1.00 kids under 12. All uniformed Scouts are free. Show Chair Karenn Snow 609-953-1987 Check the website at www.philamineralsociety.org

April 2012

19 – 22, Rochester, NY. 39th Annual Rochester Mineralogical Symposium. [Call for Papers](#) -- deadline 31 January 2012. Sponsored by the Rochester Academy of Science, Mineral Section. Radisson Inn, Rochester Airport, 175 Jefferson Rd; Rochester, NY. Contact Dan Imel, lapidry@aol.com.

27 - 29, Elkridge, MD - Atlantic Micromounters Conference sponsored by the Micromounters of the National Capital Area. MHA Conference Center. For registration and info contact Carolyn Weinberger email: cscrystals2@verizon.net.

You can find gem and mineral show listings in hobby and trade magazines as well as online. Here are some fairly useful websites, and there are also listings at the Federation sites by region.

<http://www.mineralfest.com/calendar.html>
<http://www.rocksandminerals.org/Coming%20Events/coming-events.html>
<http://www.rockngem.com/show-dates-display/?ShowState=ALL>
(lists mineral shows and bead shows together)
<http://www.mindat.org/eventlist.php>

Rock shows as viewed from southern Ontario, Canada:

<http://www.rocksforkids.com/Family%20Excursion%20Destinations.htm>

You can find bead & jewelry crafting shows here:

<http://www.rings-things.com/Show/show.php>
<http://www.justbeads.com/user/EventList.cfm>
<http://www.americangemexpo.com/>

Follow-ups

Birthstones

<http://mineralminers.com/html/garminfo.htm>
<http://www.lakegeorgeguide.com/regional-area-info/articles/geology-of-the-gore-mountain-garnet-mine/>
<http://www.mindat.org/min-10272.html>
<http://www.minerals.net/gemstone/garnet.aspx>
http://www.palagems.com/tsavorite_bancroft.htm
<http://www.gemstoneslist.com/almandine.html>
<http://mii.org/Minerals/photogarnet.html>
<http://garnetminetours.com/>
<http://www.rasny.org/mineral/Garnet/index.htm>
http://www.allaboutgemstones.com/gemstones_garnet_almandine.html
<http://minerals.usgs.gov/minerals/pubs/commodity/garnet/garnemyb04.pdf>

Tucson

<http://www.visittucson.org/visitor/events/gemshow/>
<http://emol.org/tucson/tucsonmap.html>
<http://www.22ndstreetshow.com/>
<http://twubs.com/tucsongemshow>
https://twitter.com/Tucson_Gem_Show
<http://www.tgms.org/2012show.htm>

Quartzsite

<http://www.desertusa.com/Cities/az/quartzite.html>
http://www.desertgardensrvpark.net/Desert_Gardens_Rock_Gem_and_Mineral_Show.html
<http://www.nocgms.com/fieldtrip/y2011/quartzsite/quartzsite.htm>

see also the March 2011 [Danburite](#)

Really Big Dinosaurs

<http://www.sciencedaily.com/releases/2011/11/111129125014.htm>

Whale Fossils

<http://io9.com/5861723/what-are-the-fossilized-remains-of-more-than-80-whales-doing-in-the-driest-desert-on-earth>
<http://www2.timesdispatch.com/news/world-new/2011/dec/01/tdmain02-chilean-desert-is-home-to-dozens-of-whale-ar-1505184/>

Creationists like the Whale Fossils

<http://creation.com/chile-desert-whale-fossils>
<http://biblicalgeology.net/blog/whale-fossil-graveyard-chile/>
<http://creationrevolution.com/2011/12/whales-in-the-desert/>

Pala Gems

Article vault:

http://www.palagems.com/learning_vault.htm

Climate Change

United Nations Environment Programme How Will Global Warming Affect My World? A simplified guide to the IPCC's "Climate Change 2001: Impacts, Adaptation and Vulnerability."

www.unep.org/dec/docs/ipcc_wgii_guide-E.pdf

Environmental Justice

A new French-language website by the Carter Center provides information about industrial and artisanal mining in Katanga province, Democratic Republic of the Congo, to facilitate transparency and accountability in the region. (Google translator is among the online tools available to render the site into English fyi)

<http://congominer.org/>

Calcareous Fens (see Fun Pages)

“Extreme variability of water table dynamics in temperate calcareous fens: Implications for biodiversity”

<http://onlinelibrary.wiley.com/doi/10.1002/hyp.8109/abstract>

“Vegetation, Soils, and Land Use in Calcareous Fens of Eastern New York and Adjacent Connecticut”

<http://www.bioone.org/doi/abs/10.3119/01-36.1>

http://www.mass.gov/dfwele/dfw/nhosp/natural_communities/pdf/calcareous_basin_fen.pdf

http://www.mass.gov/dfwele/dfw/nhosp/natural_communities/pdf/calcareous_sloping_fen.pdf

<http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/pennsylvania/placesweprotect/mount-bethel-fens.xml>

http://library.fws.gov/pubs5/web_link/text/hvc_for_m.htm

Mineral Club Links

Lapidary and Mineral Society of Central Connecticut
<http://www.lmscc.org/> (also on Facebook)

Bristol Gem & Mineral Club
<http://bristolgem.org/>

Connecticut Valley Mineral Club
<http://www.cvmineralclub.org/> (also on Facebook)

Stamford Mineralogical Society
<http://www.stamfordmineralsociety.org/>

Mid-Hudson Valley Gem & Mineral Club
<http://mhvgms.org/>

Orange County Mineral Society

<http://www.orangecountymineralsocietynewyork.com>

and there are more to be found at

<http://www.amfed.org/efmls/clubs.htm>

The USGS has a whole page about their social media doings, including podcasts.

<http://www.usgs.gov/socialmedia/>



More government fun: Federal agencies and their partners collect and manage large amounts of geospatial data - but these data are often not easily found when needed or accessible in useful forms. The Geospatial Platform provides ready access to federally maintained geospatial data, services and applications.

Check out the New Geospatial Website at

<http://www.geoplatform.gov/home/>

The DMS is on Facebook!! Are You ?

There are in fact a lot of rockhounds – and lapidary hobbyists of all types -- on Facebook.

Sign in or sign up at www.facebook.com and search for Danbury Mineralogical Society PAGE.

While you are there, check out the IAIS' page at <http://www.facebook.com/pages/The-Institute-for-American-Indian-Studies/94523613907?ref=ts> and

Rock, Gem and Mineral Clubs at

<http://www.facebook.com/RockGemMineralClubs>



... and **Twitter**

I like Twitter because, properly used, it can provide a stream of links to useful and interesting news, minus the chit-chat that makes FB so "social."

The Army Corps has several Twitter feeds, including https://twitter.com/usace_hq and https://twitter.com/USACE_NY

There is also a nice one for ASCE (American Society of Civil Engineers) <https://twitter.com/ASCETweets>

The American Geological Institute tweets at https://twitter.com/AGI_Updates

The American Museum of Natural History <https://twitter.com/amnh>

New York Times Science feed <https://twitter.com/nytimescience>

Science feed from The Times (of London) <http://www.twitter.rs/TimesScience>

Science policy news <https://twitter.com/ScienceInsider>

Tucson Gem Show https://twitter.com/Tucson_Gem_Show

and of course our friend Robyn Hawke's other feeds <https://twitter.com/aflonthewall>

If you really must know mine, which probably rarely or never gets anything hobby-related that doesn't also appear on the club's FB wall, it's <https://twitter.com/lizziewriter>

29 December 2011 News Item from Pala Gems:

We just received word of a theft ... at the Santa Barbara Museum of Natural History. The theft consisted of stones on loan to the museum from the Natural History Museum of Los Angeles County, including the benitoite pictured below.



Stolen. This 2.9-carat benitoite, 9 x 7 x 5 mm

The [Santa Barbara Museum of Natural History](#) can be contacted at 805.682.4711.

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Editor Emeritus	Hank Henning	e-mail hank@bestweb.net

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.

The Danbury Mineralogical Society Inc. is a non- profit corporation and is affiliated with the Eastern Federation of Mineralogical and Lapidary Societies and The American Federation of Mineralogical Societies. Meetings are held at 7:30 pm on the first Thursday of the month from October to June at Broadview Middle School, Danbury, Connecticut. Visitors and guests are welcome at all meetings. The January meeting is usually a dinner seminar. There are no meetings in July. August is preparation time for our annual mineral and jewelry show in September.

Current membership dues are \$12.50 per adult individual/\$17.50 per family (including children under 18) \$ 7.50 for students and senior citizens. Only dues-paying members are covered by our liability and accident insurance and receive the print version of the *Danburite*.

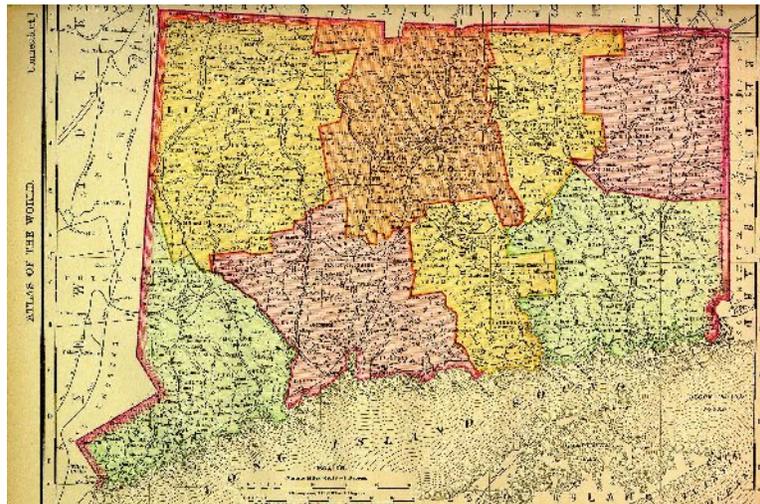
Please Please Please be sure we have your **CORRECT** email address on file! Thank you !! If you absolutely must receive your copy by real mail instead, please let us know that also.

The particular objectives for which this Society is formed are:

- To promote general interest in mineralogy
- To study rocks, minerals, fossils and the lapidary arts through lectures and discussion groups and field trips.
- To encourage the search for minerals indigenous to our areas
- To keep an accurate and permanent record of all mineral localities visited by this society and to make such records available to all members.

The Danburite is published monthly except July and August by the Danbury Mineralogical Society, Inc. *The Danburite* may be quoted and unless otherwise noted all material may be reprinted provided credit is given to the author and *The Danburite*. The Editor, the officers of the Danbury Mineralogical Society and The Danbury Mineralogical Society Inc. are not responsible for the accuracy or authenticity of information in articles accepted for publication, nor are the opinions expressed therein necessarily those of the editor and the officers and other members of the Danbury Mineralogical Society Inc.

PostScript



http://store.usgs.gov/b2c_usgs/usgs/maplocator/%28ctype=areaDetails&xcm=r3standardpitrex_prd&care=%24ROOT&layout=6_1_61_48&uiarea=2%29/.do

Connecticut Historical Maps added: The complete series of USGS [Historical Topographic Maps](#) for Connecticut has been loaded for free download from the USGS Store [Map Locator](#). That brings the total number of historical, legacy topographic maps to more than 149,190, covering [39 states](#). The historical maps are available in a GeoPDF format and can be [searched](#) by state name, scale or map name. The goal of the Historical Topographic Map Collection is to scan all scales and all editions of the more than 200,000 topographic maps published by the USGS since the inception of the topographic mapping program in 1884.

<http://1.usa.gov/oSPTDv>

MEMBERSHIP APPLICATION
DANBURY MINERALOGICAL SOCIETY, INC.
P.O. BOX 2642 DANBURY CONNECTICUT 06810-2642
WEBSITE <http://www.danburymineralogicalsociety.org>

please print or type clearly DATE OF APPLICATION _____

NAME OF APPLICANT _____

MAILING ADDRESS _____

PHONE NUMBER(S) _____

E-MAIL ADDRESS _____

PLEASE INDICATE MEMBERSHIP TYPE INDIVIDUAL ADULT \$12.50

FAMILY (including children under 18) \$17.50 STUDENT \$7.50 SENIOR \$7.50

PAYMENT BY CASH CHECK # _____ AMOUNT _____ RCVD BY _____

PLEASE LIST ALL FAMILY MEMBERS TO BE INCLUDED _____

The interests of the club members include mineral and fossil collecting and exhibiting, lapidary-jewelry making, earth and planetary science, mining and mineral usage. Dues paying members receive the club news letter, The Danburite, are covered at club activities by the club accident and liability insurance policies and may vote for club officers. .

PLEASE INDICATE YOUR SPECIAL INTERESTS _____

COLLECTING FIELDTRIPS LAPIDARY/JEWELRY
 MICROMOUNTS EXHIBITS EARTHSCIENCE FOSSILS

WHERE DID YOU HEAR ABOUT THE DMS _____

DMS SEPT. SHOW OTHER MINERAL SHOW FLYERS RADIO
 DMS MEMBERS NEWSPAPER DMS WEBSITE INTERNET

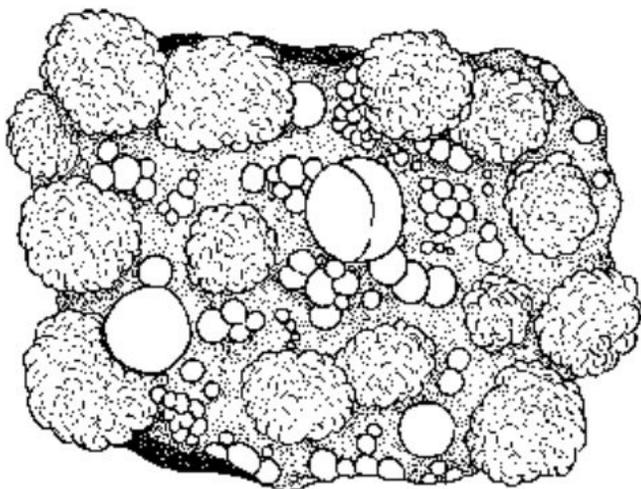
ARE YOU INTERESTED IN ASSISTING WITH ANY OF THE FOLLOWING

FIELD TRIPS PUBLICITY SPEAKERS
 REFRESHMENTS BULLETIN/NEWSLETTER SEPTEMBER SHOW
 ANNUAL SEMINAR ANNUAL SWAP LIBRARY
 JUNIOR PROGRAM MEMBERSHIP WEBSITE

MEETINGS are the first Thursday of the month in February, March, April, May, June, ... October, November, and December. There is an annual Seminar in January at a local Restaurant, an Annual swap at the Connecticut Museum of Mining and Mineral Science in Kent, CT and an Annual Mineral and Jewelry Show in September. There is no monthly meeting in July or August. An informal gathering and (when scheduled), a junior rockhound meeting begins at 7:00 p.m. and the regular meeting starts at 7:30 p.m. Our meeting place is the Broadview Middle School, 72 Hospital Drive [just up the street from Danbury Hospital] in Danbury CT. Visitors and guests are always welcome.

The Danbury Mineralogical Society Inc. is affiliated with: The Eastern Federation of Mineralogical and Lapidary Societies , The American Federation of Mineralogical Societies and The Connecticut Museum of Mining and Mineral Science.

Copper Minerals Malachite and Azurite

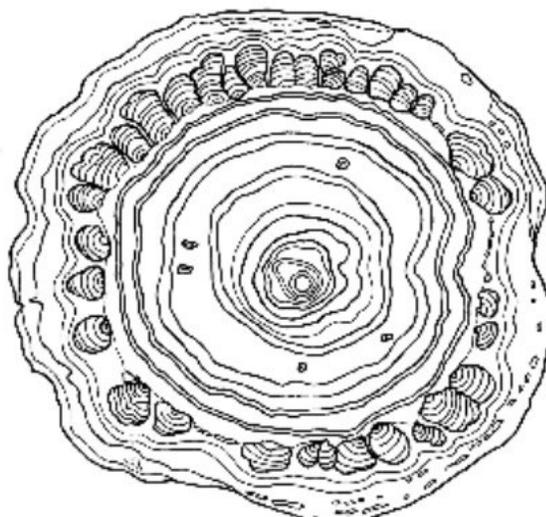


Pictured on this page and the next are a number of wonderful copper mineral specimens from the world-famous mines at Bisbee, Arizona. Bisbee is south-east of Tucson. The town was founded in 1880 and was named after Judge DeWitt Bisbee. He invested a lot of money in the nearby Copper Queen Mine. Bisbee, Arizona has produced more mineral specimens of more varieties than any other place in the United States: over 200 different mineral species have

been found in Bisbee! Color these drawings and watch the Bisbee copper minerals come alive!

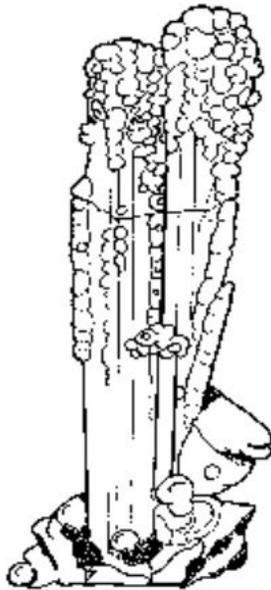
Above: Deep blue azurite crystal clusters with rounded green malachite spheres on matrix. This specimen is from the Czar shaft, Bisbee.

Below Right: A slice of a malachite and azurite stalactite. A *stalactite* is a long cave growth that forms from the ceiling of a cave or opening when dripping water deposits mineral material in layers. The rings in the center are light green malachite. The outer rings are deep blue azurite. The ring of "blobs" in the middle are green malachite. The rings just below the malachite "blobs" are blue azurite.



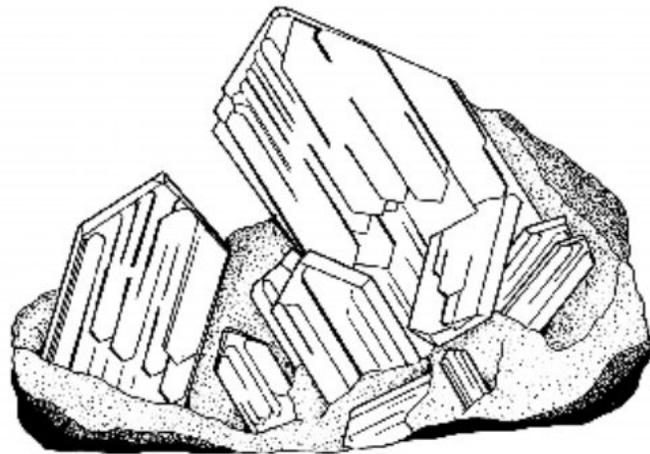
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Even More Copper Minerals

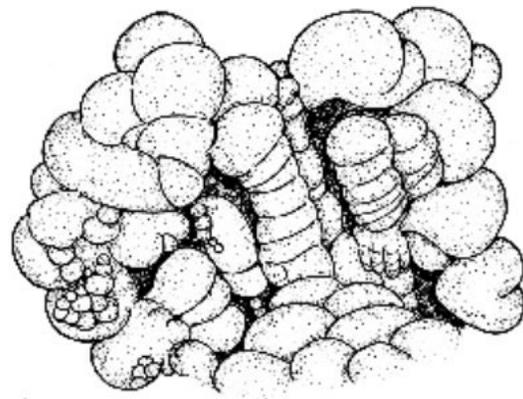


Many of the copper minerals in Arizona were formed when hot waters that were filled with natural chemicals moved through the copper-rich rocks. When the conditions are just right, a mineral can be changed from one mineral species to another. For example, a specimen of azurite can become a specimen of malachite. What is interesting about many specimens from Bisbee is that the minerals changed from one species to another, *but they kept the crystal form of the first mineral*. Mineralogists call these specimens *pseudomorphs* which means *false form*. In other words, the specimen is one type of mineral but it has the shape of another. Pictured here are two examples of

pseudomorphs from Arizona. To the left is a light blue specimen of chrysocolla. It was originally azurite (and still has the crystal form of azurite). It is from the Ray mine, Pinal County. To the right is a group of green malachite crystals. Actually, they were originally deep blue azurite crystals that changed into malachite. They are from the Campbell Shaft, Bisbee.

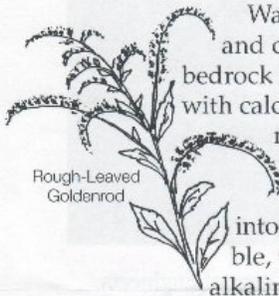


To the right is a copper mineral specimen from Bisbee. Mineral collectors and mineralogists call rounded, grape-like shapes *botryoidal* which means *grape-like*. Is it light blue azurite? Or is it dark green malachite? The interesting thing is that both botryoidal malachite and azurite have been found in Bisbee. So, how you color this specimen is up to you. Do you want it to be green malachite or do you want it to be light blue azurite? You're the mineral collector and the artist ... it's up to you to decide!



Have You Seen a Calcareous Fen?

Calcium rich (calcareous) limestone, deposited in ancient seas and metamorphosed into marble by continental collisions, forms the bedrock beneath a good portion of the Great Swamp. The marble is relatively soft, but has been an important resource for the area and is still mined next to the Great Swamp in the center of the Town of Patterson. You can see the white marble outcrops as you drive Route 22 north from Patterson. Some, such as those visible near the intersection of Routes 22 and 55 in Pawling, have been weathered black, presumably from car exhaust.



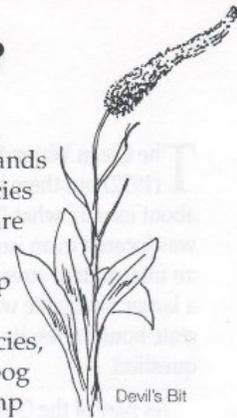
Rough-Leaved Goldenrod

Water moving through cracks and channels in the marble bedrock becomes enriched with calcium and magnesium which raises its pH. Thus when we sink our wells into the Harlem Valley marble, the water we extract is alkaline (pH 6-8.5) and has significant 'hardness', making our standard soaps less soluble.

As this enriched 'ground-water' seeps out to the land surface, it also imparts special characteristics to the wetlands that are created. They have high calcium and magnesium concentrations, but very low levels of other nutrients. Low nutrient levels and consistently saturated soils also inhibit decomposition, so fens accumulate peat or muck. The presence of unique plant species that are adapted to conditions in the calcareous wetlands can help us identify the location of a fen. Some examples are: shrubby cinquefoil, grass of Parnassus, ladies' tresses (an orchid), yellow sedge, cotton-grass and rough-leaved goldenrod.

The environmental conditions leading to calcareous fens are uncommon, but the Harlem Valley is one of only three regions in

the State with high quality fens. They are among the rarest wetlands in New York, and since the species that occur in these ecosystems are specialized, they are often uncommon. In the Great Swamp Watershed our calcareous fens support a host of these rare species, including the *State Endangered* bog turtle and *State Threatened* swamp birch, the spreading globeflower, and devil's bit.

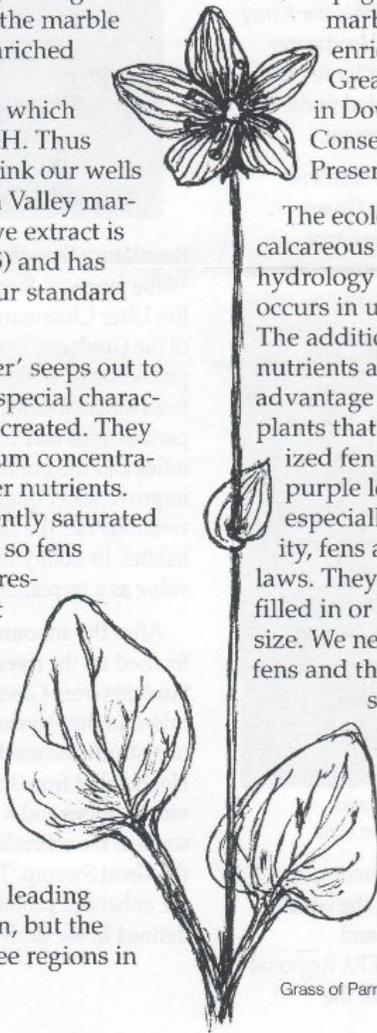


Devil's Bit

Calcareous fens are small (about an acre) seepage areas that occur over marble bedrock in the calcium enriched soils that edge the Great Swamp. They can be found in Dover at Oblong Land Conservancy's Slocum-Mostachetti Preserve.

The ecological communities of calcareous fens are degraded when the hydrology of an area changes, such as occurs in urbanization and agriculture. The addition of surface runoff with its nutrients and increased flow gives the advantage to larger, faster growing plants that choke out the more specialized fen species. Invasive species like purple loosestrife and phragmites are especially damaging. Due to their rarity, fens are protected under most wetlands laws. They are frequently not identified and filled in or drained because of their small size. We need increased public awareness of fens and their unique communities so local stewardship plans are developed to protect and preserve them.

—By Jim Utter, Laurie Wallace & Judy Kelley-Moberg
Sketches by Jean Hannon & Judy Kelley-Moberg



Grass of Parnassus



Ladies' Tresses

