

## DVESScapades

*escapades: interesting, stimulating, exciting activities and adventures*



## Delaware Valley Earth Science Society Newsletter



**March 11, 2009**

**Program: \*\*\* SPECIAL \*\*\***

**WE WILL MEET AT ROWAN FOR A FREE SHOWING AT THE PLANETARIUM**  
of the program "Our Winter Sky" by Dr John Herrmman and, if the weather allows,  
a trip up to the roof to look thru RSU's telescope for an actual viewing of the current sky.

**President's Message** - by **AnnLynne Benson**, DVESS President and EFMLS Director  
On Sunday, Feb. 15, my soon-to-be-six year old grandson Garrett Cuffy accompanied me, intrepid field trip leader Lou Detofsky, and his lovely wife Ilene to the Univ. of Pennsylvania museum of Archaeology and Anthropology for the Darwin Day event. We heard lectures, including two by paleontologist Dr. Peter Dodson (one specifically geared toward children), and saw special exhibits by the Academy of Natural Science, the Wagner Free Institute of Science and an another of orchids. They even had a Twister game featuring a shell, a picture of Darwin, a turtle and a skull.

**Here's Garrett's trip report:** "We went to the China museum; they had China lions outside. Inside we saw mummies and played Twister. I had a good time."

That's what it's all about - exposing ourselves and our children to new places and new ideas. Our entire club experience is about having fun, making friends, going (new) places, learning new things, and broadening our perspective of the world. It's about excitement and adventure - **escapades** - hence the name of our newsletter DVESScapades

Do we always understand the things we're learning? Of course not. Someone told me they weren't coming back because they didn't understand what it was all about. I told them about my first DVESS meeting: Doc Rock was talking about his trip to Hawaii and plate tectonics. I understood **not one word**, and I had trouble believing the concept itself. But he was animated, enthusiastic, excited and that excitement was conveyed to me. I came back the next month, and the next and the next and ultimately became the first woman president of our club. It's been a fantastic journey, and it's not over yet! We're just here to have a good time and we invite and encourage you to join us. You will learn a new definition of happy.

### **AMERICAN FEDERATION NEWS**

The annual Endowment Fund drawing will be handled differently this year to give each Region an opportunity to have at least one winner. Instead of drawing all winners from one bin, the tickets will be divided into seven

separate bins - one for each Region. That way, each federation will have at least one prize winner. The drawing will take place at the American Federation show and Convention, July 30 to August 2, in Billings, Montana. There will be 30,000 sq. feet of

gems, jewelry, minerals, fossils, exhibits, dealers, demonstrations, and educational displays including a cave bear and a MOON Rock from NASA, live auctions and a full week of field trips after the show. Prizes currently include an engraved vase by master engraver Jay Bowman valued at \$235.00, an opal pendant featuring 7 Mexican opals and 6 diamonds, set in 14 carat gold, on a 20 inch gold chain. There are also faceted stones, a meteorite and an intarsia. More prizes will be added monthly right up until the Convention. Tickets are \$5 each or 5 for \$20. BUY YOUR TICKETS from Carolyn Weinberger, PO Box 302; Glyndon, MD 21071-0302 [editor@amfed.org](mailto:editor@amfed.org) or our Regional Vice-president Michael Kessler - 570-421-3113- [quartz7228@aol.com](mailto:quartz7228@aol.com)).

You can view color photos of the prizes on the AFMS Website <[www.amfed.org](http://www.amfed.org)>. Just click on "Endowment Fund" on the homepage. For more information about the process, and for other current American Federation news, see the March newsletter at [http://www.amfed.org/news/n2009\\_03.pdf](http://www.amfed.org/news/n2009_03.pdf). Funds donated to the Endowment are invested and interest only is used for AFMS projects including the Jr. Rockhounds Badges, and Slide Program digitization, etc.

### EASTERN FEDERATION NEWS

Ah, the dream vacation: a fun, relaxing, and enjoyable week in the mountains, including accommodations and meals for \$345 per person - yes, that's one-tenth of what you would usually pay for such a holiday. As on any good cruise ship, this **rock**-bottom price includes numerous activities such as faceting, glass engraving and etching, lost wax casting, silversmithing, cabochons, micromounting, wire-wrapping, bead weaving, metal clay magic, setting natural stones, and exploration of the beautiful Wildacres including its flora and some of its hidden secrets. Choose April 17-23 or September 7-13 (or both); more details in the February issue of EFMLS news <http://www.amfed.org/efmls/effeb09.pdf>.

### IT'S SHOW TIME

March marks the opening of the Rock & Mineral Club Show Season in the Eastern Federation. As ad hoc field trip leader, I will lead trips to the Delaware Mineralogical show Saturday **March 7** including a side trip to the massive AAUW book sale at the Concord mall, and the combined Philadelphia Mineralogical Society/Delaware Valley Paleontological Society show Sunday **April 5**.

Also on April 5, a lecture on archaeology at the New Jersey State Museum in Trenton lecture at 4 pm; then same time, same location **Sunday April 5**, lecture on fossils; call 609-292-8594 for more information.

Trips leave from Gary's Gem Garden on Rt. 70 in Cherry Hill; sign up is required.

You can send me email at [SeleniteQueen@gmail.com](mailto:SeleniteQueen@gmail.com).

On Saturday, **March 14**, 10:00 AM to 3:00 PM, the Rock and Mineral Club of Lower Bucks County sponsors their **Mineral, Fossil and Micromount Show** at a new location – Faith Reformed Church, 479 Stonybrook Drive. Levittown, PA. Contact Dick Tillett 215-785-2642 for more information.

On Saturday, **April 25** DVESS will sponsor a tour and dig at Sterling Mine Mineral Museum in Ogdensburg, NJ (Sussex county). Over 340 minerals, 80 of them fluorescent, are found in this world-famous area. This dig is your **ONLY** opportunity to dig for fluorescent minerals **at night**. People literally travel from all over the country and all over the world for this opportunity, and it's practically in our own back yard! For all we know, this may be our last opportunity **ever** to collect these minerals at night, as they lie innocently in a newly turned-over field, waiting for us to sneak up on them with our uv lamps and snatch the brightest and best. Mineral enthusiasts of every age, from EVERYWHERE, go gaga over fluorescent minerals!! Amaze your friends! Be the star of your next social gathering! Earn money! You can collect, sell, swap, and show off these unusual and beautiful minerals. Sign up at

[www.uvwworld.org](http://www.uvwworld.org).

If you stay up there overnight, you'll be able to attend the Franklin show Sunday, **April 26** in Franklin, NJ (Sussex county).

Our own Eastern Federation show and convention will be held in Bristol, CT **Oct. 17-18**. I have tentative plans to attend and would love to have some company for the drive.

Other shows are mentioned elsewhere in this newsletter; some will be led by Vice President Richard Murray.

By the way, don't forget the East Coast Vulture Festival, Saturday **March 7**, 1 pm - 10 pm in nearby Wenonah, NJ; see [www.eastcoastvulturefestival.org/](http://www.eastcoastvulturefestival.org/) for more details and page #17 & 18 of the e-mail version of the newsletter.

Our annual field trip and FREE tour of Sterling Mine Mineral Museum in Ogdensburg, NJ (Sussex county) will tentatively take place on Sunday, **September 13**. Mark your calendars now so we can confirm the date.

### **JUNIOR ROCKHOUNDS**

Our two Junior Rockhounds teachers offer quality and exciting programs for kids of all ages. Mel LeCompte entices the young ones

- ages 8 (but as young as six depending on their ability to follow the lessons) to 12 with the American Federation Merit Badge program. Gerald Fiegin enthralles the teens with close-up inspections and explanations of minerals; each Junior receives a specimen of the topic mineral. Mel teaches classes both at DVESS and the Lower Bucks club - last month he had 17 kids in his Lower Bucks class and this month, 9 girl scouts attended the DVESS class.

### **BANQUET TIME**

Our annual **Pot Luck Dinner** will take place in the same location as the monthly meeting - the Education Building behind Centenary United Methodist Church on the White Horse Pike (Rt. 30) in Berlin - on May 17. Sign up will be at [www.whoscoming.com/dvess](http://www.whoscoming.com/dvess) at a **future date** (website is not up yet).

Our annual **Banquet** will take place in the same location as last year - Vitarelli's restaurant on Kings Hwy. in Cherry Hill. More details to follow later.

Now DON'T tell me you're bored or have nothing to do!!!! Come on out and join the fun!

### **Feb Minutes - "sort of", ed**

At our February 11<sup>th</sup> general meeting, our own "Doc. Rock" regaled us with his knowledge of Darwin. We saw slides, overhead projector slides and a display of Lou Detofsky's personal collection of Darwinism items.

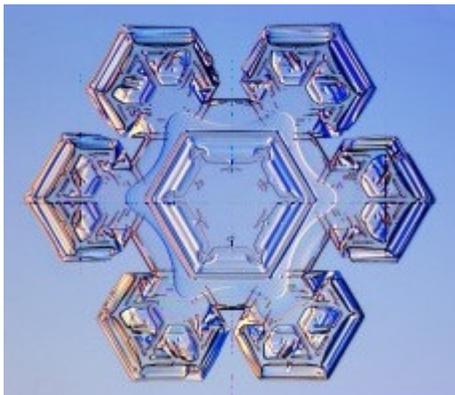
The Girl Scouts of troop 30425 from Stratford spent time with our Junior Rock Hounder Chairman Mel LeCompte learning and working on their geology merit badge. Mel had a hands-on display of field collecting tools and safety equipment. They worked on gaining the correct procedures for a good collecting trip. The girls will meet another 3/5 times before culminating in a collection trip. They then joined our meeting for part of our lecture/display before leaving due to school night requirements. Each scout had received a door prize ticket but, sadly none of them won our prize for the night. Better luck next time, and we do hope to see you again at our meeting. How nice to see young women learning about our hobby. Hope to see you again, girls.

**MEMBERSHIP** Thank you to all of those who already renewed your membership for 2009 – this is a good start to the new year. I would like to get filled out renewal forms for all renewals this year to put in a Membership Binder so I have current records for everyone. I have attached a renewal form with this issue of the DVESS Newsletter for that purpose, and I would appreciate all of you renewing, including those of you who have already renewed, but make sure I get a filled out Renewal form with current information. It can be copied and emailed to me at either of the e-mail addresses in the info box Thank you. CDC. Editor, DVESScapades



## How do snowflakes form?

It all starts with a speck of dust in the atmosphere. When the conditions are right, water attaches to the surface of the dust particle. This forms a drop of water. When the drop gets heavy enough, it starts to fall through the atmosphere. Imagine, now, that the air it falls through is cold enough to freeze the water. The first shape that forms is the 6-sided or hexagonal prism. As the crystal grows larger, it sprouts arms. Remember that snowflakes are very tiny. They can be blown up and down and around. As they blow around, they can blow through air that has different temperatures. The different temperatures create different features on each arm of the snowflake, like more plates (6-sided crystals) and more arms. By the time the snowflake hits the ground, it has been through many temperature changes and has grown from a simple crystal to a very complicated snowflake!



## Snowflake Trivia . . . Most snowflakes are lopsided!

Irregular, imperfect snow crystals are most common. Perfect, symmetrical crystals, like the ones pictured on the pages of this issue, are actually rare!

Snow can form at any temperature below freezing (32 degrees Fahrenheit; 0 degrees Celsius). All of our information about snowflakes comes from the California Institute of Technology website, <http://www.its.caltech.edu/~atomic/snowcrystals/>

This is a wonderful website, filled with fascinating information about snowflakes. It is easy to read for children and has scientific information for adults, too. A special "Thank You" to Dr. Kenneth Libbrecht, Professor of Physics and Chairman of the Physics Department, who granted permission for us to reproduce the great snowflake pictures. ( featured on Good Morning Sunday on CBS Sunday March 1<sup>st</sup> 2009 )

**PROGRAMS:** April 8th meeting program Mark your calendar for this exciting lecture. We will have the return of the previously popular teacher, Amy Carpinelli. This time her talk will be on the Tambora Volcano. Tell your friends !!! Make plans to attend !!! Bring visitors !!! A number of other speakers are being lined up, including Chet Lemanski (After February 2009 Tucson show). Since we will have meetings at the Centenary United Methodist Church in Berlin, NJ during the summer, Gary will show/plan additional programs.

DVESS General Meeting Future Dates 2009, Apr. 8; May 13, June 10; July 8;  
Aug. 12; Sept. 9, Oct. 14; Nov. 11, Dec. 9

**NOTE NEW DATES NOW INCLUDED, FOR JULY AND AUGUST**

Now is the time to register for the Spring session at Wild Acres see below for all the info, and, on page #9 you may use the registration form.

### What are the Requirements and Costs?

Workshop attendance is open to any active member of a Club or Society that is a member of the Eastern Federation. Individuals from the other Federations may attend on a space-available basis.

All registration forms MUST have 4 class choices listed, in the order of preference. Enrollees will be placed in the classes, as registration forms are received and once a class is full, the next chosen class with openings will be assigned.

Fees for the 2009 sessions of Wildacres are \$345 per person. This fee includes room, board and classroom instruction. Most classes will also charge a nominal fee to cover materials and supplies.

The week at Wildacres is divided into two parts or "semesters". Students take one class lasting either the full week (4-days) or two different classes lasting 2-days each. The day between "semesters" is a day set aside to allow participants to explore the region, participate in an old-fashioned tailgate session and relax.

Each Wildacres Workshop also features an expert in residence who gives daily talks about a variety of topics in his field of interest. The spring session (April) speaker will be Michael Wise, research mineralogist/curator at the Smithsonian and one of the world's leading authorities on the mineralogy of pegmatites. For the fall session (September), we're pleased to welcome Brenda Foreman who will talk about the history of jewelry. These experts live on campus, often attend classes and interact with Workshop participants throughout the session.

If you would like to obtain a short CD about the EFMLS Wildacres Workshops, send an e-mail to: <cscrytals2@verizon.net> giving the name and postal address to which the program is to be sent and the name of your club. The program is free for the asking and an ideal way of sharing Wildacres with your club members.

### Wildacres 2009

**Spring Dates: April 17th - 23<sup>rd</sup>** Speaker in Residence will be Mike Wise

CLASS	INSTRUCTOR	DESCRIPTION
Faceting	Steve Weinberger	Students will learn to cut and polish a 57 facet round brilliant gemstone. In addition, they will learn how to identify well-cut stones, select rough material and see whether or not they enjoy this fascinating aspect of the hobby. 4-day class. No prior experience necessary.
Lost Wax Casting	Fred Sias	This is not a wax design course. Students will learn basic techniques for lost-wax jewelry casting. Using commercial wax models, student will learn proper methods for repairing wax models, attaching sprues, investing, burnout, casting and final finishing of jewelry. 4- day class. No prior experience necessary.
Glass Etching & Engraving	B. Jay Bowman	Students will learn the basic process of glass engraving and etching and the difference between them. All students will engrave a rose as their first project, and then select from other available patterns for a second project. At the end of the class, students will have a projected suitable for framing. 2-day class offered both semesters. No prior experience necessary.
Silversmithing - Basic	Richard Meszler	Have fun learning the basics of working silver sheet and wire to fabricate jewelry. The class will be an introduction to annealing and bending/shaping/texturing metal, soldering, piercing and polishing. 2-day class offered 1st semester. No prior experience necessary.

Silversmithing - Intermediate	Richard Meszler	Students will be working with metals by doing more complex projects. Learn to make a bezel and bail in which students will set a cabochon to make a pendant. 2-day class offered 2nd semester. Prerequisite: Basic silversmithing experience including soldering.
Cabochons - Basic	Bernie Emery	Learn to transform a rough piece of rock into a shiny, well-formed cabochon. You will learn the use of the trim saw as well as basics of grinding, sanding and polishing. Slabs will be available or students may use their own with approval of the instructor. 2 day class offered 1st semester. No prior experience necessary.
Cabochons - Intermediate	Bernie Emery	Learn to cut different shapes and the techniques needed to do so. 2-day class offered 2nd semester. Pre-requisite: Students must have prior experience with cabbing and use of the trim saw.
Wildacres "Wild"	Virginia Meador	Students will explore the beauty of Wildacres including its flora and some of its hidden secrets. Good walking shoes or boots with ankle support and rain gear are recommended. 2-day class offered first semester. No prior experience necessary, however this is not a class for those having difficulty walking woodland trails and hills.
Micromounting	Carolyn Weinberger	Micromounting is the art of preparing small mineral specimens so they can best be viewed under a microscope. You will learn the process of making "mounts" and learn to appreciate the beauty of these tiny, often perfect specimens. 2-day class offered 2nd semester. No prior experience necessary.
Wirewrapped Jewelry - Basic	Jackie Orsini	Are you looking for a method to display your beautiful stones that does not require soldering? This class will teach you the skills needed to complete several beautiful projects such as earrings, rings and pendants using sterling silver. 2-day class offered 1st semester. No prior experience necessary.
Wirewrapped Jewelry - Intermediate	Jackie Orsini	Are you looking for a way to use your larger beads (the ones with the big holes)? In this class students will learn to use lots of coils, loops and bends to wrap those beads and make a wonderful bracelet. We will also learn how to make the closure for this bracelet and use a special tool to create wire beads. 2-day class offered 2nd semester. Pre-requisite: Basic wire-wrapping skills.
Bead Weaving Off-Loom	Mia Schulman	Welcome to the world of bead weaving. Projects woven in the Peyote stitch are smooth and drape as if they were made from fabric. The first project will be a small pendant using needle, bead thread and tiny Delica beads. Two stitches taught can also be used for earrings and bracelets. 2-day class offered 1st semester. No prior experience necessary
Picasso Jewelry	Mia Schulman	Named after the famed painter, the earrings and pendants are created from wire and beads. This is your chance to be creative and come up with pieces that are attractive, different and can be quite "funky". 2-day class offered 2nd semester. No prior experience necessary.
Metal Clay Magic (PMC)	Dawn Fernald-Spruill	Working with silver and bronze, this class is for the first-time user as well as folks who have had a chance to "dabble" with the clay. On the first class day students will work with the new, fabulous bronze metal clay. On the 2nd day, we will create piece from pure silver clay. You will learn to work with textures, shapes, setting stones, balls, jump rings and slumping while creating pendants, charms and earrings. Patinas and finishing techniques will be taught as well. 2-day class offered 1st semester. No prior experience necessary.
Setting Natural Stones in PMC	Dawn Fernald-Spruill	There are many natural and semi-precious stones that you can set into the metal clay and kiln fire. This class will teach several different techniques for setting those stones while creating several fabulous, one-of-a-kind pure silver rings. 2-day class offered 2nd semester.

Prerequisite: Basic PMC skills.

**Fall Dates: September 7th-13th**

Speaker in Residence will be Brenda Foreman

CLASS	INSTRUCTOR	DESCRIPTION
Cabochons - Basic	Al DeMilo	Hands on instruction will be given to show how to transform a rough piece into a shiny, well-formed cabochon with no flat spots. The use of a trim saw as well as techniques to grind, sand and polish the stone into a standard size and shape will be covered. Slabs will be provided, but you may use your own with instructor's approval. 2-day class offered 1st semester. No prior experience necessary.
Cabochons - Intermediate	Al DeMilo	This course is an extension of already learned skills. It will focus on the crafting of cabochons of difficult shapes and sizes. Much one-to-one attention will be given. Slabs will be provided, but you may use your own with instructor's approval. 2-day class offered 2nd semester. Pre-requisite: Students must know how to use the trim saw, dop a stone and use a grinding, sanding and polishing machine.
Exhibiting & Judging	B. Jay Bowman	Take an in-depth look at the AFMS Uniform Rules and how they apply to exhibits you may wish to prepare. Students will need to have the 2009 AFMS Uniform Rules (available for purchase at Wildacres). 4-day class. No prior experience necessary.
Faceting	Reivan Zeleznik	Students will learn to cut and polish a 57 facet round brilliant gemstone. In addition, they will learn how to identify well-cut stones, select rough material and see whether or not they enjoy this fascinating aspect of the hobby. 4-day class. No prior experience necessary.
Fused Glass - Basic	Becky Edmundson	Fused glass is the art of cutting and layering pieces of glass and then firing them in a kiln. Dichroic-coated glass gives a 3-D look. Students will learn the basics of cutting and firing the glass and will complete at least 2 pieces of jewelry. Please bring safety glasses. If you own them, please bring a glass cutter and breaking pliers. 2-day class offered 1st semester. No prior experience necessary.
Fused Glass - Advanced	Becky Edmundson	Students will learn to use a wet saw to cut shapes, a grinder to smooth the glass, and a jeweler's bit to cut a channel in the piece before it is fire polished in a kiln. You should expect to complete a minimum of 2 finished pieces. Please bring safety glasses. If you own them, please bring a glass cutter and breaking pliers. 2-day class offered 2nd semester. No prior experience necessary.
Lampwork Beads	Pat Baker	An introduction to glass bead making, this class will focus on basic bead making techniques including shapes, surface decoration (dots, latticino, frit, metal leaf), pulling stringers and making latticino. 2-day class offered both semesters. No prior experience necessary.
Pewter Fabrication	Bruce Gaber	Learn to make functional and decorative objects from a wonderfully versatile metal. Pewter is easy to work and easy to solder. This allows us to make a variety of forms in a much shorter time than working in silver. Pewter can be finished in everything from a glossy high luster to a deep rich matte. The surface can be further embellished by embossing and the addition of an etch or patina. Join us as we explore this most ancient and traditional material. Oh, and by the way, modern pewter contains no lead. 4-day class. No prior experience necessary.
Silversmithing - Basic	Ruthie Cohen	Students will learn the basic skills needed to make jewelry including filing, soldering, bending and polishing. 2-day class offered 1st semester. No prior experience necessary.
Silversmithing - Intermediate	Ruthie Cohen	Students will use basic silversmithing techniques and learn new ones as they create more advanced jewelry. 2-day class offered 2nd

Wirewrapped Jewelry	Ginger Posthumus	semester. Pre-requisite: Basic silversmithing skills. Students will learn the basics of wirecraft using brass and then will work in silver to make a beaded chain and in gold-filled wire to make either a pendant using a cabochon or a beaded bracelet. You may bring your own tools if you wish, but be sure to mark them clearly. 2-day class offered both semesters. No prior experience necessary.
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**2009 EFMLS Wildacres Registration**

PLEASE, ONLY one person per form per session

CHECK ONE: April 17 – 23: \_\_\_\_\_ September 7 - 13: \_\_\_\_\_

Please fill out a separate registration form for each person attending and return to BARBARA EDGE, Registrar at 1639

Fowler Rd; Woodruff, SC 29388. No registration will be accepted prior to January 1, 2008. (To make it easier for the registrar and others, please do not change or revise this form. You may photocopy it as needed.)

Name (as you wish it to appear on your name badge):

\_\_\_\_\_

Street: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone number with area code: \_\_\_\_\_

e-mail: \_\_\_\_\_

Club/Society Affiliation: \_\_\_\_\_

Fee for each session is \$345.00 per person. Deposit is \$175 per person, payable with registration.

Make checks payable to “EFMLS”. Balance of \$170 is due 30 days prior to start of session.

Cancellation policy: If unable to attend, fees paid will be refunded if notification is given prior to one month before the session begins. No refund will be made after that date.

Circle appropriate responses:

Have you been to Wildacres before? Yes No Is your Club sponsoring you? Yes No

Name of roommate: \_\_\_\_\_ (If none, one will be assigned).

Are you: Male Female (No single rooms are available). Are you a smoker? Yes No

Do you have any physical handicaps and / or special dietary needs? Yes No

If YES, please explain on reverse side.

Do you have material for exhibiting that you would be willing to display at Wildacres? Yes No

Do you have a skill to demonstrate or a program to share (up to 40 minutes)? Yes No

Class Pre-registration.

See EFMLS Newsletter or Website for class offerings. <[www.amfed.org/efmls/wildacres.htm](http://www.amfed.org/efmls/wildacres.htm)>

All participants must take classes.

Which of the classes being offered would you like to take? We will be preregistering you for classes you indicate. When a class is full NO others will be assigned to that class, and you will be assigned your next class choice(s). No class placement is guaranteed.

**A STORY FOR THE PEBBLE PUPS  
MEET THE QUARTZ FAMILY**

Papa and Mama Quartz Crystal belong to a very large family of rocks. They are called the **Quartz-Crystal** family to distinguish them

from Uncle Agate’s family and Aunt Opal’s family, and a whole raft of cousin Quartzes. Then, too, Mama Quartz’ maiden name was **Rock Crystal**. They came from Herkimer County, New York, and Papa often called her his little “**Herkimer Diamond**”. She was

very lovely - nicely shaped and perfectly clear and sparkling.

Papa Quartz was **Milky Quartz** and, while he was nicely shaped, too, he didn't sparkle like Mama. Papa and Mama Quartz had quite a large family. First there was lovely **Rose Quartz**. She often bemoaned the fact that she was dumpy and didn't have Mama's nice figure. But she was so sweet and a rosy pink that no one cared about her shape. She got her healthy color from eating her **Titanium** every morning when she was a baby crystal. Next came **Amethyst**. She took after Mama Quartz with her nice shape and sparkling, clear color, except that Amethyst was just the color of violets. She hadn't cared much for Titanium when she was a baby but she loved **Manganese**, which gave her the lovely lavender hue.

**Smoky Quartz** was the oldest boy in the family. Mama Quartz had a time at breakfast with her babies; each one liked different food. Smoky wouldn't eat anything but **Carbon**, so he had a grayish color. Little **Citrine Quartz** started out to look just like her sister Amethyst, but one day, in the hot summer, she got overheated and her lavender color turned to deep yellow. But she didn't care, really, because she was different from the



A Great Ice Experiment from scientist Dr. Kenneth Libbrecht California Institute of Technology. When water freezes, it

gets bigger! Fill a plastic bottle with water and put it in your freezer. When the water is frozen solid, you will see that the bottle has split open. When the water froze, it expanded, that is, it got larger. This physical feature of ice helps create ice spikes in an ice tray.

### What You Need:

- Plastic Ice Tray
- Distilled Water (water from the faucet does not always work very well for this experiment)

others and still quite pretty.

The Quartz-Crystal children had a younger brother whose name was **Ferruginous Quartz**, but almost everyone called him "**Ferry**". He was quite a handsome boy with an attractive red color which Mama Quartz insisted was because he was such a good child and ate his daily portions of **Iron** eagerly.

That's just about all of the Quartz-Crystal family except for the Ghost. He was known as **Phantom Crystal** and he looked like all the rest of the family except that you could look right through him and see another crystal inside. The Quartz crystals were all quite important people: Papa Quartz was content to do ordinary things but Mama was a brilliant actress and little Rose, Amethyst and Citrine Quartz-Crystal all grew up to be lovely jewels. Smoky and Ferruginous, the boys, took after their father and worked at ordinary jobs. Papa and Mama Quartz-Crystal were certainly very proud of their big family.

Original Author - Unknown

From - Jaspilite (another Newsletter), via Crystal Gazer, (another Newsletter) Glacial Drifter (another Newsletter) and Oregon Rockhound - 11 / 82 (another Newsletter)

# Ice Spikes

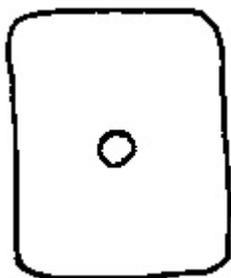
--Freezer

**What To Do:** Preparation for this experiment is very easy. Fill each section in the plastic ice tray with distilled water. Only fill each section about 2/3 full. Don't fill them to the point that they flow into each other. Now, put the tray in your kitchen freezer. Place the tray so that there is at least two inches of space above the ice tray. When the water is frozen, you should have some ice spikes.

**How Do Ice Spikes Form?** Ice spikes are the result of the special feature of ice mentioned above: water expands (gets larger) when it freezes. This is what happens. At first, the ice in the ice cube tray freezes at the edges

of each section. Then, it freezes toward the center of the section. This will continue until there is a small hole in the middle of the top of the ice cube. While this is happening, the water is also freezing below the surface of the ice cube. Remember that

water expands or gets larger as it freezes. So, as the water freezes at all the sides of the ice cube section in the tray, it pushes the unfrozen



water up and out of the little hole on the top. The water that is pushed through the hole freezes in the shape of a small straw. More water is pushed through the straw and it freezes. This continues until all the water has frozen or the straw itself freezes solid. This “straw” is the ice spike!

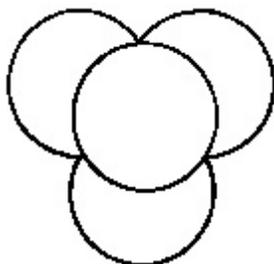


In September 2008 we began to talk about the chemical formulas of minerals and we learned that minerals are put into groups based on their chemical formulas. Many young collectors find that it is easier to learn about these chemical groups by studying one group at a time. So that is what we will do. We started with the simplest group, the Native Elements. Then we looked at the group called The Sulfides. Next we studied the carbonates. Last month we studied the oxides. Now we will start a series of lessons on the largest group of minerals called “The Silicates.”

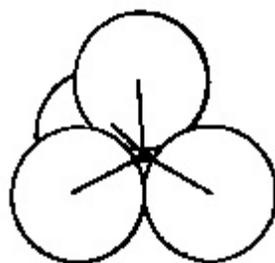
We’re going to study the silicate minerals for many months. So, let’s get started with some basics. The silicates is the largest group of minerals. Silicate minerals are the most common as well. They cannot be dissolved by acids. (Actually, some can be dissolved by certain acids, but not easily.) Light can shine through very thin slivers of silicate minerals.

They are all relatively hard, usually between 6 and 8 on the hardness scale. Their specific gravities are lower than most minerals, too. Silicate minerals all have molecules that are made up of silicon (Si) and oxygen (O). A single molecule has one silicon atom and four oxygen atoms (SiO<sub>4</sub>). When they connect to each other, they form a 4- sided shape called a tetrahedron. Many tetrahedra can connect with each other to form circles, single chains, double chains, sheets and 3- dimensional structures. Is this getting too complicated? Don’t worry. As we go on through the months, it will become easier to understand. Next month we will look at minerals that have single molecules of silicon and oxygen.

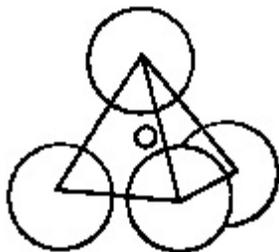
Above Left: Top view of 4 oxygen atoms.



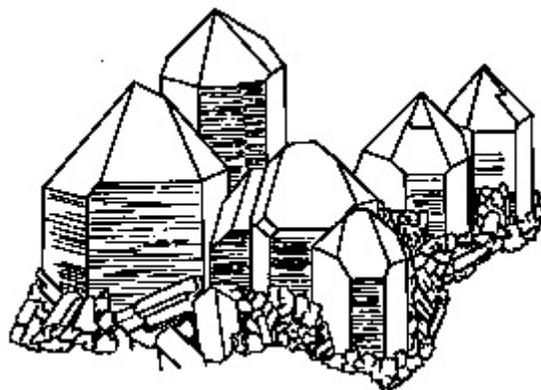
Center Left: The side view, underneath, shows the silicon atom “hiding” in the space between all the oxygen atoms.



Lower Left: a different side view of the atoms



Right: A group of black smoky quartz crystals. Quartz is one of the most common of the silicate minerals



Mark your calendar for the Saturday, April 4<sup>th</sup> and Sunday, April 5<sup>th</sup>. They are the dates of the Philadelphia Mineral Treasures And Fossil Fair 29<sup>th</sup> Annual Show and Sale sponsored by the Delaware Valley Paleontological Society and the Philadelphia Mineralogical Society.

New this year – we will have several speakers talk about paleontology, geology and minerals. Dr. Ted Daeschler, Curator of Vertebrate Paleontology at The Academy of Natural Sciences will speak on The Nunavut Paleontology Expeditions: Late Devonian Fossils from the Canadian Arctic. For more information on Dr. Daeschler's research, you can go on the web to [http://clade.ansp.org/vert\\_zoology/people/daeschler/](http://clade.ansp.org/vert_zoology/people/daeschler/).

Dr. Lauck Ward, Curator Emeritus of the Virginia Museum of Natural History will speak about the stratigraphy and paleontology of the Atlantic Coastal Plain. The Show will be held at the Shriners LuLu Temple 5140 Butler Pike, Plymouth Meeting, PA 19462 For more information on the Show, please go to the DVPS website at <http://dvps.essentrix.net>

**DUES** Hopefully you have been enjoying your participation in our club and would like to continue doing so. Dues are due. Please bring them to a meeting or to Gary at his store or send them to the PO box. Don't miss out on all the great programs, field trips and other wonderful activities we offer. Gary

**FIELD TRIPS:** April 25, 2009 Sterling Hill Dig, Sterling Hill tour for DVESS will in September 2009.

**EVENTS:** The potluck dinner is on May 17, 2009 at the church and the banquet at Vitarelli's on October 18, 2009.

#### **Other Happenings:**

Hadrosaurus foulkii - THE DINOSAUR THAT CHANGED THE WORLD special exhibit at the Academy of Natural Sciences opens on November 22<sup>nd</sup> and runs thru April 19<sup>th</sup>, 2009, or six months to celebrate the 150<sup>th</sup> anniversary of the discovery of this important fossil. 1868 the Academy became the first museum in the world to display the complete skeleton of a dinosaur. See Hadrosaurus foulkii again, remounted and reinterpreted for the 21<sup>st</sup> century and learn of its fascinating discovery 150 years ago. Academy Of Natural Sciences, Philadelphia

#### UPCOMING EVENTS

##### **New Jersey State Museum Sunday Science Lecture Series**

- March 8** Dr. Ian Burrow, Hunter Research  
"Secrets of the Ancients: Myths & Mysteries in Archaeology"
- April 5** Dr. Chung Shih, Infineum USA  
"Silent Stories - Fossil Treasures from Liaoning, China"
- May 3** Dr. Kenneth Miller, Rutgers University  
"Sea-level & Climate Change: Should I Sell My Shore House?"
- June 14** Robert Denton, Discoverer and leading paleontologist of the famous Ellisdale Fossil Site

***Space is limited. Reserve your seats early!***

#### **WHAT YOU NEED TO KNOW Free Admission - Free Parking, Museum Auditorium**

**Each lecture begins at 4pm. Light refreshments will be served.** For more information, or to make reservations, please call (609) 292-8594

**DVESS MEETING LOCATION :** Centenary United Methodist Church, 151 South White Horse Pike, (route 30) in Berlin, 856-767-3881 or 856-767-7453. Located between E Staugh Ave and W Taunton Ave on your left, the church is on the right hand side.

## **MEMBERSHIP INFORMATION**

Regular members are entitled to participate in all DVESS activities. Sponsoring members are entitled to the same plus a specially chosen mineral specimen. Dues are renewable each year in January. Membership rates for the Society:

### **Regular Membership:**

\$15.00 for the 1<sup>st</sup> family member + \$5.00 for each additional family member

\$10.00 for the 1<sup>st</sup> Senior ( 65+ ) member + \$5.00 for each additional family member

### **Sponsoring Memberships ( each additional family member - \$5.00 ):**

"Silver" \$50.00 for 1<sup>st</sup> family member - receive a Geode Specimen

"Gold" \$75.00 for 1<sup>st</sup> family member - receive a Native Gold Specimen

"Platinum" \$100 for 1<sup>st</sup> family member - receive a Premium Specimen

## **SOCIETY INFORMATION**

The **Delaware Valley Earth Science Society, Inc.**, ( DVESS ), a non-profit organization, was founded in 1956 and incorporated in the state of New Jersey in 1957.

The Society:

- \* promotes interest , knowledge and the development of skills in the "earth sciences". These interests include mineralogy, paleontology, lapidary arts, archeology and local preservation.
- \* supports the conservation of natural resources, advocates the availability of collecting sites and maintains close contact with those in the academic field.
- \* is a member club of the Eastern Federation of Mineralogical and Lapidary Societies  
( <http://www.AmFed.org/EFMLS> )

## **MEETINGS**

The Society meets the 2<sup>nd</sup> Wednesday of each month throughout the year at Centenary United Methodist Church, 151 South White Horse Pike, (route 30) in Berlin

**Anyone** with info for the newsletter please share with me. **You can be published!**  
Stuff you did in school, on a trip etc., see my info below.

Editor's Notes: Editor is not responsible for authenticity of information in any articles submitted for publication. Nor are the opinions expressed in the "DVESScapades" necessarily those of the officers of the Delaware Valley Earth Science Society, Inc., and/or the editor.

To submit an article for publication in the DVESScapades contact the Newsletter Editor. [decuzzic@comcast.net](mailto:decuzzic@comcast.net), or Delaware Valley Earth Science Society Inc., DVESS, P O Box 372 Maple Shade, New Jersey 08052 or DVESS Website: <http://www.dvess.org> [garyskyrock@comcast.net](mailto:garyskyrock@comcast.net)

Six more pages available for this newsletter by e-mail or at the web site.

Check the website for more shows than will fit in my 12 page limit for mailing. Caution price going up in May and service will be reduced to 5 days a week while the postmaster general makes \$850000 per year .

*"To be really happy and really safe, one ought to have at least two or three hobbies, and they must be real"* Winston Churchill

**AFMS CODE OF ETHICS (American Federation of Mineralogical Societies)**

- 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.

<i>DVESS Directory 2008</i>	President Ann Lynne Benson 856-783-0969 <a href="mailto:SeleniteQueen@gmail.com">SeleniteQueen@gmail.com</a>
1 <sup>st</sup> Vice President Gerald Feigin <a href="mailto:gfeigin@co.gloucester.nj.us">gfeigin@co.gloucester.nj.us</a>	2 <sup>nd</sup> Vice President Richard Murray <a href="mailto:bearich@snip.net">bearich@snip.net</a>
Jr. Rockhound Coordinator Mel LeCompte 856-783-0969 <a href="mailto:works-in-faith@comcast.net">works-in-faith@comcast.net</a>	Recording Secretary Grant Elliott 856-728-1731 <a href="mailto:gle@verizon.net">gle@verizon.net</a>
Website Coordinator Terry Wilson 609-714-1309 <a href="mailto:terry@dveess.org">terry@dveess.org</a>	Special Events Coordinator Ann Lynne Benson 856-783-0969 <a href="mailto:SeleniteQueen@gmail.com">SeleniteQueen@gmail.com</a>
Treasurer, Program Chair, Membership Chair Gary Weinstein 856-234-0708 - home 856-795-5077 - work <a href="mailto:garyskyrock@hotmail.com">garyskyrock@hotmail.com</a>	DVESS Newsletter Editor Carol De Cuzzi 856-428-0621 - home <a href="mailto:decuzzic@comcast.net">decuzzic@comcast.net</a> or <a href="mailto:DVESS@int-pro.com">DVESS@int-pro.com</a>

\*\* NOTE E-MAIL ADDRESS CHANGES \*\*  
DUE TO COMCAST'S MESSING AROUND WITH THEIR E-MAIL ACCOUNTS

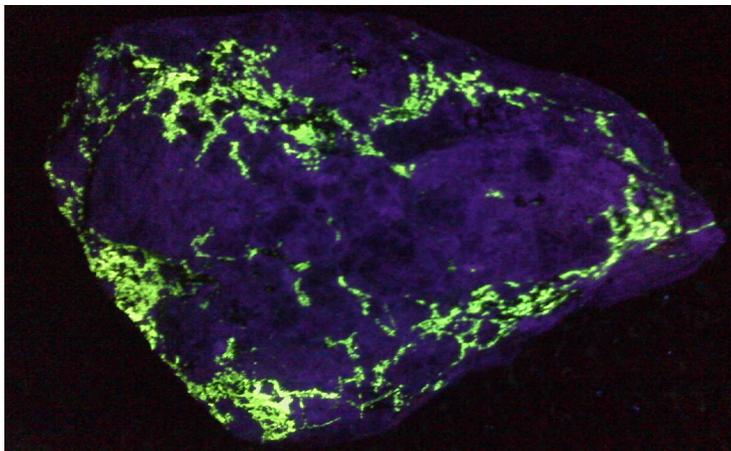
Delaware Valley Earth Science Society, Inc. ( DVESS )  
P.O. Box 372  
Maple Shade, N.J. 08052  
DVESS Website : <http://www.dvess.org>

**RETURN SERVICE REQUESTED**



**March 21-22** OUR largest annual event is the GEM-MINERAL-FOSSIL SHOW at the Montgomery County Fairgrounds, our 45<sup>th</sup>. We take pride in the many exhibits which YOU and friends put into the show, a feature not seen in commercial shows.

Below is a picture of a Hardystonite/Willimite specimen under UV light from Stephen Bognar of Ogdensburg, NJ. He is up near the site of the Big DIGG. He sent it so we all may enjoy the beauty. Thank you Stephen. Click on the jpeg and enlarge it so you can get the full effect.



Don't forget, now is the time to sign up for the Big DIGG, there are only so many spots open then that is it until NEXT year. Go to [whoscoming.com/uvworld](http://whoscoming.com/uvworld) to sign up NOW.

Now, here is an unusual event in Wenonah, NJ. Would it be classified under natural history? Said our Sec. Grant Elliott Go to <http://www.eastcoastvulturefestival.org/> for the answer to this question.



WHY a Vulture Fest? For several years, nearly 200 Vultures (Turkey and Black) have made [Wenonah, New Jersey](http://www.eastcoastvulturefestival.org/) their winter home, returning each evening to form a communal roost in town (their previous winter roost was lost to development). The scientific name for Turkey Vultures, *Cathartes aura* ("golden purifier"), refers to their role of cleansing the environment. Yet the behavior and beneficial contributions of vultures are not well understood by the public. Since 2006, the East Coast Vulture Festival has become an annual event both to educate the public about the gentle giants circling our skies, and to celebrate the impending end of winter. It is the only event of its kind on the Eastern seaboard of the United States. Festival proceeds are used to support [local environmental education](#). Check out the site for a short video report from 6ABC Action News provides a good overview of how the Festival came into existence. This year's fest is march 7<sup>th</sup> from 1pm to 10pm. It will be fun, enjoy!!

Festival Activities Include:

Vulture Day Children's Fair

1:00-3:00 pm Free crafts, games, artwork, and educational displays.

1:00-3:00 pm Experts from [The Academy of Natural Sciences](#) will present **Animal Encounters** featuring live birds, mammals, reptiles, and vulture biofacts.

1:00-5:45 pm Take a guided walk to watch vultures flying overhead and returning to their roosts around the streets of Wenonah.

## **The East Coast Vulture Festival Evening Roost**

- 7:00-7:30 pm Fruit salad, elegant desserts and beverages will be served, with time to socialize, visit the Vulture Store, and view exhibits.
- 7:30-7:45 pm Introduction by the [sponsoring organizations](#), including the awarding of the 2009 [VEE Grants](#) to local teachers.
- 7:45-9:00 pm Presentation ***Raptors: Predators of the Sky*** by The Academy of Natural Sciences featuring live owls, hawks, a falcon, and possibly a Turkey Vulture.
- 9:00-9:30 pm Live music performed by singer-songwriter [Jim Six](#)
- 9:30-10:00 pm Music and dance featuring the Road Kill Review Dance Ensemble, including a not-to-be-missed Vulture Rap!

Cost Afternoon events are FREE. Tickets for evening events are \$18 for adults; \$10 for children 12 and under.

Locations Afternoon activities will start at the Wenonah Community Center (former train station), East Mantua Avenue and North East Avenue, Wenonah, NJ 08090. (See the [Google map](#) for directions.)

Evening activities will be held just two blocks away at Wenonah Elementary School, 200 North Clinton Avenue, Wenonah, NJ 08090. (See the [Google map](#) for directions.)

Wenonah is a 20 minute drive southeast of Philadelphia.



A view of the solar system forwarded from our Secretary Grant Elliott



Bill's moon 02/08/09 at 9:42pm Hampton Furnace in Wharton State Forest, contributed by our eldest son, William De Cuzzi

The following article is excerpted from Diamond Dan Mini Miners publication with permission to reprint in our newsletter and the article on line at <http://www.waynesthisandthat.com/wintergreen.htm> and find out! Copy this address into your search line in google and follow the link.

WINTERGREEN LIFESAVER FLASH! A discussion with a picture explaining why lifesavers flash when bitten For years I've heard about the flash of light that's supposed to occur when a wintergreen lifesaver is crushed, but never believed it was true. Finally, I tested it and was delighted to discover that the flash really does happen. It's extremely faint, quick, and has a cyan color. I failed several times to capture the event on film. Even ASA 800 film was far too slow to capture the flash. Success came when I used Kodak's TMAX ASA 3200 black and white film and had it push processed to ASA 6400. The picture below, after my photo processor optically enhanced it, was the

result. The wedge-shaped object surrounded by the flash is the tip of a pair of needle-nosed pliers as they crushed the lifesaver to cause it to flash. Simply breaking the lifesaver didn't produce enough light to record.

What Causes Wintergreen Lifesavers to Flash? When a lifesaver is broken, the



positive and negative charges in the sugar molecules split, creating an electric field across the break. This field is strong enough to excite nitrogen molecules in the air with the result that they reemit the energy they absorbed from the electric field in a burst of ultraviolet radiation, which we can't see. This radiation is then absorbed by the wintergreen oil that is used to flavor the lifesaver. This energy is then emitted as a flash of blue light that we can see.

UPDATE!!! Several years after posting this page I decided to try again to capture images of a wintergreen flash, this time with my new Canon EOS 20D digital camera . I set the ASA (ISO) to 3200 and used an extension ring to get as close to the lifesaver as possible so that most of the light would go into the lens. The first shot is similar to the one above ( on the web ) in that the lifesaver was crushed with the upper jaw of the plier blocking the direct view of the flash. Even at ISO 3200 the original image was completely black. I had to increase the contrast 96 percent to bring out the image, with the result that a lot of noise was introduced. Still, the image is larger and in color, which is better than my first attempt. Similar to the first attempt there are bright rays emanating along fracture lines in the lifesaver that look brighter because they emit light directly into the camera. All the other light was emitted under the plier jaw and had to diffuse outward through the lifesaver to be visible. The next two images used broken lifesavers so I could photograph the flash across the face of the area being crushed. In both pictures the jaws of the plier are on the left and right sides of the lifesaver. Note the complex pattern of light caused by the brightest light coming from fractures propagating across the face of the lifesaver. The outline of the lifesaver's cross section can just be made out in the image on the right.

All of these photos, especially the last two, are many times actual size. Two final notes about wintergreen lifesavers and their flash: First, as of 2005 in southern California it is impossible to find the traditional rolls of wintergreen lifesavers. I looked in six different stores and only one carried the traditional multi-colored candies. None carried rolls of wintergreens. The only wintergreens I could find were in large bags. Second, the wintergreens in the bags do not have any wintergreen oil in them, just artificial flavors, making the explanation I found on the Internet and repeated above suspect. After researching this I discovered that the active flavoring in oil of wintergreen is methyl salicylate, a distant relative of aspirin. Like aspirin, this chemical can be obtained from natural sources or manufactured in a laboratory. Since it's cheaper to make it than collect it from nature, manufactured methyl salicylate is used and therefore has to be listed as an artificial flavoring. This means that the explanation above is still valid. One final note is that many sugar-based candies will emit weak flashes when crushed. It is a common result caused by fracturing sugar molecules. The problem is that the flashes in all other sugar candies are so weak that they are almost impossible to see. Only candies with methyl salicylate flash brightly enough to be seen easily. This flashing light that results when something is broken is called triboluminescence and is common in many materials, particularly crystals. Perhaps the oddest example of triboluminescence comes from quickly tearing glow-in-the-dark Silly Putty. Unlike wintergreen lifesavers, the flash is extremely weak and the only image I could get of it is of very poor quality. Such as it is, it can be seen half way down the [Silly Putty](#) page. ( on the website)

Membership Form

First Name: \_\_\_\_\_

Last Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

ZIP+4: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Cell Phone: \_\_\_\_\_

Profession, School or Major Work  
\_\_\_\_\_

Okay to let other members see your email and other orange-starred information?

Okay to share \_\_\_\_\_  
Do NOT share \_\_\_\_\_

Newsletter Delivery via

Email \_\_\_\_\_  
Postal Mail \_\_\_\_\_

Type of membership **Regular Membership:**

\$15.00 for the 1<sup>st</sup> family member + \$5.00 for each additional family member

\$10.00 for the 1<sup>st</sup> Senior ( 65+ ) member + \$5.00 for each additional family member

First Name: \_\_\_\_\_

Last Name (if different)  
\_\_\_\_\_

First Name: \_\_\_\_\_

Last Name (if different)  
\_\_\_\_\_

First Name: \_\_\_\_\_

Last Name (if different)  
\_\_\_\_\_

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*"Platinum"* \$100 for 1<sup>st</sup> family member - receive a Premium Specimen

Interests Minerals \_\_\_ Fossils \_\_\_ Lapidary \_\_\_ Collecting \_\_\_ Museum Trips \_\_\_  
Trotter \_\_\_ Sterling Hill \_\_\_ other, list \_\_\_\_\_

How did you learn of DVESS? \_\_\_\_\_

Other clubs you belong to \_\_\_\_\_

Comments \_\_\_\_\_

What NON-DVESS interests or hobbies do you have? \_\_\_\_\_

\_\_\_\_\_

# Fun Mineral Activities

## Double Refraction

In this experiment, you will see a special property that happens with clear, colorless pieces of calcite. Another name for clear calcite is Iceland Spar.

What you will need:

--Paper and pen or pencil

--A piece of colorless, clear calcite (Iceland Spar).

When calcite breaks, it breaks into rhombs. A rhomb is like a box that has been pushed over on its side. It looks like the specimen to the right.

What to do:

Step 1: Draw a large "+" sign on a piece of paper.

Step 2: Place a piece of Iceland Spar on top of the lines.

What do you see? This is a special property called Double Refraction. When light goes into Iceland Spar, the crystal breaks the light into two parts. As a result, you see two lines instead of one.

**Sparks** The mineral pyrite is named after the Greek word *pur* which means fire. You will learn why in this experiment.

What you will need:

Safety goggles, a piece of pyrite (not a good display specimen), a steel hammer.

Step 1: Put on the safety goggles to protect your eyes.

Step 2: Hold a piece of pyrite firmly in one hand.

Step 3: Hit the pyrite with the edge of a hammer (or any other item made of steel). Turn the lights down (or off) and do this again. The results will be more dramatic.

What do you see? \_\_\_\_\_. You will see the flash of sparks.

(You will also smell something. This is the smell of the sulfur that is in the pyrite crystal.)

A long time ago, this was a way people could start campfires in the wilderness.