

DVESScapades

escapades: interesting, stimulating, exciting activities and adventures



Delaware Valley Earth Science Society Newsletter

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



Program : June 14 John Sanfacon on rare earth minerals
 Juniors 7pm General program 8 pm

PRESIDENT'S MESSAGE – **JUNE 2012** by AnnLynne Benson

It is with great sadness that we report the passing of one of the early members of our club, George Petreshock. He was a wonderful man whom I knew for over 25 years. He had a good sense of humor and in no way allowed his disability to prevent him from leading a full, rewarding life. George was very knowledgeable about minerals and freely shared his expertise. His personality was acerbic at times, but he smiled and joked a lot. One time I drove him and Alex Klinshaw up to Allentown to a private mineral/fossil show; they argued all the way, but although they didn't agree on everything, they were friends and they respected each other and supported the club unconditionally. When George lived at Greenbriar next to Evergreen Ave. School in Woodbury, we would bring him over for meetings in a wheel chair; he enjoyed that very much. George was a Sage and Life Member of DVESS and will be greatly missed.

Check the trip info at the end of the news

The American Federation* annual convention will be held in conjunction with the Midwest Federation of Mineralogical and Geological Societies' annual convention "A Celebration of Agates" July 27-29 in Minnetonka, MN. Forty items valued at over \$7,300 have been donated for the AMFS Endowment Fund Drawing this year! The Endowment Fund raises money, which is maintained in a perpetual account, to support Federation activities. The interest from the proceeds is used to support the production and distribution of programs to each regional federation; these programs are then available to the individual club/society members of the regional federation (that's us!). Find out how to get tickets for the drawing and see pictures of the prizes at <http://www.amfed.org/endow2012.htm>; read the AFMS newsletter online at <http://www.amfed.org/news/default.htm>; check out more info about the Federation at <http://www.amfed.org/index.html>.

(The above blue print is an interactive link to the info on the web site on the internet, just click, wait a few seconds, it will bring you right there to enjoy)

The Eastern Federation** is gearing up for its annual convention (Theme: Crystals - "Flowers of the Mineral Kingdom") September 3-9 in Harrisburg, PA; see more info at <http://www.amfed.org/EFMLS/conventioninformationhbg2012.pdf>; let me know ASAP if you wish to attend as an Alternate Delegate.

Summer time is upon us! We'll be having some **FIELD TRIPS** you won't want to miss!! First up is the **GEOLOGY GRAND TOUR**, Saturday June 23. NOW is the time to sign up by contacting Mark Leipert or Ann Benson (phone # & email at the end of this newsletter). This is an all-day, limited participation, car-pooling trip leaving from Washington Twp. Register ASAP to reserve your place.

Thought to Ponder: Many older folks today observe that the younger generations seem to be less polite, less (fill in the blank) than we were when we were kids. Part of the solution to this problem is: mentoring! We encourage you to find a few hours a month to spend in quality time with a local young person – build a relationship and do something meaningful together. We in the mineral / fossil collecting community have all the resources needed to be mentors to young people. We can share what we do – dig, collect, enjoy, trade, learn, go to museums, attend club meetings, shows and conventions. Darryl Powell, EFMLS Junior Activities Chair, speaks at length about this in his article on page 7 of the June-July 2012 EFMLS News. Darryl states, "I believe, to the core of my being, that part of who and what I have become as a human being is directly the result of people like Trudy who sincerely invested their energies, interests and love into my life." All of us have the potential to impact the life of a young person in a similar way. If you don't know where to start, just ask me. You'll find it one of the most rewarding experiences of your life.

Grab your Crayons and Markers: U-Haul Is Hosting a SuperGraphics Coloring Contest

<http://blog.suzieknows.com/grab-your-crayons-and-markers-u-haul-is-hosting-a-supergraphics-coloring-contest/>

U-Haul - one of the sponsors of our Sterling Mine Super Dig - has officially launched its very first "SuperGraphics Coloring Contest." SuperGraphics, for those who may not recognize the term, are the images that appear on the sides of U-Haul moving vans, and illustrate entertaining facts about states and provinces. The contest will run monthly, and will feature a U-Haul selected graphic. Contestants will be able to post their submissions on the U-Haul website, and even share them with friends and family in order to collect votes.

At the end of each month, the three top winners will win a \$50 gift card and special prize. They will also be automatically entered into the Super Grand prize drawing: the winner of that drawing will get to have their U-Haul SuperGraphic drawing rendered on the side of a U-Haul moving van near or in their hometown. Even better, U-Haul will host an unveiling party for the winner, so their friends and family

can be there to see the winner's artwork on one of U-Haul's moving vans.

To enter, visit www.uhaul.com/supergraphics/coloringcontest/, download the month's U-Haul SuperGraphic, and get to work! When you finish, upload it to www.uhaul.com/supergraphics/coloringcontest/ and then share the photo online with your friends and family so they can start voting for you to win.

(The above blue print is an interactive link to the info on the web site on the internet, just click, wait a few seconds, it will bring you right there to enjoy)

Although winners for the month will be announced at the end of each contest, it seems contestants will have to be patient to find out about the Super Grand prize, which will not be announced until May 5, 2013. This would be a great project for your kids to enter, and there are several different age categories to choose from.

At the Super Dig, U-Haul gave out bags emblazoned with a graphic of fluorescent rocks, and they have provided DVESS with a poster of this Super Graphic; be sure to look for it at the next meeting!

From **THE NEWSLETTER OF THE ROCK AND MINERAL CLUB OF LOWER BUCKS COUNTY, PA, INC. June 8, 2012 for your info (with their permission)**

A swap and sell of minerals, fossils, gemstones, books, etc. will be the subject of our June meeting. The swap and sell will run from 8:00 PM to 10:00 PM. Please spread the word as we would like to have as many visitors as possible. The vendor cost will be \$2.00 for ½ tables or \$5.00 for a full 8 foot table. Will you please call Ralph at 215-295- 9730 if you plan to set up. Set up is from 7:00 PM to 8:00 PM. There will be displays and mineral

POSTITE - New mineral discovered by Joe Marty, Salt Lake City, UT. Named in honor of Dr. Jeffrey E. Post of the National Museum of Natural History (Smithsonian Institution). Dr. Post has had a long and distinguished career in mineralogy, crystallography and geochemistry, and has contributed to the scientific understanding of manganese oxide minerals. Postite is a rare vanadium-bearing mineral first discovered on sandstone blocks from the Vanadium Queen mine, La Sal Creek Canyon, and the Blue Cap mine, Lyon Canyon Creek, in San Juan County, Utah. Postite occurs as very thin needle-like golden-yellow, crystals up to 1 mm long and 50 mm in diameter. Crystals often occur in parallel bundles and grow in "jackstraw" bundles and grow in "jackstraw" masses. Postite forms from the oxidation of the vanadium minerals montroseite and corvusite in a moist environment. Its chemical formula is $Mg(H_2O)_6Al_2(OH)_2(H_2O)_8(V_{10}O_{28}) \cdot 13H_2O$ Postite is Orthorhombic. See a photograph at <http://mineralsciences.si.edu/news/newsletters/DMSWinter2011Newsletter.pdf>

DEMANTOID is the green gem variety of the mineral andradite (a member of the garnet group). Demantoid is the rarest and most valuable garnet gem and gets its green color from the substitution of chromium for iron in the garnet crystal structure. Demantoid was first discovered in Russia's Ural Mountains in 1851 and was used by the finest jewelers, often seen in Carl Fabergé's jewelry and precious objects made for the Czars. Demantoid has been found in Italy, Iran, and more recently Namibia, but the Russian material continues to be the standard by which the gem is judged. Gems larger than a few carats are extremely rare. An 11.24 carat Demantoid from the Korkordino Mine, Ural Mountains, Russia was recently acquired by the Smithsonian Institution National Museum of Natural History. See a photograph at

<http://mineralsciences.si.edu/news/newsletters/DMSWinter2011Newsletter.pdf>

WEBSITES OF THE MONTH - <http://mineralsciences.si.edu/> This is the Mineral Science page of the Smithsonian Institute's National Museum of Natural History.

<http://paleobiology.si.edu/dinosaurs/interactives/dig/dinodig.html> - Use a rock hammer and chisel uncover fossil dinosaur bones, a paint brush to clean them off, and paper towels and burlap to wrap them before transporting your find back to the museum and assembling the skeleton at this interactive website.

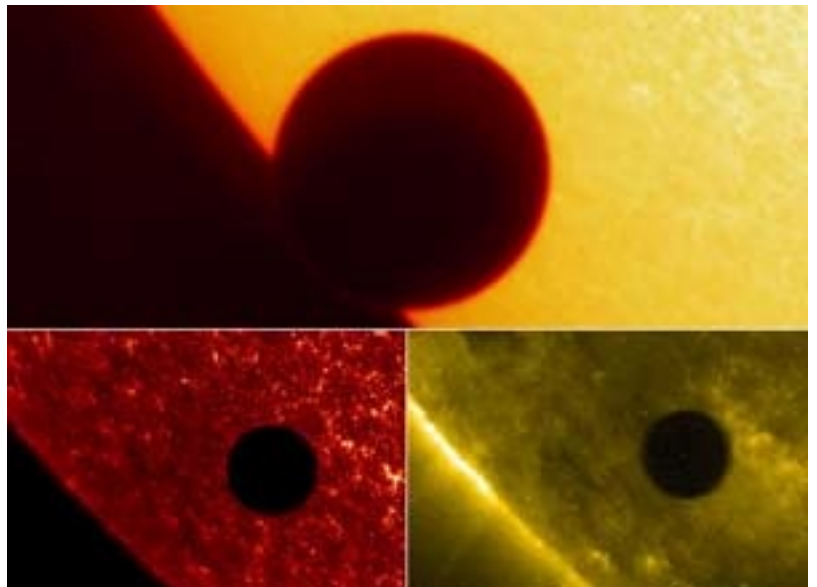
<http://www.smithsonianchannel.com/site/sn/show.do?show=140671#game> – Play TITANOBOA, the monster snake game; eat other creatures to grow longer!

<http://www.smithsonianchannel.com/site/sn/schedule.do> - complete listings for the Smithsonian channel

<http://www.americanmastersofstone.com/index.htm> - Recently, several people have asked me, "What is intarsia?" It's a beautiful art form - the assembly of the stones which fit precisely next to each other without grout or channels to form a picture; the stones are cut so as to align with each other leaving no gaps between the pieces. See a jewelry size finished piece at <http://www.lapidary.org/smith%20intarsia.jpg>

On Tuesday/Wednesday June 5/6, Earth will have the best seat — the *only* seat — for a great show: the Transit of Venus across the face of the Sun. This is a relatively rare event, and the next one won't happen until December 10, 2117, so I'm guessing this will be the last time you'll be able to see it.

I have a lot of info below, so I've broken it up into sections. Also, a special note: Fraser Cain, Pamela Gay, and I are hosting a live online video chat star party for the transit! That live video feed will be embedded here on the blog at the time of the transit, so if you read this blog — and you do — you'll see it. I'll have more info closer to the date.

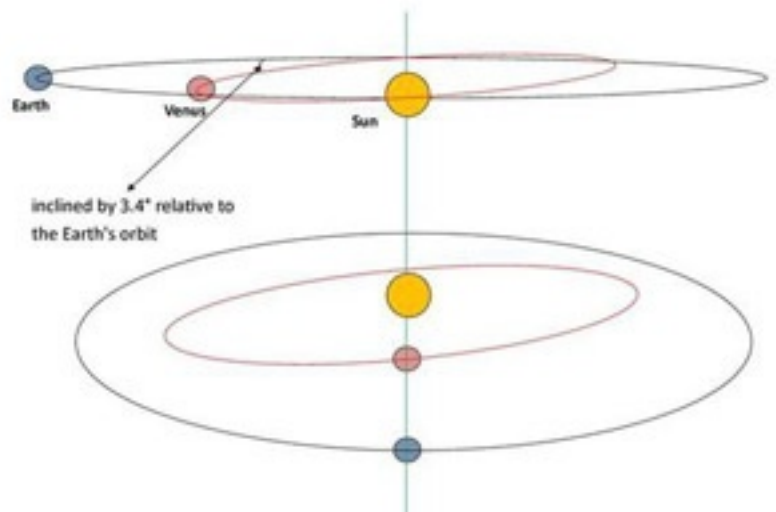


- 1) **What Is the Transit?**
- 2) **Observing the Transit** (incl. how to do so safely)
- 3) **Watching Online**
- 4) **Resources**

What Is the Transit?

A transit is when one object in the sky passes in front of another. In this case, we'll see Venus move across the Sun's face. Think of it as a mini-eclipse.

Venus orbits the Sun closer in than we do, taking about 225 days to circle it once. We don't see a transit every time, though, because its orbit is tilted slightly (by about 3°) to the Earth's, so most of the time it passes near the Sun, but misses it*. Only when the planets align just right do we see an actual transit.



The geometry works out in a funny way. Transits come in pairs 8 years between events, but each pair is separated from the next two by more than a century. [The last pair](#) was 1874/1882. The next transit after that was in 2004. Now we have the second of our current pair, and then the next two won't be until 2117/2125!

I saw the last transit in 2004, and it was pretty awesome. Venus was just a small dot, barely a disk, seen in silhouette against the Sun, but it was clearly not a sunspot even without magnification. I'll note here you shouldn't observe the Sun without eye protection! I have more about that in the [Observing the Transit](#) section below.

Historically, the transit was used to measure the size of the solar system. In the 1600s, the distances to the planets were only known in units of the Earth's orbit. So Venus was 0.7 times as far from the Sun as Earth, and Jupiter was 5 times as far. But the actual size of Earth's orbit wasn't known! Before we had space probes and radar (which we can use to bounce signals off planets and measure their distance directly) it was hoped the transit of Venus would allow it to be measured. It worked, but the details are pretty cool and well worth a read. The story is actually told pretty well on [the Wikipedia page](#).

Even in modern times, transits are useful. We look for planets orbiting other stars using a similar method, [watching for a dip in the light as the planet blocks the star](#). To help refine this method, [astronomers will use Hubble \(!\) to look at the Moon \(!\)](#) — since the Moon is lit by the Sun, the tiny drop in sunlight during the transit should dim the Moon a bit. They're actually hoping to see *if they can detect Venus's atmosphere too*, since that will affect how the light gets to the Moon from the Sun. Amazing.

Interestingly, as seen from Saturn in December 2012, Venus will transit the Sun as well, and astronomers are hoping to use Cassini to see if they can detect it. Also, in 2014, Earth will transit the Sun as seen from Jupiter! Hubble may be used to observe Jupiter at that time to see if it can be detected as well. [Thanks to BABloggee [Garrett Curley](#) for this info! You can read more about these space observations at [Physics World](#) - you have to register, **but it's free.**]

* [Actually, because the Earth is moving around the Sun as well, after one complete orbit Venus still has to "catch up" to the Earth to line up with the Sun again. That's called [the synodic period](#), and it takes about 584 days. Still, the tilt of Venus's orbit means it doesn't always cross the Sun directly every synodic orbit.]

(The blue print is an interactive link to the info on the web site on the internet, just

click, wait a few seconds, it will bring you right there to enjoy)

So I wanna see it! What do I do?

Because Venus is transiting the Sun, it has to be daytime during the transit for you to see it (duh). The transit occurs from about 22:00 June 5 to 05:00 June 6 (UTC; subtract 4 hours for Eastern US time). The exact time depends on where you are on Earth; NASA has a list of times [for US cities](#) and [for the rest of the world](#).

For a more general overview, here's a map of where the transit is visible:

[Read the rest of this entry »](#)

That's it! Enjoy the transit! Remember, if you miss it, the next one won't be for 105 years. You might get to see it, but it won't be as much fun when you're a disembodied head in a jar. So grab this chance now.

This is probably the most important part of this website. If you ever want to view an eclipse, the first thing you must know is this: Never view the sun with the naked eye or with any optical device, such as binoculars or a telescope!

This is more than advice. Why? As a kid, did you ever take a magnifying glass out into the sun and burn leaves? If so, you probably remember that when the focused sunlight coming through the lens was refracted and concentrated to a small spot, the energy available there was truly remarkable. Guess what? You have a lens just like that in your eye. If you look at the sun, your eye-lens will concentrate the sun's light and focus it to a very small spot on the back of your retina. This can cause permanent eye damage or blindness. Additionally, there are no pain sensors back there so you won't even know it's happening! Have I scared the willies out of you? Good!

There are safe ways to view the sun. The simplest requires only a long box (at least 6 feet long), a piece of aluminum foil, a pin, and a sheet of white paper.

The length of the box is important. The longer the box, the bigger the pinhole image. To find the size of the image, multiply the length of the box by the number 0.0093. For a box that is 1 meter long, the image will be 0.0093 meters (or 9.3 mm) in diameter. If your box is 5 feet (60 inches) long, your solar image will be $60 \times 0.0093 = 0.56$ inches in diameter. If you want to round things off, the size of the image is about 1/100th the length of the box.

If you can't find a long box or tube, you can tape together two or more boxes to make a longer one. In the illustrations below, we found that taping together two triangular UPS shipping tubes works well. Of course, if you do this, you must cut out the cardboard at the ends of the tube in the middle!

For full directions on how to make go here <http://www.exploratorium.edu/eclipse/how.html>

DVESS General Meeting May 9, 2012

By Grant Elliott, Recording Secretary

May 9th meeting was held at Centenary UM Church in Berlin, NJ.

AnnLynne Benson- President/Special Events Coordinator and Treasurer/Program Chair Gary Weinstein had special commitments and were unable to attend.

Therefore, 1st VP Mark Leipert took charge of the meeting and opened the proceedings at 8:00pm.

Attendance: Grant Elliott- Recording Secretary, Mark Leipert- 1st VP, Lou Detofsky- 2nd VP, Lance Schnatterly- Cyber Consultant, Mil LeCompte- Jr Rockhound Coordinator/Facilitator, and Carol DeCuzzi- Newsletter Editor/Membership Chair. Stu Cleveland, Bob & Sally Todd, and Evelyn Vickovich were present amongst other attendees.

Program:

Lance Schnatterly presented a DVD on the mining and history of Columbian Emeralds. The feature's host (He laughed a great deal all through his travels to the various Columbian mines) was a very experienced dealer in Columbian minerals. In addition to emeralds, we all learned about the politics, history, and people in this lush and sometimes dangerous part of the world.

Very interesting and informative.

Future Programs:

June 13, 2012- TBD

Dick Bostwick, John Sanfacon, Bob Thompson (Indian Artifacts), Earl Verbeek and Gene Hartstein are in the works.

Debriefing the Dig

Most recent comments by Mark Leibert are in red. Nothing else was changed.

I	RECOMMENDATION	RATIONALE
1.	Registration / Check out - separate the area for checking out/weigh out from the area where people are checking in	Improve traffic flow; relieve chaotic conditions; process more folks, more quickly
2.	Electrical outlets – install along the fence where the two canopy tents are erected install on the rear garage/building where the blackout tent(s) are always erected	eliminate constant power issues required
3.	Generator for the wall lighting	we need something quiet This will most likely come from one of our sponsor's donations. You can't hear yourself think out there and actually, it is a distraction
4.	UV lighting – provide quality UV lighting	to showcase certain areas
5.	Install Signage – stating we are a WIFI open access hot spot	some folks had no idea they could enjoy this and would have brought their laptops
	Identify gathering areas for Tours	People were wandering around asking where they are we supposed to meet.
	in the Gift Shop announcing the Dig	90% of walk-ins heard about the dig after they arrived at Sterling they had no idea Sterling or club membership was necessary in order to participate in the Digg (for insurance purposes)
	Mount all of the signage on wood with professional letters	This will make us look more professional and keep the signs from blowing around
6.	Fliers in the Gift Shop and at the food tables – to explain the Dig pricing for registration, insurance, & poundage	
7.	Expand the Itinerary to include all propose tours and the starting point of each Tour	e.g., the Itinerary should specifically state “11 am Upper Mine Tour – meet in the upper parking lot (in front of the gift shop)”
8.	Facilities Map – identify Tour gathering areas - Tours which do not start out by going into the museum can start out from the Upper Parking Lot ; Upper Mine Tour can start out from the Lower Parking Lot ; Trotter Tunnel Tour can start at the Blackout Tent	this will relieve congestion in front of the Registration Tent

I	RECOMMENDATION	RATIONALE
9.	<p>Sound System for Ticket Drawing - Can we borrow some child's Karaoke microphone, or get something better just for the day? This doesn't need to be a professional sound system – it just needs to amplify the Speaker's voice.</p>	<p>People had a difficult time hearing the Winning Ticket Numbers; folks in the back were repeating the number called out amongst themselves looking for a confirmation while new numbers were being called.</p>
10.	<p>UPDATE FORMS - add the following on Registration forms - "are you certified by the Red Cross for First Aid and/or CPR, or trained for medical emergencies and willing to assist us until the local EMS arrives?"</p>	<p>Safety when they arrive at check in, get contact information in case needed for emergency</p>
11.	<p>Increase Head Count – we need a minimum of 10 people: one each designated for: Someone to hand out Forms to be filled out prior to signing in Pre-Registered Pre-Paid Pre-Registered Unpaid Walk-ins 7 am – 3 pm Checkout 10 am – 3 pm Checkout 3 pm – 11 pm a Runner A person to sell glasses, gloves, tee-shirts, etc. New Member sign up (to handle DVESS, Sterling Hill Mine and FOMS new membership process)</p> <p>One of these people can also ask before the drawing starts if everyone has a ticket We also need a Safety person up on the hill at all times</p>	<p>Let's figure on processing 300 people next year; conceivably it would be worthwhile to have more than one person in the morning signing in BOTH the Pre-Registered Pre-Paid AND the Pre-Registered Unpaid, and then in the afternoon having more than one person checking out; the Runner runs errands and fills in for folks needing a break. The addition of these 3 people brings Processing Personnel Head Count to 10.</p> <p>Due to travel conditions, everyone may not arrive at Sterling early enough to be on the job on time. Safety was manned only about 9 hours out of 14; faster EMS response if needed - this is the furthest point from the entrance and place most accidents would likely occur; prevent digging in areas that are off limits; prevent historical items from being removed from the property</p>
12.	<p>Cross-train Personnel</p>	
13.	<p>Purchase a new tent that has manufactured walls</p>	<p>Streamline the setup process - it took 4 hours with 4 -5 people to put up the</p>

I	RECOMMENDATION	RATIONALE
		tents due to the high winds; we are using borrowed tents 8-year-old tents which are used 10 weeks throughout the year.
14.	Improved communication - walkie talkies (Mark Leipert)	to see if anyone needed relief from their current station. Or reporting an incident to get "first aid trained personnel on site quickly if an emergency occurred.
15.	Develop duty roster	so no one is doing any one chore or duty for too long. This would also let us see where we might be weak in one area vs. another area for better coverage.

II		IMPLEMENTATION	
		What to Do	How to Do It
1		<p>TRAINING –schedule a “dry run” at the DVESS meeting location for as many volunteers as can attend. Set up the room the way the Registration Tents are set up; practice handing out the HOLD HARMLESS FORMS that should be filled out prior to Signing In. Practice how each participant is signed in using the 3 separate forms (Pre-Registered Prepaid, Pre-Registered Unpaid, and Walk-in).</p> <p>Train the Ticket Drawing Reader to stand just outside the front of the tent and speak in a “preacher’s voice”; if all Tickets start with the same numbers, only read the last three digits</p>	<p>Rick told someone he did not need safety glasses. Rick and Alice forgot Hold Harmless forms for safety glasses were necessary; they forgot to hand out membership cards to folks who had just paid to join a club. Half way into the drawing a woman accused us of not giving her a ticket and later privately admitted she gave her ticket to the mine tour guide (did the Guide know to tell her the ticket was for the Drawing?). People have had a difficult time hearing the Winning Ticket Numbers.</p>
2	a.	Erect a small tent off to the side 11 am to 7:30 pm (by 7:30, 98% of participants would have been registered and the lighting system would be hooked up)	at 7:30 pm all scales, cash box and paper work would be moved over to the big tent.
	b.	We could use a copy machine in the Registration tent	an exact copy of the 3 Registration Sheets would be necessary (Pre-Registered Prepaid, Pre-Registered Unpaid, Walk-in)

II		IMPLEMENTATION
c	.	Need to assign a "runner" to take cc of Participant names Sheets over to the Check out/Weigh out tent

* Item numbers in Table II relate to item numbers in Table I

III		FUTURE RECOMMENDATIONS
		Open a new tunnel; open the Bat Cave to tours; bring in rock from other mines; turn the upper facilities into an industrial museum

Don't get lost !!! In an open space where the ground is level, drive a stake into the ground. Mark the tip of the shadow the stake makes with a small pebble or a rock. Wait at least 10 minutes and do it again. The line joining the two rocks will always point east - west no matter what time of day or year!!!

From the ROCKHOUND Gazette, Nov 2011 via the Pegmatite Bulletin, San Diego M & G Society

SHOWS AND EVENTS

July 26 - 29, "A Celebration of Agates." AFMS Convention and Show and seminars. Lindbergh Center at Hopkins High School, 2400 Lindbergh Drive, Minnetonka MN. For information see: <<http://minnesotamineralclub.org/2012show.htm>>. (To get to the internet, copy the green, put it in google, press enter)

Sept 15 - 16, 47th Annual Show by the Central Pennsylvania Rock & Mineral Club, Zembo Shrine, 2801 N. 3rd St., Harrisburg PA 17110. **EFMLS** Meeting Friday Sept 14th. For information see <<http://www.rockandmineral.org/>>. (See above info)

SCIENCECAFE "MARKET FOR MINERALS

Rockville Science Café, Tuesday, June 19, 2012, Branded '72, 387 Gude Road, Rockville, MD 20850, 7:00 - 8:00 pm. Speaker: Phillip Candela, Professor of Economic Geology. For more information, contact Ruth Hanessian at 301-674-7884 or call the Rockville Science Center at 240-FUN-8111.

WEB SITES By Wendell Mohr editor of Gem, Lapidary, and Mineral Society of Montgomery County MD., Inc news letter

Glacier National Park, Park Service site, is at <http://www.nps.gov/glac/index.htm>. It's exciting to look at every nook and cranny here. You might even want to visit this summer because, if current trends continue, some scientists have predicted that by the year 2020, there will be no more glaciers in GNP due to global climate change! The stunning national park was established on May 1, 1910. In the fall of 2011 the US Mint released the Glacier quarter in the America the Beautiful Quarters® program. The park is named for its ancient glaciers and its glacier-carved landscape, descended from the ice age of 10,000 years ago. These lands were first set aside as a national reserve on February 22, 1897. The coin shows the northeast slope of Mount Reynolds towering in the distance. A mountain goat views the scene from a rocky perch.

Coincidentally on January 19, 2012 the USPS released an 85¢ Canada/Mexico rate stamp. The stunning national park was established on May 1, 1910. The stamp image shows Logan Pass, the highest point on the park's Going-to-the-Sun Road. Peaks of the Northern Rocky Mountains fill the photo's background. The park preserves more than a million acres of peaks and valleys, meadows, lakes and forest.



You can enlarge the coupon to the right and make many copies to use.

With this ad, \$1.00 off General Admission

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SUNDAY, AUG 19: 10 A.M. - 4 P.M.

\$6 ADMISSION - CHILDREN UNDER 12 FREE

Lebanon Expo Center: Route 72
5 mi. N. of PA Turnpike--Exit 266 (old exit 20),
right on Rocherty Road.
www.gem-show.com
(see website for updates)
(717) 838-8870

ALEXANDRITE an alternate birthstone for June, is a strongly pleochroic (trichroic) gem, and will exhibit emerald green, red and orange-yellow colors depending on viewing direction in partially polarized light. However, its most distinctive property is that it also changes color in artificial (tungsten/halogen) light compared to daylight. The color change from red to green is due to strong absorption of light in a narrow yellow portion of the spectrum, while allowing large bands of blue-greener and red wavelengths to be transmitted. Which of these prevails to give the perceived hue depends on the spectral balance of the illumination. Typically, alexandrite has an emerald-green color in daylight (relatively blue illumination of high color temperature) but exhibits a raspberry red color in incandescent light (relatively yellow illumination).

Alexandrite results from small scale replacement of aluminum by chromium ions in the crystal structure, which causes intense absorption of light over a narrow range of wavelengths in the yellow region of the spectrum. Alexandrite from the Ural Mountains in Russia is green by daylight and red by incandescent light. Other varieties of alexandrite may be yellowish or pink in daylight and a columbine or raspberry red by incandescent light. Alexandrite is a variety of chrysoberyl, BeAl_2O_4 , Hardness 8.5 (unusually high, between topaz [8] and corundum [9]) Despite the similarity of their names, chrysoberyl and beryl are two completely different gemstones.

According to a popular but controversial story, alexandrite was discovered by the Finnish mineralogist Nils Gustaf Nordenskiöld (1792–1866), and named alexandrite in honor of the future Tsar Alexander II of Russia. Nordenskiöld's initial discovery occurred as a result of an examination of a newly found mineral sample he had received from Perovskii, which he identified as emerald at first. The first emerald mine had been opened in 1831.

Alexandrite up to 5 carats (1,000 mg) and larger were traditionally thought to be found only in the Ural Mountains. Other deposits are located in India (Andhra Pradesh), Madagascar, and Sri Lanka. Alexandrites in sizes over three carats are very rare.

Some gemstones described as lab-grown (synthetic) alexandrite are actually corundum laced with trace elements (e.g., vanadium) or color-change spinel and are not actually chrysoberyl. As a result, they would be more accurately described as simulated alexandrite rather than synthetic, but are often called Czochralski alexandrite after the process that grows the crystals.

Alexandrite lasers are commonly used in laser hair removal for pale skins. They work at 755 nm. Abstracted from Wikipedia.

From the **THE ROCKHOUNDER Page 13 June 2012**

SAFETY - SIZE MATTERS By Ellery Borow, EFMLS Safety Chair

Really! It does! Think of cabinet specimens, thumbnails and micro-mounts - one would never enter a cabinet specimen in a micro-mount competition. Now think even smaller, think chips, dust and microns. Imagine collectors working on breaking rocks in a hot dusty quarry. Imagine the look after hours of digging, hammering, and even perspiring where clothes are dirty, gloves are dirty, face is probably dust covered (with assistance from the aforementioned perspiration

and dust). The only part of one not dust covered are the clean circles around your eyes that were protected by your goggles - you were wearing your goggles weren't you? If so, congratulations! Give yourself a pat on the back)

Now think of your nose. With all that quarry dust and those chips flying your way, think of the title of this article. Size matters. Hammer chips may go flying but they soon land on the ground or in your shoes. Dust, especially the really fine particles, are often suspended in the air for lengthy periods of time - time in which they can cover clothes and gloves and faces and be inhaled. Our noses are nice moist places. They provide great mechanisms for collecting dust. Given small amounts of dust, one's nose is remarkably efficient with keeping particulate matter from reaching our lungs. Noses are efficient, think of a dirty sneeze - you know the kind I'm talking about. Now, if you are not experiencing such sneezes again congratulations - either you are working in a relatively clean environment or are taking steps to protect your lungs by wearing a dust filtering mask. Give yourself another pat on the back.

It is good to protect yourself by wearing a dust mask. It is even better to prevent dust from getting to you in the first place. It's even better to avoid dust in the environment or be exposed to dust to begin with; but, really, we live in a dirty, dusty world. Let's settle for good ventilation (either natural or man made) to keep dust away when we can - if we can't, a dust mask may be called for. Lapidary work has similar issues. We are supposed to use good ventilation practices and keep dust down by keeping things wet as we enjoy our lapidary work. Now, think of most lapidary equipment. Even with the best of good practices the equipment becomes dirty and dust covered. How does it get dirty?

Well, yes there is usually some splashing but a good deal of cutting dust is transported by water vapor and mist in the air. That water vapor is carrying that dust to equipment, to aprons, to work tables, to hands, and again, to faces - and faces (except for certain prize fighters) are where our noses reside. If one does a good deal of lapidary, please consider protecting your nose with the use of adequate ventilation in conjunction with a proper fitting dust filtration mask. One may be surprised to note just how moist a dust mask gets with that water-vapor carried dust.

Your nose knows that size matters. I hope this short message has engaged your brain to think so as well. The chips may fall where they may but dust goes on and on - just hanging around to await inhalation. For this month's safety review, considering the warmer than usual temperatures experienced in many parts of the east coast this past mid and late winter, please consider making a review of Bill Klose's excellent sun and heat safety issues article in the June/July, 2006 issue of the EFMLS News which, if you do not have a copy, is available from the EFMLS web site at www.amfed.org/efmls. Just click on the "Newsletter" tab to download the issue. (To get to the internet, copy the green, put it in google, press enter)

DVESS MEETING LOCATION :

DIRECTIONS:

From Atco (west-bound), after the traffic light at Taunton Ave. (Rite Aid drugstore on the left), the church is about the 3rd building on the right; turn into the first driveway. If you miss it, pass by the church and turn Right onto Broad St. (at the Berlin Diner) then turn Right into the parking lot of the Baptist Church and go straight all the way - the parking lots of both churches connect.

From Rt. 73 in Marlton: head East (South) on Rt. 73. As you enter Berlin, you will pass Wal-Mart (on the left) and a shopping center (on the right) with Shop Rite and Staples. **Get into the Right "Exit Only" lane and follow the signs for Cross Keys Rd. At the intersection of Cross Keys Rd. and the White Horse Pike (Rt. 30) turn LEFT. At the next intersection (Broad St.) continue straight past the Berlin Diner and SPEEDY MART on your left; pass by 2 or 3 white storefronts on the left then see the big white church with red front doors on your left. Pass in front of the church and turn into the driveway on the far side. Education Building is behind the church.**

From Lindenwold or Clementon on the White Horse Pike (east-bound):

As you enter Berlin business district, you will pass through the traffic light at Cross Keys Rd. (CVS Pharmacy on right corner). Follow highlighted directions above.

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 1st family member + \$5.00 for each additional family member

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

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

"Silver" \$50.00 for 1st family member - receive a Geode Specimen

"Gold" \$75.00 for 1st family member - receive a Native Gold

Specimen "Platinum" \$100 for 1st 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 2nd Wednesday of each month throughout the year at Centenary United Methodist Church, 151 South White Horse Pike, (route 30) in Berlin. Junior Rockhounds meet at 7:30pm with the regular meeting beginning around 8 pm.

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 (next page).

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.

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

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LOU DETOFSKY FIELD TRIP

GEOLOGY GRAND TOUR – June 23, 2012 – leaving from Washington Twp. 7 am This is a geology study and collecting trip conducted by DVESS Field Trip co-Chair and Geologic Assn. of NJ founding member Lou “Doc Rock” Detofsky and our other Field Trip co-Chair, first vice-President Mark Leipert. ITINERARY NJ: Sewell – Inversand Marl Pit; Runnemede – Irish Hill; Trenton – State Museum; Titusville; Lambertville; Byram; Frenchtown; Milford. PA: Coffman – Bucks County Park; Hellertown, New Hope WHAT WE’LL SEE Vistas including the Philadelphia skyline, all 3 types of rocks; Triassic lowlands; Piedmont uplands; dinosaur tracks & raindrop impressions; faults and reverse faults, Ringing Rocks, Bucks County's largest waterfall, Lower Paleozoic cave, Bowman’s Tower WHAT WE’LL COLLECT We’ll collect a suite of rocks from well-studied areas, WHAT TO BRING Tools: rock hammer, boots for wet areas? Collecting Equipment: collecting bag, notebook, newspaper, zip lock bags, ball point pens, index cards (specimen name, locality, formation, age), vials, Crystal Light cans, ? Safety Equipment: hard hat, gloves, first aid kit, sun screen, OFF, ? Misc: camera, plenty of water, snack bars,

ATTENDEES

This trip is intended for adults who are members of DVESS or another club covered by American Federation insurance. Trip is limited to the first 30 who sign up; contact Mark (mark.leipert@yahoo.com) or Ann (856-783-0969 or 856-418-6121 text) to register.

LEAVING

We will be meeting 7-7:15 am and leaving at 7:30 am sharp from the park adjacent to Washington Twp. high school on Hurffville-Cross Keys Rd. [Directions: from Rt. 42 and GreenTree Rd. (the Dump) proceed to the light at Ganttown Rd.; turn Right. At the Hurffville-Cross Keys Rd. traffic light turn Right again.

SUPPLIES

Expect tall grass, dirt and ticks; wear long-sleeve shirt and light-colored slacks or jeans (easier to see the ticks).