DVESScapades

escapades: interesting, stimulating, exciting activities and adventures

Delaware Valley Earth Science Society Newsletter

Program: May 12

will be one from the National Federation, a DVD's entitled Franklin, NJ vs the World! (Fluorescence)

President's Message- by Grant Elliott

It seems I was star-crossed and managed to miss out on everything in April - From major house reorganizing the week of our general meeting to contracting a particularly virulent cold virus just before the STERLING HILL SUPER DIGG event. My wife has now also caught the bug, so we now have something to share as we dodder around our reorganized household.

Judy-Lynn Goldberg's Cherry Hill fossils presentation had to be a winner on the 14th.

I heard from our Treasurer that the DIGG was very successful. I am certain it's success was due to the tireless efforts of so many dedicated people. I regret that I could not be there, but do look forward to some great stories from everyone.

Report on our Sat fossil trip by Peter & Carol De Cuzzi

We arrived at the appointed time at Gary's Gem Garden on Sunday, April 18th for our fossil search party. Brrrrr !!!!! Judy showed all of us what we were looking for and we discussed again the method we would use to search today.

After a short ride we all parked, (9 cars). Took a little walk with Judy, along a tributary creek, festooned with shinny three leafed poison ivy (that eliminated 2 of our number right then and there). We then walked into the rapidly running stream in search of washes, gravel and sand bars to mine for sharks teeth, small fossil bones etc. As luck would have it, Judy made the first find of a small tooth. At least one of the search party also made a couple of finds.

"We" were there about 2 hrs and then with the cold "we" went our separate ways, mulling over our new info. All had thoughts and dreams of more local areas to search at future times. A big THANK YOU to Judy from all of us.

In this Issue

Minutes of Our April Jr Rockhounder Meeting:

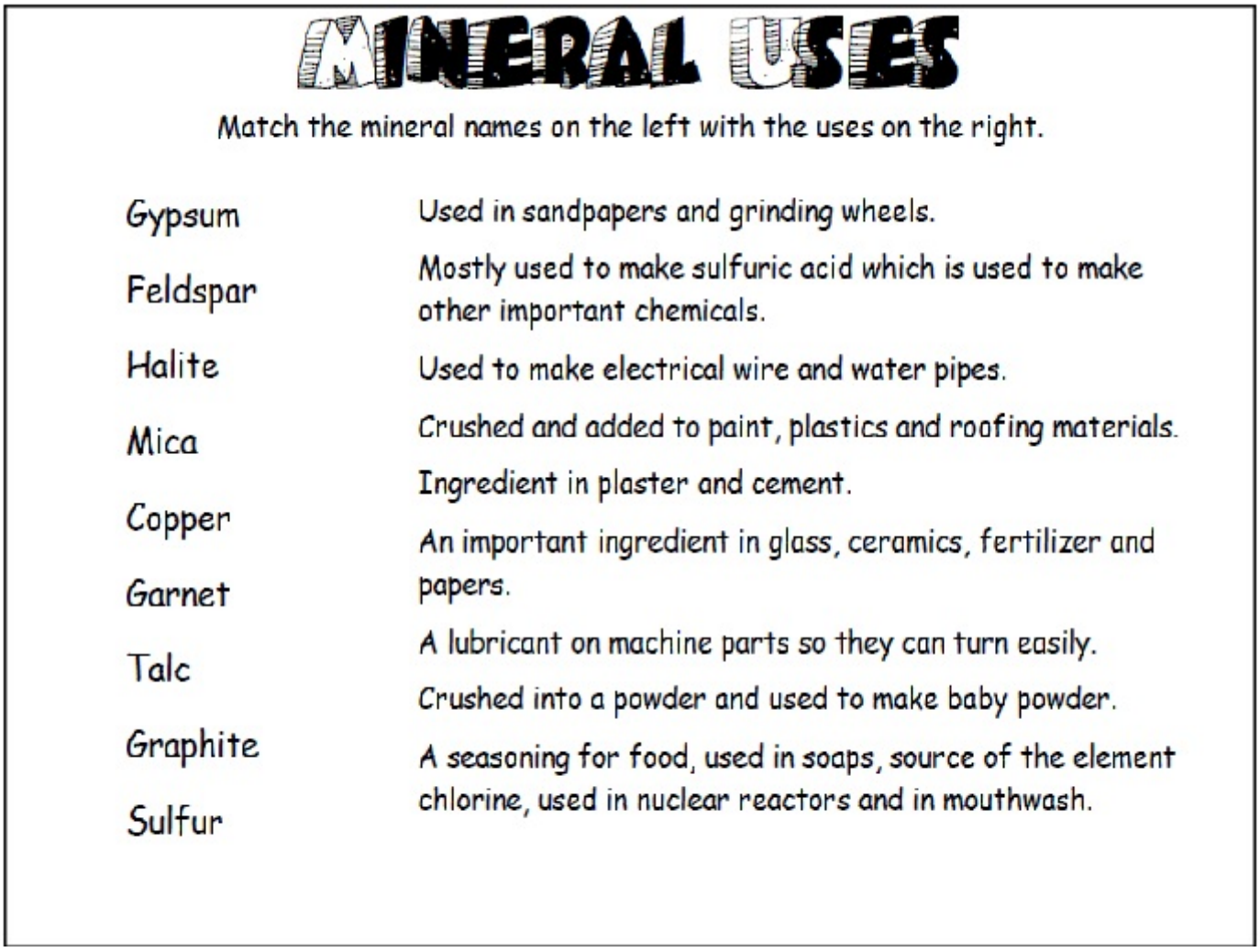
Badge #1 consists of mineral identification and making your first collection.

Badges were awarded to successful Juniors. All Juniors were awarded their presenter their Jr Federation patches during our regular meeting to the applause of our members.

Thanks kind and thanks Mil !!

Mil LeCompte, our Jr Rockhounder Coordinator He can be reached at (856)783-0960 Or RocksAndBadges@yahoo.com

The following pages are provided for our juniors from our mentors DIAMOND DAN.



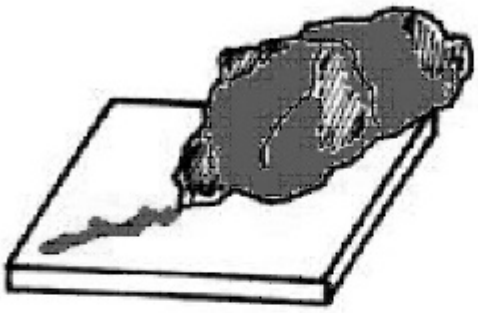
MINERAL USES

Match the mineral names on the left with the uses on the right.

Gypsum	Used in sandpapers and grinding wheels.
Feldspar	Mostly used to make sulfuric acid which is used to make other important chemicals.
Halite	Used to make electrical wire and water pipes.
Mica	Crushed and added to paint, plastics and roofing materials.
Copper	Ingredient in plaster and cement.
Garnet	An important ingredient in glass, ceramics, fertilizer and papers.
Talc	A lubricant on machine parts so they can turn easily.
Graphite	Crushed into a powder and used to make baby powder.
Sulfur	A seasoning for food, used in soaps, source of the element chlorine, used in nuclear reactors and in mouthwash.

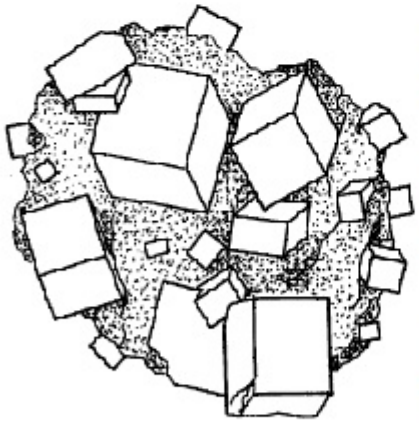
The Streak Test

There are a number of physical tests that mineralogists do to an unknown mineral specimen to determine its identity. We have talked about a number of these in past issues of *Mini Miners Monthly*. The physical tests are hardness, color, luster, cleavage, fracture, acid test, magnetism, and the streak test.

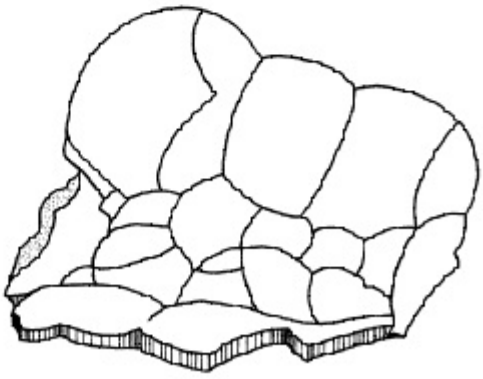


What is the streak test and how is it done? The streak test is a simple test. You will need a piece of unglazed porcelain. "Streak plates" can be purchased, but it is cheaper, and easier, to find an old bathroom tile. You will use the side of the tile that is dull and rough (the back side of the tile that is usually attached to a wall or floor). Take a piece of a mineral and firmly rub it across the porcelain. Now look at the mark you made on the porcelain. The color of the mark is the *streak* of the mineral. The streak is actually the color of a mineral when it is ground into a powder.

The streak of most minerals is not a surprise. Gypsum, calcite and fluorite all have white streaks. The blue copper mineral *azurite* has a blue streak. The green copper mineral *malachite* has a green streak.



Two minerals have streaks that are so distinctive that they can be used to identify these minerals. The first is pyrite (pictured to the left). Pyrite always has a dull, dark green streak. The second is hematite (blood-red "kidney ore" hematite is pictured to the right, below). Specimens of hematite can be deep blood-red, black or silver. Regardless of its color, hematite's streak is *always* deep blood-red.



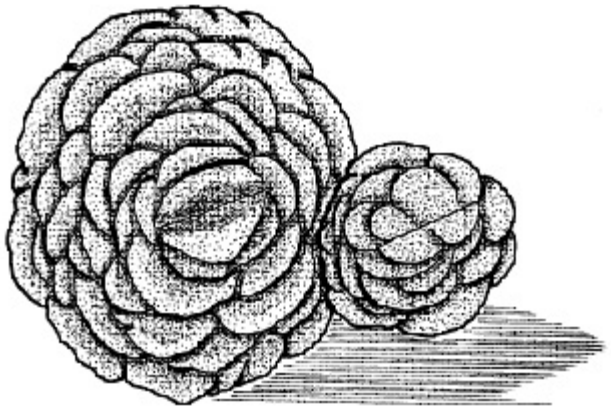
Minerals that are harder than 7 are too hard to leave a streak on a streak plate. In this case you can note that the mineral has "no streak." If a mineral is hard enough, it will actually scratch the streak plate! It is easy to think that it left a white streak. Wipe away the streak and look very closely to see if the specimen scratched the streak plate or left a white streak.

This is a simple test you can do on your own. Test different minerals and record the streak you find for each. Don't do this test on your good specimens. Use very low quality pieces to do the streak test.

Barite Roses

by Dr. Barry I. Trose, Mineralogist

For nearly twenty years now, my lab partners and I have been studying a mineralogical oddity known by mineral collectors as "Barite Roses." In these years we collected specimens and studied their formation and have come to the conclusion that "Barite Roses" are without question *petrified roses*! Of course, the first clue that led to this conclusion is their shape. They do look like flowers. Their red color is also a hint that they were originally red roses. As you can see in the drawing, barite roses indeed look like flowers!



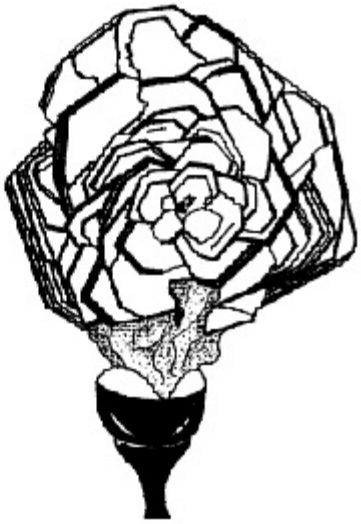
But a good scientist doesn't just look at a sample and come to a conclusion. One must also test the sample in a variety of ways.

We did the smell test but, unfortunately, discovered that barite roses do not smell like roses. The reason for this is that the smell disappeared when the flowers turned into rock, in this case the mineral *barite*. In a similar way, petrified dinosaur doo-doo (scientifically called *coprolites*) doesn't smell, which is a very good thing. Therefore, we shouldn't expect petrified roses to have any smell, either.

The next test we did was bring a dozen barite roses home to our wives. They were very, very happy to receive them (they are all mineral collectors anyway) and responded by smiling, saying "Thank You" and giving us hugs and kisses. This is the same reaction we get when we bring home real roses. You can already see that barite roses must be related in some way to real roses.

The last step was to observe the dirt and soil *above* the barite rose deposits. In the general area gardeners are able to grow very nice rose plants. Since roses can grow there now, we conclude they must have grown there thousands of years ago.

To be thorough, we compared barite roses with hematite roses from Austria (see specimen pictured to the right). Hematite roses are definitely only hematite. They never were roses. We looked and looked and couldn't find a single rose bush growing high in the Alps. This leads to the obvious conclusion that roses have never grown in the Alps and therefore could not become petrified there.



Well, there you have it. Scientific proof that barite roses are petrified red roses. We are amazed that scientists never figured this out before now.

And, if you believe all of this, all we have to say to you is . . .
April Fools!!!

Incredible Crystals

You are probably used to seeing crystals that are about as tiny as a fingernail up to specimens that are about as big as your head. However, some minerals, when allowed to grow in very special conditions, can be bigger than a car!

Above are gypsum crystals that were discovered in 2000, deep underground at Naica, Chihuahua, Mexico. Some of the crystals are up to 40 feet long and are estimated to weigh up to 55 tons . . . each! These crystals are easily the largest gypsum crystals found anywhere in the world. They may very well be the largest crystals of any mineral ever found!

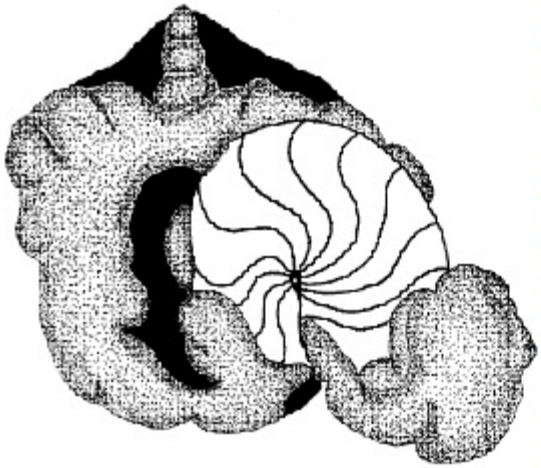
By now you know that we really like to tell you about great web sites. Go to this link at the Mineralogical Record magazine web site, and you will be able to download a Power Point presentation with real pictures and stories from this underground wonderland!

http://www.minrec.org/multimedia.asp

When Minerals & Fossils Meet

by Darryl Powell

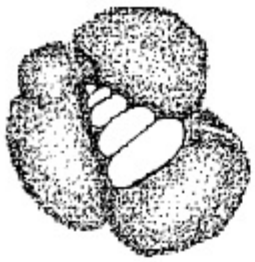
There is a very special fossil occurrence here in New York State not too far from the City of Buffalo. In the little village of Alden, right up next to the local stream, you can find fossil shells that have been turned into the mineral pyrite! Usually shells are fossilized as limestone. Very rarely the original shell material is preserved. But, when ocean creatures are buried in sediments that have very little oxygen in them and a lot of sulfur, the shells can become pyrite!



These pyritized fossils occur in a layer of sedimentary rock that is called the *Ledyard Shale*. The Ledyard Shale is part of a larger rock formation that is called the *Ludlowville Formation*. The Ledyard Shale was deposited in deep ocean water (that is when western New York State was under ocean water!). The shale that contains the pyritized fossils is exposed along Spring Creek in the town of Alden, New York.

The organisms that are fossilized in the Ledyard Shale include brachiopods, ammonites, and trilobites. There are also many individual and connected "balls" of pyrite that are not attached to any fossils at all. Pictured above is an ammonite fossil. Not only is the ammonite shell now pyrite, but the fossil is also surrounded by "blobs" of pyrite.

To the left (top) is a small brachiopod pyritized shell that is surrounded by a number of balls of pyrite. The middle picture is of a different type of brachiopod that has pyrite growing on either side of the shell. On the bottom is a picture of a gastropod (that is, a snail) that is surrounded by three balls of pyrite.



The fossils take a little work to get out of the shale bed. Of course we *always* wear safety goggles to protect our eyes and heavy gloves to protect our hands. Using wide, flat pieces of steel and a heavy hammer, we dig into the shale. It takes practice to look for the slightest spark (that means you hit the pyrite) or to see the rounded pyrite blobs. When they first come out of the shale, they are covered with the gray, shale rock. You never really know what you have until you take them home to clean them. So, collectors take buckets of specimens home and carefully, one by one, clean them off and inspect them. The best way to clean them is to soak the pyrite in a mixture of water and toilet bowl cleaner! After they have soaked for a couple hours, they can be brushed with a stiff toothbrush. We also brush them with a water-baking soda mixture to neutralize the toilet cleaner acid. When these steps are done, we have sparkling pyrite balls and pyritized fossils! Maybe you will be able to visit New York State and dig at the Village of Alden, too.

ROCKS AND MINERALS

What is the Difference?

by Darryl Powell

Rocks and minerals are not the same. You may be asking, then, what is the difference? Think of a rock as a collection of minerals. Most rocks contain two or more different minerals. For example, *granite* contains quartz, feldspar and biotite mica. There are some rocks, like marble, that contain only one mineral.

There are three different categories of rocks. *Igneous rocks* are rocks that form when liquid rock cools and hardens. *Metamorphic rocks* are rocks that form when older rocks are changed by very, very high heat and pressure. *Sedimentary rocks* are rocks that are formed when wind or water transports older rocks from one place to another and then deposits them.

Find a piece of granite and look at it closely with a hand lens. What do you see? You will see small grains of pink feldspar, gray grains of quartz and tiny black flakes of biotite mica. Sometimes, if the granite cooled slowly enough, real crystals with faces will form.

Now, look at a piece of limestone. What do you see? It will be hard to see anything but gray limestone. Geologists take pieces of limestone (and other rocks) and slice them so thin that light can shine through the slice. Under a microscope you will then be able to see the grains of calcite that make up the limestone.

Here is a list of rocks. Using a good rock and mineral handbook or the internet, make a list of the minerals found in each rock.

Mystery Mineral: Magnetite

Igneous Rocks

Basalt _____

Granite _____

Syenite _____

Gabbro _____

Metamorphic Rocks

Marble _____

Gneiss _____

Serpentine _____

Quartzite _____

Schist _____

Sedimentary Rocks

Sandstone _____

Shale _____

Limestone _____

Conglomerate (this is a little bit of a trick question) _____

www.diamonddanpublications.net

DVESS MEETING LOCATION : Centenary United Methodist Church, 151 South White Horse Pike, (route 30) in Berlin, 856-767-3881 or 856-767-7453

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 **D**elaware **V**alley **E**arth **S**cience **S**ociety, 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

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, 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

Our newsletter goes out solely by email (a major cost savings and quick delivery solution).

Article from a sister Club News Letter for you to share and enjoy.

SAFETY Snake Bite 101

by Owen Martin, AFMS Safety Chair March 2010

While researching details for this month's note I came across a great blog note from a gentleman named Steve Beyer who writes a blog for a website called "Singing To The Plants."

Much of one of his blog notes is contained below. With that being said we can break it down to three main points: stabilization, transportation and treatment. Of note at the bottom of the blog is mention of a "Pressure Wrap" which is a technique I've discussed in previous Safety Articles. Since most of us are more likely to encounter snakes in the field this method should be seriously considered in situations where emergency care is not immediately available.

Be safe, and now onto an excerpt from Steve's blog:

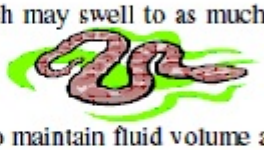
"As professional handlers of venomous snakes say, 'The best equipment for treating a venomous snakebite is a set of car keys.'

However, the first step in treatment is to avoid panic. Death is rare. Even without evacuation, most cases result in several days of serious misery and then full recovery. Remember that the fatality rate even for untreated pit viper bites is extremely low.

The treatment steps are:

•Use the Sawyer Extractor. If you are in snake country, the Extractor should always be within easy reach in your pack. The Extractor can remove as much as 30 percent of Crotalid venom proteins if applied within three minutes. Use the Extractor as quickly as possible and then keep it on the bite for about thirty minutes. Because of the great suction it creates, no cutting is necessary. This should always be the first thing you do, even when evacuation is in progress. [Keep in mind that certain areas of the south and southwest USA have snakes that have bites too wide for a single extractor so plan accordingly [Owen]

• Remove rings, bracelets, or any other constricting jewelry on the affected limb, which may swell to as much as twice its normal size.



• Immobilize the bitten extremity with a splint, just as you would a fracture.

• Have the patient rest and keep activity to a minimum .

• Have the patient drink as much fluid as possible, in frequent small amounts, in order to maintain fluid volume and kidney flow

• Remember that a snakebite is a contaminated puncture wound, and treat it as such.

• Get to definitive care as quickly as you can. Otherwise, have the patient rest and drink fluids; keep the wound clean; give lots of encouragement and support.

The following are **not** recommended for pit viper envenomations:

• Do not make incisions or try to suck out the venom. In jungle conditions, cutting into an already compromised limb is asking for an infection. You absolutely do not want pit viper venom in your mouth. Conversely, your mouth is full of all kinds of bacteria. And you can't suck as hard as the Extractor can anyway.

•Do not use a tourniquet. Tourniquets can result in loss of the limb due to decreased blood flow. In addition, you are just keeping the venom localized where it does the most tissue damage.

•Do not use electric shock. It can be dangerous, and has no proven value in managing pit viper bites. It is the great urban legend of wilderness first aid.

•Do not use ice. There is no evidence that snake venom enzyme activity diminishes with cold. Freezing already compromised tissue can lead to frostbite, which can damage the limb more than the original bite. Packing in ice has probably resulted in more lost limbs than snakebite itself; this is particularly tragic when limbs have been lost to frostbite because of a non-envenomated bite.

•Do not give alcohol. It causes vessels to dilate and may speed venom absorption. The use of an elastic bandage pressure wrap - recommended for use with bites from Elapidae or coral snakes – has been recommended for use in some cases of Crotalid envenomation as well. The argument against its use is that the pressure may actually increase the risk of disfiguring local tissue damage, which may then require skin grafts and extensive repair and treatment; and that removal of the pressure may result in sudden massive swelling and discoloration. The argument in favor of its use is that the spread of venom to vital organs can be life-threatening - in fact, some Crotalid bites can cause serious damage to limbs even when the bites were to a finger or foot - and the use of a pressure bandage can prevent this spread, even at the risk of greater localized damage.

The problem is that there is no way of knowing how serious the envenomation is at the outset, when the decision must be made. There is a tradeoff between averting more serious life-threatening damage and increasing the risk of painful and disfiguring local damage. Such a decision should be considered a serious one, to be decided in full consultation with the patient."

More can be found on Steve's blog site: <www.singingtotheplants.com/2009/03/jungle-survival-tips-snakebite-i/>.

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.

DVESS Directory 2010	**President Grant Elliott 856-728-1731 gle@verizon.net**
1st Vice President Lou Detofsky "Doc Rock"	**2nd Vice President Jonathan Feigin**
Jr. Rockhound Coordinator Mel LeCompte 856-783-0969 works-in-faith@comcast.net	**Recording Secretary Richard Murray bearich@snip.net**
Website Coordinator Terry Wilson 609-714-1309 terry@dvess.org	**Special Events Coordinator Ann Lynne Benson 856-783-0969 SeleniteQueen@gmail.com**
Treasurer, Program Chair Gary Weinstein 856-234-0708 - home 856-795-5077 - work garyskyrock@hotmail.com	**DVESS Newsletter Editor, Membership Chair Carol De Cuzzi 856-428-0621 - home decuzzic@comcast.net or DVESS@int-pro.com**

The Dvess puzzle for April by Ed Loveland, Puzzle maker to the DVESScapades for many great years, and well appreciated, is attached in a separate PDF file for the month.

UPCOMING SHOWS

May 16-17 Berks Mineralogical Society World of Gems & Minerals. Leesport Farmers Market Banquet Hall, Route 61. Sat 10:00 AM to 5:00 PM, Sun 10:00 Am to 4:00 PM.

June 5 Spring Mineralfest sponsored by the Pennsylvania Earth Sciences Association. Macungie Memorial Park Building, Macungie, PA. Sat 8:30 AM to 3:00 PM.

June 26-27 5th Annual Nittany Gem and Mineral Show sponsored by Nittany Mineralogical Society, Inc., at Mt. Nittany Middle School, 656 Brandywine Drive, State College PA 16801, near the Oak Hall exit of US Route 322 east of State College. Vendors of minerals, lapidary materials, gemstones, jewelry, beads; expert speakers, hands-on activities, demonstrations, displays, Best of PA mineral specimen contest, club silent auctions including kids' sections, field trips, good food. Sat 10:00 AM to 6:00 PM, Sun 11:00 AM to 4:00 PM. Admission (good for both days) $5.00; seniors and students $2.00; children 12 and under and scouts in uniform free with an adult. Please check <http://www.ems.psu.edu/nms/> for details and updates. Contact: David Glick <xidg@verizon.net>.

NOTE Come visit DVPS (Delaware Valley Paelontological Society) the 4th Thursday of the month at the Academy of Natural Sciences in Philadelphia, PA

Transcendent: Toshiko Takaezu in the State Museum Collection 2nd Floor Cityside Gallery through May 30, 2010.

Hear Our Voices:Selected Works by African-American Women in the State Museum Collection 2nd Floor Foyer Gallery through June 13, 2010.

***Statesmen,Indians, Soldiers, Missionaries and Travelers: The Development of an Ethnographic Collection* 2nd Floor Galleries through August 1, 2010.**

In Someone Else's Shoes: A Collection of Native American Footwear from the State Museum 2nd Floor Galleries through August 1, 2010.

***If Pots Could Speak: A History of Pre-Historic Ceramics from New Jersey* 2nd Floor Galleries through August 1, 2010.**

Fossil Mysteries: Investigating the Prehistoric On extended view in the Auditorium Galleries.

***Trenton: Crucial Crossroads* On extended view in the Auditorium Alcove Gallery.**

The Civil War Flag Collection of New Jersey On extended view in the Museum Galleries in the Department of State Building.

Membership Form start w/ first family member (head of family)

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(on website)?

Okay to share _____
Do NOT share _____

Newsletter Delivery **ONLY** via e-mail

Email _____

Type of membership **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

Dues are collected on a calendar year Jan to Dec, no pro-rata rates

additional family members to be registered w/ above member

First Name: _____
Last Name (only if different from above) _____

additional family members to be registered w/ above member

First Name: _____
Last Name (only if different from above) _____

First Name: _____
Last Name (only if different from above) _____

First Name: _____
Last Name (only if different from above) _____

additional members on another paper if needed

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

Interests: Minerals ___ Fossils ___ Lapidary ___ Collecting ____ Museum Trips ____
Trotter ___ Sterling Hill ___ other, please list _____

How did you learn of DVESS? _____

Other clubs you belong to _____

Comments _____

What NON-DVESS interests or hobbies do you have? Would you be willing to share with our members? _____

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