

DVESScapades

escapades: interesting, stimulating, exciting activities and adventures



DELAWARE VALLEY EARTH SCIENCE SOCIETY NEWSLETTER



October 2020

Next Meeting: Wednesday, October 14th, via Zoom

7:00 pm social hour

8:00 pm Program: **Dinosaur Hunting on Four Continents**
by Peter Dodson



Next meeting: November 11th: **Harold Connolly** will present an update on the OSIRIS-REx mission, via Zoom

No regular, in-person meetings until further notice

Meeting location: Education Bldg. behind Centenary United Methodist Church,
South White Horse Pike, Berlin NJ 08009

President's Message

It's been seven months since our last face to face meeting. I'm sure everyone is getting tired of hearing that everything is closed or cancelled. We can start having field trips to places where we can drive ourselves, wear masks and socially distance and still have a good time collecting fossils or minerals. Several members have done some fossil, mineral or collecting something interesting during this pandemic. Franklin Mineral Museum continues hosting night digs once a month.

The Centenary United Methodist church where we meet is not allowing any outside organizations to resume regular gatherings. Everything will be on hold until at least early 2021 or until a vaccine is developed and distributed.

In the meantime, continue taking field trips to your basement, closet, garage or secret stash area and look through many of the items you've collected over the years. You might surprise yourself and find something you didn't know you had. Remember our Junior Rockhounds, if you discover duplicates or extras that might be of interest to someone who will never be able to collect at a closed locality. Think about bringing them to a future meeting for the junior rock hounds or give away table. I'm taking a poll right now to see if there would be any interest in a Junior Rockhound's zoom session once a month. Let me know what you think.

Maybe if you're feeling ambitious, you could research some places you would like the club to go on field trips once we are let free from our shelter-in-place. Feel free to email, text or call myself or any officer with your recommendations. Meanwhile, until we meet again please stay safe, practice social distancing, wash your hands frequently, use hand sanitizer, disinfect surfaces and wear some type of face mask when you go out.

We held our third Zoom meeting last month. I'd like to thank our guest speaker, Robert Kamilli who shared his experiences of the Geology of the Saudi Arabia region and what it was like working for the USGS in Saudi Arabia with his family. We will probably be continuing into the winter months and beyond using Zoom as our vehicle to hold meetings.

This month's Zoom meeting will be on the second Wednesday, October 14th at 7:00. We will have a twenty minute or so social time then some club business and then special guest speaker, Dr. Peter Dodson. He is professor of veterinary gross anatomy at the University of Pennsylvania, as well as dinosaur paleontology in the Dept. of Earth and Environmental Science. The topic Dr. Dodson will be presenting is "Collecting Dinosaurs on Four Continents." We are in for a real treat. Some of you might have attended Dr. Dodson's talk at Camden County College a few years ago on "Dinosaurs and Religion."

In November our guest speaker will be Dr. Harold Connolly from Rowan University, via Zoom. He will be giving us an update on the OSIRUS- REX mission to collect a soil sample from asteroid 101955 Bennu. Dr. Connolly has been working with NASA on this project for several years and hopes to have some exciting news.

I continue digging out some select articles from old club newsletters and sharing them as part of our current newsletter. There is a lot of history, write ups of field trips, mentioning of guest speakers, the old picking table, and plenty of good old science like geology and paleontology. It's important to share some of our club's highlights over the last 64 years. Next year we will be celebrating our 65th Anniversary.

Right now we are setting our sights on Super Diggg Spring 2021. This gives us more time to get organized, gather up more volunteers and get the Franklin Mineral Museum promoting this event on their website and social media. I have also been notified that there will be a cost per pound increase for the material you collect.

Don't forget to visit our Facebook page and share with as many friends as possible. This month, share your favorite dinosaur with everyone on our page.

Everyone stay safe and hope to see you all soon!

Mark Leipert, President

Special Mid-Week Field Trip to Assiscunk Creek:

Phyllisanne Greco will be leading a mid-week collecting trip. It is limited to the first 15 members who respond due to COVID-19.

PLACE: Assiscunk Creek Park located at 1200 Old York Road in Burlington Township, NJ (to the right of Green Acres Park)

DATE: Wednesday, 10/21/20. Rain date: 10/28. 10 AM - 2 PM ?.

MINERALS and FOSSIL FINDS: Marcasite, lignite, burrows, fossil impressions, iron concretions, petrified wood, etc. Clay beds and shale on wall of creek.

REQUIRED ATTIRE and EQUIPMENT: Mid calf boots or water shoes, gloves and small shovel or spade.

TERRAIN: 10 minute walk to creek with slight rocky incline before creek.

PARKING: Make left at 2nd park entrance and follow to end. Make left and follow to end again. Make final left.

Bring a mask and social distancing will be required.

SIGN UP: phyllisgrieco494@gmail.com.



Peter Dodson

Peter Dodson holds a Ph.D. in geology and geophysics from Yale University (1974). He also holds a B.Sc. (geology) from the University of Ottawa and an M.Sc. from the University of Alberta. He is professor of veterinary gross anatomy at the University of Pennsylvania, as well as dinosaur paleontology in the Dept. of Earth and Environmental Science. Still active, he has completed 46 years of teaching at Penn, where he has spent his entire career. He has done fieldwork in the western United States and in Alberta. Since 1995 he has visited India and has participated in field projects in Madagascar, Egypt, Argentina and China. With his students he has named seven genera (kinds) of dinosaurs, three from the United States, three from China and one from Egypt. He has supervised more than 20 Ph.D.s, and his graduates teach in China, Japan, and Canada as well as in the United States. He is the author of more than 100 scientific papers, co-editor of *The Dinosauria*, (1990; 2nd ed. 2004); author of *The Horned Dinosaurs* (1996); and of several children's books, including *An Alphabet of Dinosaurs* (1996). He is a faculty host for Penn Alumni Travel. In that capacity he has led trips to the Galapagos, Patagonia, Alaska, Churchill, Manitoba, Tanzania, Uganda and South Africa.

Unexpected Treasures by Mark Leipert

Have you ever driven down the road and seen a housing development or shopping center under construction, a storm water retention basin being dug, a strip mall going up, excavation to bury a stream in a large corrugated galvanized pipe or maybe a road going into the woods along a stream that didn't normally go before and you see that there is a project to redirect the erosion of a stream? You say to yourself, I wonder if they are digging up fossils or interesting things. You won't know if you don't check it out. It could be dangerous, so you must be careful. You don't want to become a statistic. Safety is of the utmost priority. Wear hard soled shoes, take a walking stick with you, don't enter an excavation, stay away from any heavy equipment, and stay away from operating machinery.



Or go there on a weekend when no one is working on the site. Just be careful, wear your fluorescent safety vest, wear boots, gloves and look like you belong there. Well, several club members were getting a bit of cabin fever from not going out collecting rocks and fossils over the pandemic so they went out exploring this past weekend. OK, let's give these guys some

names: Paul, Lou, Fred, Flynn, Mike, Mark and Josh. They came across a fabricated wooden road for heavy machinery to go through wetlands near stream beds without sinking. They followed the wooden road which lead to some cut off sheet-pilings to help shore up the stream banks adjacent to a shallow stream. It was loaded with numerous gravel bars towards the middle of the stream. The banks of the stream were very muddy and slippery. The water level was only a foot deep and there was little danger of water going over the top of your boots. The water was crystal clear. Clear enough that you could see giant fossil exogyras and belemnites on the bottom. We spent hours chopping and digging in the streambed and in the outcrop in the side walls of the stream.

We recognized the formation right away, by the grey to olive green sand in the gravel bars and side walls, as the Navesink formation from the Cretaceous period. Similar to what we were used to digging at the Edelman Fossil Park. This was a lot harder, like some of the material I had dug many years ago in Mullica Hill. The material was highly weathered and iron coated. You had to fight it every inch with a hammer, chisel and shovel. Perseverance paid off and we all collected some of the giant exogyra shells, belemnites, gastropods, brachiopods, a shark tooth and a small piece of vertebrae.

Just about a half hour before we left, Paul dug up a large Mosasaur vertebrae. He got the prize for finding the best find of the day. We were collecting for the moment because we were not sure if the stream erosion prevention project was going to bury this area under tons of riprap. We were tired by the time we lugged all our treasures to our vehicles. We could have missed out on all this opportunity if someone hadn't had their eye out for these types of construction projects. Just in case you think I'm making this whole story up we've got pictures as proof.







Quote of the Month:

When you look at the origins and evolution of life on Earth, it's been severely affected by asteroid impacts through history. [Rusty Schweickart](#)

Websites

OSIRIS-REx

<https://www.nasa.gov/osiris-rex>



Events

3rd Annual South Jersey Gem, Jewelry, Mineral & Fossil Outdoor Show

Date: October 17, 2020

Rain Date: October 18, 2020

Location: 1721 Springdale Road Cherry Hill, NJ 08054

Show Time: Saturday @ 10:00am – 5:00pm

Website: www.sjmineralshow.com

Facebook: www.facebook.com/sjmineralshow

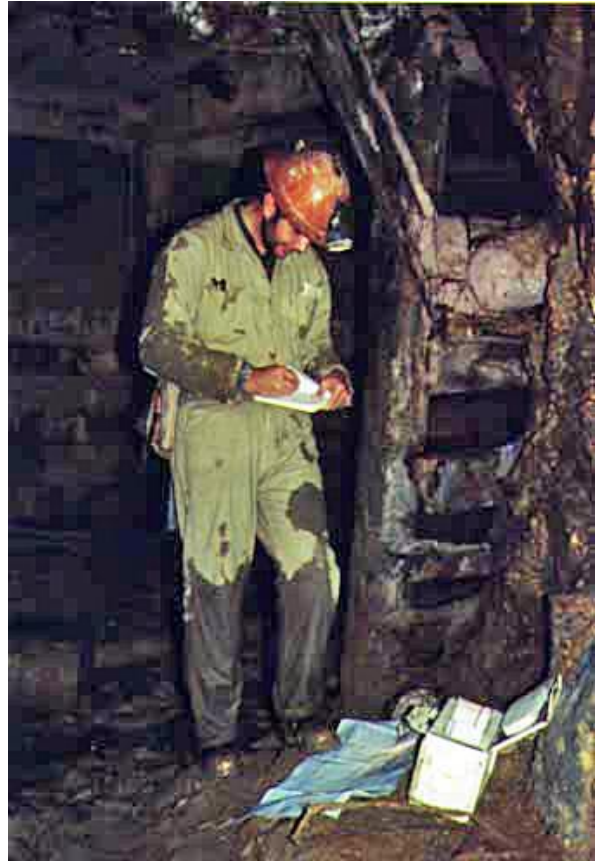
Why I decided to learn Spanish

by Robert J. Kamilli

When I was doing the early fieldwork in Perú for my dissertation, I did not know much Spanish. One day the mine foreman said to me (approximately) "Vamos a explosionar temprano hoy día, así que asegúrese de salir de la mina antes del mediodía." ("We are going to blast early today, so be sure to leave the mine by noon.") I just smiled and said something like "Buenos días" and went on my way.

I was alone in a stope when I felt the blast through the rock, then the sound of the dynamite exploding, then the air blast. Big rocks started falling around me out of the back of the stope. I was OK, but decided that maybe I had better leave. It was about a 200 meter ladder climb and then a 500 meter walk to leave the mine. When I exited the mine, the mine managers were waiting for me. They were both very mad and very relieved to see me.

That was the day I decided to learn Spanish. I took many crazy chances in this little mine, which would never have passed an MSHA inspection in the United States, but I was young and immortal back then.



Below is an article by Howard Cutter III; DVESS Member for 3 years and editor of the *Geosphere* for about three years. Howard III upon graduation from high school, entered the military.

The forgotten Gem-Trails of *New Jersey*

By: Howard M. Cutter III

TWO years ago, when Scott Stepanski and Karenne Snow wrote "Gem Trails of Pennsylvania and New Jersey," their book was heralded as the only good compilation of collecting sites in New Jersey. Sadly, for those of us living here, most of the collecting sites detailed in their book were located in Pennsylvania. Only thirteen out of the forty-seven sites described in their book were located in New Jersey.

Any native of this area, however, will tell you that there are many more collecting sites in New Jersey... if you know where to look for them.

The first of these "forgotten" sites is Mantico Ponds, a sand pit located on Route 49 between Millville and Tuckahoe. At this site possible specimens include samples of agate, flint, and quartz (if you go there and don't find any quartz-, you probably took a wrong turn along the way), as well as other related rocks.

Another collecting site, although much further from our club, is the small town of Mine Hill, located just west of the town of Dover, on Rt. 46. Here you should look for the industrial park situated just over the peak of the large hill. If you go back to the rear of the industrial park you will find large piles of rock on the west side of the cul-de-sac that the road turns into. These are the dumps of what used to be the Scrub Oak Mine, and it is possible to find such minerals as appetite, aventurescent, bornite, doverite, feldspar, garnet, hornblende, hyalite, ilmenite, iron, and magnetite in the cast-off rocks of this defunct mine. Besides... what real rockhound could resist collecting in a town called "Mine Hill?"

The next forgotten collecting site of New Jersey would have to be the West Milford valley, where you can commonly find a dark purple breccia with white quartz inclusions (known commonly as "puddingstone") that is supposedly unique to this valley. Also available in this area are the minerals calcite, willemite, iron ore, and many others. In addition, this area has seen its share of history as well. Located off Rt. 23, West Milford's "Long Pond" area one served as an important iron smelting area during the 18th century.

Finally, in our brief sampling of the lesser-known collecting sites that are located around our state, we come to Worthington State Forest. Here you can supposedly find some nice fossils and other rocks. The best area for collecting is said to be near the campground along the river during the early fall, when the river is low enough for you to actually walk in the riverbed. If you have some extra time, there are also on some interesting formations along the section of Interstate 287 north of US Rt 202 up through the point at which it meets State Highway 208. Unfortunately, there are few places in this area where one can park.

Safety First

by Bill Klose, EFMLS Safety chairman

Hammers used by rock hounds come in every size, type and construction, and include rock hammers, bricklayer's or mason's hammers, blacksmith's or sledge hammers, machinist's peen hammers, jeweler's hammers, setting hammers, soft face hammers, lead or copper faced hammers, trimmer's and welder's hammer's, as well as a variety of mallets, such as rawhide, rubber, and tinner's. I have even seen napping hammers (a 3 pound high carbon steel hammer with tapering faces used for forming stones during road construction or similar stone work) and railroad track mauls (used for driving railroad spikes). As it is hard to anticipate what a rockhounds "favorite weapon" will be, I though I would present a list of general hammer safety practices followed by the proper use of some of the more common hammer types.

1. Always select the proper type, size, and weight of hammer for the job.
2. Always wear eye protection.
3. Always strike a hammer blow squarely, avoiding glancing blows and over and under strikes.
The hammers striking face should be parallel with the surface being struck.
4. When striking a chisel, punch, or wedge, the striking face of the hammer should be 3/8" larger than the struck face of the tool. Both the striking hammers face and the struck face of the tool should be free of oil.
5. Do not strike another hammer with a hammer.
6. Do not strike a harder surface with a hard surface hammer.
7. Never use a hammer with dents, cracks, chips, mushrooming, or excessive wear. Replace the hammer-redressing is not recommended.
8. Replace worn or damaged handles. A qualified individual should replace hammer handles. Most hardware stores will replace hammer handles for a nominal fee. They can also provide a rubber sleeve for sledge hammers, which will prevent handle damage just above the head.

Bricklayer's or mason's hammers are designed for setting or splitting bricks, masonry tile, and concrete blocks. Never use them to strike metal or drive tools such as chisels. The blade of a bricklayer's hammer should be kept sharp by redressing at a 40 degree angle with a bench grinder. Keep the metal cool while grinding by quenching often in water to protect the metals tempering.

Hand drilling hammers are used with chisels, star drills, punches, and hardened nails. Never use common nail (claw) hammers for striking metal, such as chisels, as they are designed for driving unhardened nails and their shape, depth of face, and balance make them unsuitable for this use.

Machinist's peen hammers (ball, cross, or straight) are designed for striking chisels and punches and riveting, straightening and shaping metal.

Blacksmith's or sledge hammers are designed for striking wood, metal, concrete, or stone, depending on size, weight, and shape.

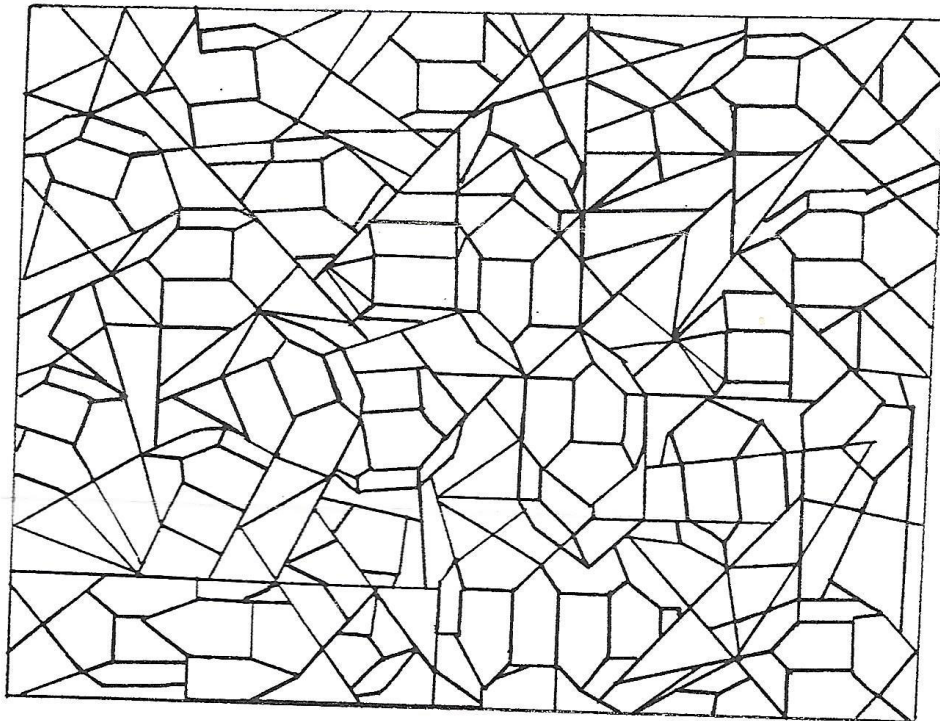
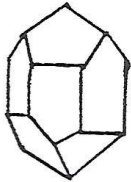
When using a hammer, grip the handle near the end where it is designed for gripping and will give you the best control and impact with the least effort. Watch your hands, shins, and feet. It may be advisable to wear gloves, long sleeve shirts, and high lacing safety shoes to protect from flying debris and sharp shards if the situation warrants it.

When storing hammers for a period of time, lightly lubricate metal parts, but wipe any oil or grease from rubber mallets or rubber handle grips to prevent damage to the rubber.

So get out there and hammer up a storm, safely.

How many complete doubly-terminated quartz crystals can you find in this design? By Michael Kessler

One terminated quartz crystal is demonstrated at the left. Answer below.



This type of puzzle was used to raise funds for the Brooklyn Mineralogical Society in 1998 in the *Crystal Coloring Book* written by Michael Kessler. Readers who enjoy doing these exercises in observation and recognition can get more free by sending a S.A.S.E. to INXLS, P.O. Box 290090, Brooklyn, NY 11229-0090. The bulletin of the Brooklyn Mineralogical Society, *The Crystal Courier*, also contains one such puzzle each month (except July and August). Address for the bulletin is *The Crystal Courier*, The Brooklyn Mineralogical Society, c/o The Geology Department, Brooklyn College of the City University of New York, 2900 Bedford Avenue, Brooklyn, New York 11210. Cost of the bulletin is \$10/year. *The Crystal Coloring Book* may be purchased in its entirety by sending a check for \$5 made payable to Michael Kessler and sent to the INXLS address. For those interested, INXLS also publishes learning exercises for intermediate school children. Teachers interested can email them at INXLS@aol.com

Answer: there are 6 crystals hidden within the design.

Top 10 Tips from Martha Stewart's New Book, *Decorating with Fossils*

Lithosphere April 1998

Ottawa Paleontological Society Newsletter

via *Rockhound Record* (March 1998; Cecilia C. Flores, Editor)

10. Attach some wing-like brachiopods to the backs of your trilobites with a hot glue gun and spray paint them gold. Hang them on the Christmas tree as paleo-angels. Bumastoids are especially cute.

9. Long, thin cephalopods make nice swizzle sticks for your guests' drinks.

8. Cut hollow dinosaur leg bones into 2-4 cm sections, glue a brachiopod on the side and spray paint gold to make elegant napkin rings.

7. Turn a large trilobite upside-down and hollow it out with an air scribe. It makes a very attractive soapdish.

6. Create a festive wreath by using your glue gun to stick large fossil shark teeth onto a loop of curly wire. Spray paint green and wrap with gold ribbon.

5. Drill a hole through the ends of large brachiopod and bivalve shells and string them together with mono-filament fishing line to make a lovely wind chime. I had mine tuned in the key of G-major, and when properly arranged and hung in a 7 km/hr westerly breeze, it plays the first three bars of Bach Brandenburg Concerto #4.

4. A fossil fish plate from Solnhofen, once glazed and fired, makes a lovely serving platter for hors d'oeuvres or salmon.

3. Using a hammer and screwdriver, smash and pry off the pearly, opalized outer layer from *Placentiaceras ammonites*. Then nip the pieces to the right size with a pair of tile nippers and set them with grout into a colorful peacock or cherub mosaic as a delightful backsplash for the kitchen sink.

2. If you have an old, intact Neanderthal skull, cut off the top of the cranial vault, line with lettuce leaves, and use as a bowl for dip. Cherry tomatoes in the eye sockets give it a friendly look.

1. Mount a Tyrannosaur mandible complete with teeth on the vestibule wall at the cottage. It makes a sturdy and rustic coat hanger. Don't forget to round off the tooth points and serrated edges with a Dremmel tool to prevent damage to coats.

Field Trip Phobias

Lithosphere February 1998

Dee Grover, FGMS Member

These phobias and resulting fears
will really upset your enjoyment of field trips

Phobia	...	Fear
Batophobia	...	Walking
Eagophobia	...	Work
Kyphobia	...	Stooping
Mysophobia	...	Dirt
Ombrophobia	...	Rain
Sitophobia	...	Food
Thixophobia	...	Touching
Trapophobia	...	Making Changes
Vesteophobia	...	Clothing

Then there is the phobia I could not find—the fear of spelling long words. Here is a word to test anyone's phobia (it's the name of a hill in New Zealand):

Taumatawakanhangakouauamateopokaiwhenuakitanatatau.

[Ed. Note: And there's always the disease some miners get from inhaling very fine particles of silica dust:

pneumonoultramicroscopicsilicovolcanoconiosis.]

Other trivia from Dee Grover:

- Western Europe is sinking at the rate of one inch every ten years
- The Atlantic Ocean is widening by one centimeter every year.
- The main ingredient of bricks and glass is sand.
- Plymouth Rock weighs seven tons.



Lithosphere

Fallbrook Gem and Mineral Society, Inc.

Fallbrook Gem and Mineral Society, Inc.
P.O. Box 62; Fallbrook, CA 92088-0062
<http://www.inetworld.net/rbusch/fgms/>



DVESS Directory for 2020

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Membership Information

Regular memberships are entitled to participate in all DVESS activities.

Regular Membership:

\$20.00 for the 1st family member + \$5.00 for each family member

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

Delaware Valley Earth Science 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 in, knowledge of, 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>)

Delaware Valley Earth Science Society Inc. (DVESS)

Delaware Valley Earth Science Society

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DVESS Website: <http://www.DVESS.org>



To submit an article or photos for publication in the DVESScapades, contact the Newsletter Editor at aquamarinepaisleyorchid@yahoo.com.

