

DVESScapades

escapades: interesting, stimulating, exciting activities and adventures



Delaware Valley Earth Science Society Newsletter

November 11, 2009



Program: Judith Goldberg

"FOSSILS IN CHERRY HILL"

followed on Saturday the 14th, we hope, by a field trip to find our own local fossils in Cherry Hill!!!

We'll have coffee and snacks waiting for you!



President's Message - by **AnnLynne Benson**, DVESS President and EFMLS Director
DVESS has been active and growing as Summer gave way to Fall. Our area is bright with the spectacular color changes of leaves and just before it gets too cold to go on a field trip, Judith Goldberg will give us a presentation we'll remember for a long time to come. On Nov. 11, Judith will present "FOSSILS IN CHERRY HILL" followed, we hope, by a field trip to find our own local fossils!!!

OCTOBER MEETING: Gene Hartstein came from Delaware to speak about FOSSIL FAKES AND FORGERIES. Thank you Gene for an excellent presentation.

OUR ANNUAL BANQUET was held at Vitarelli's Restaurant in Cherry Hill. The food was again splendid, several members brought desserts and everyone had a great time. Thanks to Gary for providing great door prizes for all and silent auction items!! Using our NEW PROJECTOR, we saw a National Geographic program "SEA MONSTERS: A PREHISTORIC ADVENTURE IN 3D" provided by Grant; Terry provided the 3D glasses. The club picked up part of the cost for the evening and a good time was had by all. Thanks to everyone for making our banquet such a success!!

As usual, I bid on too many things, and our Rockreation Room - already groaning under the weight of its vast collection - will have to find room to squeeze in a few additional specimens. All the more so because, as I write this, Mel is in Pennsylvania at ULTRAVIOLATION undoubtedly "collecting" some more fluorescents.

The **ANNUAL FREE TOUR OF STERLING MINE** was enjoyed by several members; this year they were able to collect also, but that was cut short by rain.

On Friday, as I was coming out of WaWa with my morning coffee, Mike from the Clementon Water Department stopped me and asked if I was the lady with the "glowing rocks". I assured him

I was and as we chatted, I gave him a club brochure. We hope to see Mike and his son at a future meeting. WE HAVE ENOUGH BROCHURES TO GO AROUND - if you want some to send to your local school, give to your friends, or just keep handy in your car, you can pick some up at the meeting Wednesday Nov. 11.

Thank you Terry for setting up my email address - now anyone who wants to contact me can easily remember PRESIDENT@DVESS.ORG.

DUES ARE DUE - please get your check into the mail or see the website for additional instructions. Hopefully you have been enjoying your participation in our club and would like to continue doing so. Dues are due (We operate on a calendar year). Please bring them to a meeting or to Gary at his store or send them to the PO box. Don't miss out on all the great programs, field trips and other wonderful activities we offer.

Our **ELECTION** coming up in December could be history-making!! An addendum to our Constitution and By-Laws would provide for a Junior member, 16 years of age or older, if an active member of the club for several years, to run for a position on the Executive Board. If passed, it would then be possible for our slate for the December election to be as follows:

President	Grant Elliott or Gerald Fiegin
1 st Vice President	Lou Detofsky
2 nd Vice President	Jonathan Fiegin
Secretary	Richard Murray
Treasurer	Gary Weinstein

I will remain on the Board as Past President. Nominations from the floor will be entertained prior to the vote.

FIELD TRIPS - IN ACCORDANCE WITH FEDERATION INSURANCE REGULATIONS, THE FOLLOWING FIELD TRIPS ARE ANNOUNCED:

We will be traveling by **car pool or caravan** from Gary's store unless otherwise noted:

Sunday Nov. 8 - Tuscaroara Lapidary Society show at Church Farm School in Exton, PA - 10 am

Saturday Nov. 14 - fossil hunting in Cherry Hill - 10:30 am

Saturday Jan. 30 - Rutgers Geology Museum Open House and Mineral Sale - 8 am

PLEASE CALL ANN OR GARY TO CONFIRM
PLEASE CHECK THE WEBSITE FOR ADDITIONAL INFORMATION

Have you contacted your local high school and middle school science teachers yet to let them know about DVESS? What are you waiting for??

Mel LeCompte has spent many hours preparing lessons for the Junior Rockhounds Merit Badge Program.

Each and every one of you is important in helping keep the lines of communication, education, and involvement alive, not only our club, but in the Federation as well. One place this teamwork can be seen is in the preparation for the Sterling DIGG, coming up in, April 2010. Many people have taken on tasks which together will make it possible for you to enjoy a collecting experience rockhounds in other parts of the globe can only dream of - night collecting in the Fluorescent Mineral Capital of the World. See www.uvworld.org for more information.

Being stuck indoors while it's raining or snowing is a great time to write an article for your newsletter. Your fellow club members, as well as your editor, will greatly appreciate your efforts. It doesn't have to be anything elaborate: your take on a field trip, a get-acquainted blurb about a new (or old) member, some thoughts on a mineral or fossil that you found while on vacation, or on research you've done on the internet.

Now is the time to think about the Spring sessions at Wildacres. More information can be found on the EFMLS website <www.amfed.org/efmls/wildacres.htm>.

Get involved, get active. Invite a friend to a meeting. Attend one of the upcoming shows. You'll get more out of life when you LIVE IT!!

Mark your calendar for Philadelphia Mineral Treasures And Fossil Fair's 30th Annual Show and Sale sponsored by the Delaware Valley Paleontological Society and the Philadelphia Mineralogical Society. Check the DVPS website for more info.

Again this year – they will have several speakers talk about paleontology, geology and minerals.

Dr. Ted Daeschler, Curator of Vertebrate Paleontology at The Academy of Natural Sciences will speak on The Nunavut Paleontology Expeditions: Late Devonian Fossils from the Canadian Arctic. For more information on Dr. Daeschler's research, you can go on the web to

http://clade.ansp.org/vert_zoology/people/daeschler/ .

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

Have you visited a good internet site about minerals? There are a lot of really great mineral websites available from which you can learn a lot.

www.rockhounds.com This terrific site is safe and has hundreds of links to interesting information. One of its highlights is an entire section about NASA's Mars Rover Expedition. You can also find information on crystal system, on cutting gemstones, how to wire wrap a crystal, articles on mineral stamps, and much, much more.

www.mineralofthemonthclub.org visit the Mineral of the Month Club run by Diamond Dan Publications especially for education you may also want to check out these links relating to fossil preservation and conservation sent in newsletter by Grant our Sec.

<http://www.flmnh.ufl.edu/natsci/vertpaleo/resources/prep.htm>

http://www.paleocurrents.com/docs/fossil_preparation.html

<http://paleo.cc/kpaleo/fossprep.htm>

<http://www.mineralogie.uni-wuerzburg.de/palbot/tools/preparation.html>

"Volcanoes in Maryland?", Maryland National Capital Parks and Planning Commission, Black Hill Visitor Center, 301-916-0220, <BlackHillNature.org> 11:00 am to 5:30 pm, ages 12 & up, Free. Led by Naturalist Glenn Cumings, you will visit volcanic areas around Catoctin and South Mountains, and Myersville. At Greasey Farm see volcanic fireplace, look at Native American artifacts, and visit ancient Indian quarry. Volcanic rocks may be collected along the route. Get the Montgomery Co. Recreation And Park Program Guide for registration information. (I called about this fantastic trip, but, it was already filled. Maybe we could think about our club doing this as one of our field trips. Ed)

SAFETY BE “PATIENT” OR

“A PATIENT” It was about 1:30 a.m. when the Doctor finally came in to look at my smashed finger. It had been almost five hours since I had checked in --- after all --- it was Saturday night and things were pretty hectic in the Emergency Room. “What happened?,” the pleasant young doctor asked. “Well ... I guess I was in too much of a hurry. We were on a field trip to collect rocks and minerals in a rock quarry and I decided to turn over a 300 pound rock to get some nice crystals. I could have used my six foot steel pry bar to turn the rock over, but it seemed like a waste of time to walk the 50 yards to get it. So I just rolled the big rock over with my hands. I was wearing the right safety stuff --- steel toed shoes, long jeans and heavy work gloves --- but it rolled right onto my finger! It really hurt, but I didn’t make a big deal. I took my glove off and my finger was bleeding, so I wrapped it up with several Band-Aids and put my glove back on. No one knew that I was hurt --- in fact, I used a big sledge hammer to get out some more crystals. About 8 hours later after the drive

home, my wife took one look at my swollen, blue-black finger and sent me straight to the Emergency Room.”

“When was your last tetanus immunization?,” he questioned. “About 10 years ago,” I replied --- knowing that the nurse would soon be giving me another shot. Doc then said, “I will check your X-rays and if nothing is broken, we will dress your finger and get you out of here. We will also give you an antibiotic, because we can’t take chances with infection.” I recalled that infection in bones can be deadly. Later, some good news from the doctor ---no broken bones. But my earlier decision to not get the pry bar had been a costly mistake --- 5 hours at the Emergency Room, another hour at the drugstore, more hours of follow-up at my regular doctor and the orthopedic doctor --- not to mention pain, money, and the inconvenience of having my hand in a bandage. Lesson learned --- be patient and take the extra time and effort to get and use the proper tools.

By Dave Lines, ROCK TALK, Southern MD R&M Club, Oct 2008 well worth the retelling

“If we name the left twin crystal ‘Kate’ then what do we call the right one? ‘Duplicate!’ “

A FIELD TRIP TRAGEDY

A member of the East Coast Fossil Club was killed by a cave-in on Nov. 30, 2007 while collecting fossils during a private collecting trip in North Carolina. Bob Henderson, a retired Air Force officer from Fayetteville, North Carolina died when the high wall of a

borrow pit in Elizabethtown collapsed on him. Several other fossil collectors located and uncovered him, but he could not be revived. (Old News, but “The Message”): **Always** stay away from high walls. Ed of the East Coast Fossil Club, a web group. Via THE ROCKHOUNDER Page 8 January 2009

Premiums for the EFMLS insurance programs this year are:

EFMLS Liability Insurance: \$3.124 per club member

EFMLS Accident Insurance: \$2.40 per club member

Don’t Forget How Important The Liability Insurance Is!

Without the EFMLS Liability Insurance policy, many clubs and individual Federation members could not collect on the majority of all commercially owned localities. This

includes active quarries and mines, inactive but still commercially owned quarries and mines, and well known (and not so well known) privately owned locations, where the EFMLS insurance gives that land owner that extra peace of mind. And don’t forget that it protects your club against covered lawsuits for alleged and actual claims.

Accident Insurance

The EFMLS Accident Insurance program for your club members is a very inexpensive way to provide some relief for medical expenses

incurred due an injury while on a Club

sanctioned collecting trip, meeting, event, etc.

Lesson learned!!! Please stay with our **INSURED** group on field trips and heed the warnings and information given by our safety director MEL LeCompte (Ed)

MEMBERSHIP Thank you to all of those who already renewed your membership for 2010 – this is a good start to the new year. I would like to get filled out renewal forms for all renewals this year to put in a Membership Binder so I have current records for everyone. I have attached a renewal form with this issue of the DVESS Newsletter for that purpose, and I would appreciate all of you renewing, including those of you who have already renewed, but make sure I get a filled out Renewal form with current information. It can be copied and emailed to me at either of the e-mail addresses in the info box Thank you. CDC. Editor, DVESScapades

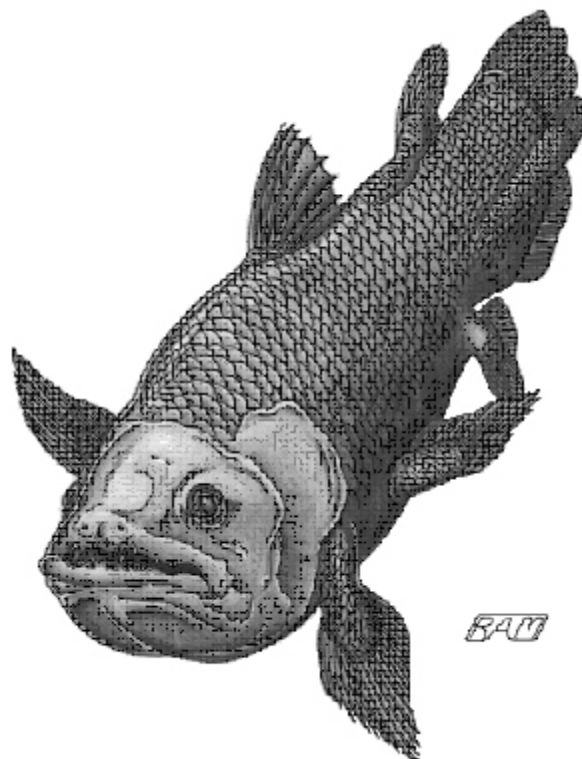
Joke taken from THE ROCKHOUNDER newsletter

A scuba diving geologist has a business to measure the relative sizes of the rises, drops, cavities and undulations of coral formations along the sea coasts. Of course this can only be done in the summer months so he takes the winters off to avoid the frigid air like we have been experiencing recently. You may tag him as a “frost-free reef ridge rater.”

UPCOMING EVENTS

New Jersey State Museum Sunday Science Lecture Series

Sunday Science Lecture Series The New Jersey State Museum is excited to offer the third season of the Sunday Science Lecture Series, sponsored by the Friends of the New Jersey State Museum. Scholarly, yet family-friendly lectures will be presented in the Museum’s Auditorium by some of the world’s most distinguished and prominent researchers in the natural sciences, including wildlife and ecology, paleontology, paleo artistry, archaeology, paleoanthropology, space science, and global climate change. The Lecture Series is free and open to the public. The experience isn’t over when the presenter is finished: following each lecture, guests will have the opportunity to ask questions, share their own experiences and ideas, and meet the featured lecturer. Bring your own specimens for the Museum’s professional paleontologists and archaeologists to identify! Each lecture begins at 4 pm. Parking is free. For more information, please call (609) 292-6740 weekdays from 8:30 to 3:30. Reservations are suggested.



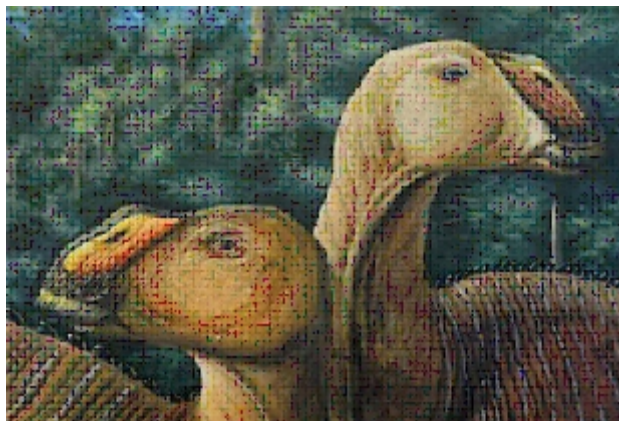
Big Fish in a Dinosaur World - October 18th

4 pm; 60 minutes; General Audience; Auditorium; Free (Already over but the info is here, you can

go to the website .)

Paleo-Illustrations - March 14, 2010 4pm; (60 min);
General Audience; Auditorium; Free

New Jersey native Larry Felder is one of the world's leading paleo artists, with much of his work featured in museums and books. He will be discussing the subjects of his art, as well as sharing many of his newest pieces.



Space is limited. Reserve your seats early!

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

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

UPCOMING SHOWS

- October 31: 20th "Ultraviolation" Fluorescent Mineral Show sponsored by the Rock & Mineral Club of Lower Bucks Co. First United Methodist Church, Fairless Hills, PA. (A fantastic show in our backyard was a very nice display with good attendance, one you should all plan for next year. Ed)
- November: 7 – 8: 49th Gemarama, 2009, "Gems of Myth, Legend & Lore" sponsored by the Tuscarora Lapidary Society. The School at Church Farm, nr. Frazier, PA
- also 7 – 8: Annual Gem, Mineral, Jewelry & Fossil Show sponsored by the Stamford Mineralogical Society. Eastern Greenwich Civic Center, 90 Harding Rd; Greenwich, CT.
- February: 20-21: 7th Annual James Campbell Memorial Gem, Mineral & Fossil Show and Sale co-sponsored by the Capital District Mineral Club and the NY State Academy of Mineralogy. Museum of the Empire Plaza, 4th Floor, Albany, NY.
- March: 6 – 7: Annual Gem & Mineral Show and 60th Annual EFMLS Convention hosted by the Delaware Mineralogical Society. Delaware Technical College, Rts 58 & 7, Stanton, DE. *EFMLS Annual Meeting Friday, March 5.*
- Mar 19-20: 40th Annual Unifour Gem, Mineral, Fossil & Jewelry Show sponsored by the Catawba Valley Gem & Mineral Club. Metro Convention Center, Hickory, NC.
- Mar 26-28: 37th Annual Atlantic Micromounters Conference hosted by the Micromineralogists of the National Capital Area. MHA Conference Center, Elkridge, MD. Registration & Info: S. Weinberger, <cscrytals2@verizon.net>.
- Mar 27-28: 38th Annual Gem & Mineral Show sponsored by the Island Rockhounds. Holy Family School, 25 Fordam Av; Hicksville, NY.
- Mar 27-28: 41st Annual Che-Hanna Rock & Mineral Club Show sponsored by the Che-Hanna Rock & Mineral Club. Athens Twp. Volunteer Fire Hall, Sayre, PA
- April 10-11: 41st Annual New York Southern Tier Geology Club Show sponsored by the Southern Tier Geology Club. Johnson City Senior Citizen Center, Johnson City, NY

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 **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

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

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

There was an old miner who loved to paint. Sadly, he could not afford canvases. But he found a solution. He would paint on the interior walls of his house. They soon became covered with his paintings. One day, a group of wayward youths broke in and defaced the paintings. The youths were soon apprehended and arrested for corrupting the murals of a miner.

Why did the space rock come to earth? The food out there was good, but the place lacked atmosphere. Ha, Ha, Ha

Dr. Hermann W. Pfefferkorn, gave an interesting presentation titled "Pennsylvania 320 Million Years Ago: Fossil Plants and Paleoclimate." Photo by **Gail Heimberger**

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Come visit DVPS the 4th Thursday of the month at the Academy of Natural Sciences in Philadelphia, PA



October 2009 Puzzle

by

Ed Loveland

Puzzle maker to the DVESScapades for many great years, and well appreciated.

THANKS ED, hope for many more!!!

A	M	B	L	Y	G	O	N	I	T	E	E	K	A	U	Q
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B	A	U	X	I	T	E	T	I	C	S	I	R	A	V	S

THE WORDS ARE;

ACTINOLITE	AGATE	ALABASTER	ALBITE
ALEXANDRITE	ALLANITE	ALLUVIALS	AMBLYGONITE
ANDALUSITE	ARAGONITE	ASBESTOS	AUGITE
AXINITE	BABINGTONITE	BARITE	BAUXITE
BENITOITE	BENTONITE	BERTRANDITE	MICA
PEGMATITE	QUAKE	SALT	SUBLIMATE
ULEXITE	VALENCE	VANADINITE	VARISCITE
VEIN	VUG	WAVELLITE	WULFENITE

AFMS CODE OF ETHICS (American Federation of Mineralogical Societies)

- I will respect both private and public property and will do no collecting on privately owned land without the owner’s permission.**
- I will keep informed on all laws, regulations of rules governing collecting on public lands and will observe them.**
- I will to the best of my ability, ascertain the boundary lines of property on which I plan to collect.**
- I will use no firearms or blasting material in collecting areas.**
- I will cause no willful damage to property of any kind - fences, signs, buildings.**
- I will leave all gates as found.**
- I will build fires in designated or safe places only and will be certain they are completely extinguished before leaving the area.**
- I will discard no burning material - matches, cigarettes, etc.**
- I will fill all excavation holes which may be dangerous to livestock.**
- I will not contaminate wells, creeks or other water supply.**
- I will cause no willful damage to collecting material and will take home only what I can reasonably use.**
- I will practice conservation and undertake to utilize fully and well the materials I have collected and will recycle my surplus for the pleasure and benefit of others.**
- I will support the rockhound project H.E.L.P. (Help Eliminate Litter Please) and will leave all collecting areas devoid of litter, regardless of how found.**
- I will cooperate with field trip leaders and those in designated authority in all collecting areas.**
- I will report to my club or Federation officers, Bureau of Land management or other authorities, any deposit of petrified wood or other materials on public lands which should be protected for the enjoyment of future generations for public educational and scientific purposes.**
- I will appreciate and protect our heritage of natural resources.**
- I will observe the “Golden Rule”, will use “Good Outdoor Manners” and will at all times conduct myself in a manner which will add to the stature and Public “image” of rockhounds everywhere.**

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

Membership Form

First Name: _____

Last Name: _____

Address: _____

City: _____

State: _____

ZIP+4: _____

Phone: _____

Email: _____

Cell Phone: _____

Profession, School or Major Work

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

Okay to share _____

Do NOT share _____

Newsletter Delivery via

Email _____

Postal Mail ___

Type of membership **Regular Membership:**

\$15.00 for the 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

First Name: _____

Last Name (if different)

First Name: _____

Last Name (if different)

First Name: _____

Last Name (if different)

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, list _____

How did you learn of DVESS? _____

Other clubs you belong to _____

Comments _____

What NON-DVESS interests or hobbies do you have? _____

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

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Electronic newsletter only (more info from Diamond Dan Publications Newsletter)

This is printed info about a recent episode on the history channel. Check it out it will be repeated multiple times on the channel. I also saw the same thing on 'Monster Quest', same channel

DIG THIS!

Mammoth Tusk Discovered On Santa Cruz Island from *Press Release - The Nature Conservancy 1/14/2009 Submitted by Don Miller to the DVPS newsletter, (reprinted with permission)*

As a startling reminder of just how ancient the island is, a fully intact tusk, most likely belonging to a mammoth, was discovered on Santa Cruz Island in January 2009. Several other bones, including ribs and possibly a femur, were found near the four-foot-long tusk. "This is a very rare and exciting discovery. It's not yet known whether these are the bones of a Columbian mammoth or a pygmy mammoth, but in either case this is a remarkable find," says Dr. Lotus Vermeer, the Conservancy's Santa Cruz Island project director in the northern Channel Islands.

The northern Channel Islands are the only known island home for the pygmy mammoth. It is thought that this dwarf species of the Columbian mammoth evolved due to a limited food supply. The pygmy mammoth stood close to eight feet high at the shoulder and weighed 2,000 pounds, compared with the Columbian species, which stood 14 feet tall and weighed in at 20,000 pounds. Pygmy mammoth remains date from more than 47,000 years ago, beyond the limits of radiocarbon chronology.

The pygmy mammoth may have survived until the early colonization of the Channel Islands by the ancestral Chumash Indians approximately 11,000 – 12,000 years ago. This discovery underscores the importance of protecting unique landscapes like Santa Cruz Island," explains Dr. Vermeer, "not only to preserve its plants and animals, but to keep alive the amazing cultural history of the island's Chumash Indians, who lived in an era when mammoths roamed these islands."

The Conservancy has actively protected Santa Cruz Island since 1978. The Nature Conservancy, the National Park Service and



U.S. Fish & Wildlife Service pooled their resources, engaging in an intensive, sciencebased restoration program to save the

island fox and revitalize the natural communities of Santa Cruz Island. After three decades of work, Santa Cruz Island has emerged as a model for island restoration and conservation. This latest discovery was made by Kristina Gill, an archaeology graduate student from the University of California, Santa Barbara who was working at a Chumash site at the university's field research center, which is hosted by the Conservancy. The Conservancy has invited mammoth expert Dr. Larry D. Agenbroad, director of the Mammoth Site of Hot Springs, South Dakota, to lead the excavation of the mammoth bones, starting in late January. Once excavation begins, Dr. Agenbroad will confirm which species of mammoth it is. Following excavation, the bones will be turned over to the Santa Barbara Natural History Museum.

How Did Mammoths Get to the Island? During the late Pleistocene era, the Channel Islands were part of one vast island called the Santarosae, which was located five miles from the mainland. Scientists believe that large mainland mammoths, attracted by the smell of the Santarosae island grasses, swam across the then-shallow Santa Barbara Channel to reach the large island. Centuries later the sea level began to rise to contemporary levels, isolating what

are today's Channel Islands from the mainland and

stranding the mammoths. This discovery of a fully intact mammoth tusk is extremely rare,

I (ed) was watching the History channel between 'trick or treats' and happened on this program, therefore it is still being shown at random times. I believe there is a way to find the list of shows some how on the internet. Good luck.

DIG THIS!

Shark Fossil Adds Evidence to Great White's Origins - *University of Florida Press Release March 12, 2009*

Submitted by **Don Miller** DVPS Past-President (DVPS Newsletter V33 I2 pg 5)

A new University of Florida study could help resolve a long-standing debate in shark paleontology: From which line of species did the modern great white shark evolve?

For the last 150 years, some paleontologists have concluded the great white shark, *Carcharodon carcharias*, is a smaller relative of the line that produced *Carcharodon megalodon*, the largest carnivorous fish known. Other paleontologists disagree, arguing the great white shark evolved instead from the broad-toothed mako

shark. The second group contends megalodon, which grew to a length of 60 feet, should have its genus name switched to *Carcharocles* to reflect its different ancestry.

The study in the March 12 issue of the *Journal of Vertebrate Paleontology* falls squarely into the mako camp.

It concludes megalodon and modern white sharks are much more distantly related than paleontologists initially believed.

and only a few other fossils have been found on Santa Cruz Island over the last 150 years. The last great discoveries on the island include a tusk unearthed in 1985 and a portion of a femur and a humerus found in 2005; each of these bones was from a Columbian mammoth. There have been more substantial finds on neighboring Santa Rosa Island, including a whole pygmy mammoth skeleton that was found and excavated in 1994 and the Arlington Springs man—the earliest human remains discovered in the Americas, which date back about 13,000 years.



Dana Ehret, the lead author of a UF study on the great white sharks' origins, is seen here with the shark fossil in the study at Gordon Hubbell's private gallery in Gainesville, Fla., on March 6, 2009. Hubbell, a study coauthor, recently pledged the fossil to the Florida Museum of Natural History

"I think that this specimen will clarify things," said lead author Dana Ehret, a vertebrate paleontology graduate student at the Florida Museum of Natural History located on the UF campus. "When we only have isolated teeth to describe, it's very hard to come to a definitive conclusion." The study is based on a remarkably well preserved 4- to 5-million-year-old fossil from Peru of an early white shark species: a complete jaw with 222 teeth intact and 45 vertebrae. Most ancient shark species are known only from isolated teeth. Based on tooth size and analysis of growth rings within the vertebrae, the shark was about 20 years old and 17 to 18 feet long, a size in the range of modern white sharks.

Having the teeth in place allows researchers to see important distinguishing characteristics that help determine a fossil's genus and species, such as whether a tooth curves toward the outside of the jaw or its midline, Ehret said. He believes the fossil belongs to a white shark species closely related to *Isurus hastalis*, a broad-toothed mako shark that probably grew to 27 feet long and lived 9 million to 10 million years ago.

An olive-grove farmer trained in fossil collection discovered it near his home in the desert of southern Peru in 1988. It has since been part of a private collection and was donated to the Florida Museum of Natural History in December. "It's the only fossilized partial skull of a white shark that's ever been found," said Gordon Hubbell, the fossil's owner and study co-author. Hubbell purchased the fossil from the farmer during his first trip to Peru, which coincidentally occurred only a few days after the discovery.

The specimen came from an area known as the Pisco Formation, famous for its rich fossil beds dating from the late Miocene to Pleistocene, about 1 million to 9 million years ago. The region was once a sheltered, shallow marine environment ideal for preserving skeletons. The formation has produced articulated broad-toothed mako shark skeletons as well as fossils of whales, aquatic sloths and sea turtles.

The study strengthens the evolutionary link between the extinct mako and the modern white shark, said vertebrate paleontologist Kenshu Shimada, an associate professor at DePaul University in Chicago. Shimada said paleontologists now need fossil skeletons from megalodon and a shark from the extinct Otodontidae family such as *Otodus*, a large prehistoric mackerel shark that lived about 40 million to 60 million years ago.

"If we can demonstrate the strong link between *Carcharocles* and *Otodus* from such skeletal remains," Shimada said, "we may be able to settle the evolutionary and taxonomic debates."

Megalodon was first classified in the same genus as the modern white shark in the 1840s based on the similarity of tooth shape and serrations specialized for eating marine mammals. Mako sharks have no serrations because they feed primarily on fish. Ehret says the shark fossil's coarse serrations are evidence of a transition between broad-toothed mako sharks and modern white sharks. "Here we have a shark that's gaining serrations," he said. "It's becoming a white shark, but it's not quite there yet."

The transition from megatooth sharks like megalodon to modern white sharks would require changes in body size and tooth serrations, thickness and enamel, Ehret said. By contrast, the transition from the broad-toothed mako shark to modern white sharks would require only the presence of serrations and a shift in the slant of a key tooth position.

October 14, 2009 General Meeting minutes

By Grant Elliott, Recording Secretary

Meeting was held at Centenary United Methodist Church in Berlin, NJ.

Present were Ann Lynne Benson- President/ Special Events Coordinator, Gary Weinstein- Treasurer/ Programs, Terry Wilson- Website Coordinator, Grant Elliott- Recording Secretary, Gerald Feigin- 1st VP/ Field Trip Chair, Mel LeCompte- Jr Rockhound Coordinator, and Carol

DeCuzzi- Newsletter Editor/ Membership Chair.

Ann gavelled the meeting to order at 7:55pm and obtained count on Banquet (10/18/09) attendees and Sterling Hill jaunt (10/24/09).

Gene Hartstein then made an excellent presentation on fossil fakes and forgeries- Pretty scary if one collects fossils.

Potential candidates were discussed for 2010. Grant and Gerald are in the running for President. Richard Murray nominated for Recording Secretary, Jonathan Feigin for 2nd VP, Ann for 1st VP, and Gary for Treasurer. Nominations will be discussed further at the Banquet.

Drawing winners were Bob Todd and Carol DeCuzzi.

Executive Board meeting on October 21, 2009 will be at Gary's shop.

BANQUET: Event to take place at Vitarelli's in Cherry Hill on Sunday October 18, 2009 2pm-6pm. Program will be National Geographic's Sea Monsters in 3-D. Terry will provide the 3-D glasses.

Meeting adjourned at 9:55pm.

Geology 101



to right:
Geologist Brian Oram points to a layer of anthracite coal in an exposed section along Rt. 309 at the Borough of Luzerne. All the layers of coal

were once horizontal. The collision of the continental plates created the uplifting.

To left: This "smiley face," known as a syncline, indicates a fault where the layers of rock collapsed. The syncline in the photo seems to have concentrated the coal that was in a layer rising from left to right and pushed it deeper into the rock formation where it was able to escape being scraped away by glacial action.





Geologist Brian Oram uses a sheet of paper to demonstrate how the layers of the Earth had folded. He explained that after the sedimentary layers formed, the drifting of the continents caused a collision of plates below what is now the northeastern U.S. The Continental Collision, much like the squeezing of the paper, caused portions of the land to rise into ridges or mountains and other areas to be pushed below, forming valleys.

What Lies Beneath Northeastern Pennsylvania?

Mountains, plateaus, valleys, gorges and coal mines—Wow!

Geologist Brian Oram points to a layer of anthracite coal in an exposed section along Rt. 309 at the Borough of Luzerne. All the layers of coal were once horizontal. The collision of the continental plates created the uplifting.

This “smiley face,” known as a syncline, indicates a fault where the layers of rock collapsed. The syncline in the photo seems to have concentrated the coal that was in a layer rising from left to right and pushed it deeper into the rock formation where it was able to escape being scraped away by glacial action.

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You don't have to be a geologist to notice that northeastern Pennsylvania is a special place. It has mountains, plateaus, valleys, gorges and coal mines—with many variations of often rugged and picturesque landscapes. To find out why northeast PA is the way it is, it wouldn't hurt to consult with a professional geologist like Brian Oram. Oram is an administrator in the Environmental Engineering and Earth Sciences, and the director of the Center for Environmental Water Testing Laboratory, both at Wilkes University.

Oram drove to a section north of Wilkes-Barre where a rock mountainside had been blasted open to construct Rt. 309 near the borough of Luzerne. Here, layers of rock lay exposed one upon another. To our left, he pointed out the upper layer of rock, the Llewellyn Formation—named after the community of Llewellyn in Schuylkill County.

The Llewellyn layer is mostly gray with buff, brown and black areas formed of sandstone, siltstone, shale, conglomerate and anthracite

coal in repetitive sequences. To our right, he pointed out the younger rocks of the reddish gray Mauch Chunk formation—named after the former town that merged into the borough of Jim Thorpe.

Looking at the section through the mountain reveals that the rocks are arranged in layers. Today, these layers either rise or fall—rarely are they flat, but these layers were originally flat. The layers were formed by the action of water and decaying plant life leaving behind layers of sediments. When conditions changed, the layers of sediments changed. Thus, the sediments, which formed sedimentary rock, contain a record of the history of the Earth. If this process continued undisturbed, a section through the Earth would reveal what Oram calls “layer cake geology.”

“In most places, the geology ranges from layer cake geology where the formations were deposited in near horizontal beds that now tend to tip or plunge in one direction,” he noted, “to more exciting places where we have a series of anticlines and synclines where rocks have been folded.”

Oram describes these features as frowns and smiley faces. The frowns—anticlines, where rocks folded downward from a crest, and the smiley faces—synclines, where the rocks slope upward forming a trough, are characteristic of the rock formations that lie beneath Northeastern Pennsylvania. A coal bed can be seen to be in a layer between upturned rock layers. At a point where the layers change direction, coal can be observed accumulating in a pocket. Oram used a sheet of paper to demonstrate how

the layers had folded. Holding the paper flat, he pushed the two ends together and the paper buckled and became wavy. He explained that after the sedimentary layers formed, the drifting of the continents caused a collision of plates below what is now the northeastern U.S. The Continental Collision, much like the squeezing of the paper, caused portions of the land to rise into ridges or mountains and other areas to be pushed below forming valleys. Through erosion and the movement of glaciers, the upper rock formations were scraped away. “The coal was protected in synclines as the glaciers advanced,” Oram noted. “When the glacier retreated, we had valleys where coal formations were exposed on the side slopes of the valley and as we worked our way into the core of the valley, we found deeper and larger deposits.”

In Northeastern Pennsylvania, coal can be found exposed at the surface, and large amounts of coal are within 600 feet of the surface. Coal was formed millions of years ago at a time when Pennsylvania was further south and much warmer, with a climate similar to the Caribbean. The land was swampy. As time passed, its decaying plants became peat, and then turned to coal. When the period of mountain building began, the horizontal layers of coal bent into large folds and under heat and pressure, over time, transformed into anthracite. The mountain building was followed by weathering and glaciers.

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