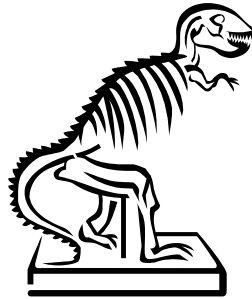


DVESScapades

escapades: interesting, stimulating, exciting activities and adventures



Fossil Edition



(bare bones)



DELAWARE VALLEY EARTH SCIENCE SOCIETY NEWSLETTER

Next Meeting: Wed., Feb. 8, 2012

Geology DVD "Living Rocks" - how the earth forms rocks

President's Message: February 2012 by AnnLynne Benson

Our heartfelt sympathy goes to Carol DeCuzzi on the loss of her beloved husband, our senior member Pete DeCuzzi. Pete was a quiet presence in our somewhat boisterous meetings, and he was well thought of by all who knew him, including Elaine Tuttle, a member of the Centenary Church congregation, who fondly remembered him hiring her as a teacher many long years ago (Elaine retired this past year). **MANY THANKS** to Carol DeCuzzi for her years of outstanding service as newsletter editor, and for her willingness to resume editorship beginning in March.

Preparations are already under way for our favorite annual Field Trip, the Sterling Mine tour and day/night Digg scheduled for Saturday, April 28. You won't want to miss this marvelous opportunity to hang out with your fellow collectors, crack a few rocks, and discover the wonder of fluorescent minerals to add to your collection.

FLASH - THIS NEWS JUST IN -

On Friday night Feb. 3, fellow DVESS member Mike Murphy and I witnessed a large blue and very bright white fireball in the Southwestern sky which had 3 or 4 fragments following. This event was also reported by 30 people on *The Latest Worldwide Meteor/Meteorite News* (<http://lunarmeteoritehunters.blogspot.com/>).

FIELD TRIP - Saturday April 28, 2012 <STERLING HILL SUPER DIGG> “day-and-night” mineral collecting at Sterling Hill Mine (9:00 AM - 11:00 PM); organized by the Delaware Valley Earth Science Society and Northeast Field Trip Alliance; cost of \$20/person includes museum and extended mine tour and registration; fee of \$1.50/lb. is charged for those participating in mineral collecting; preregistration required; see www.uvwworld.org for information. **NOTE:** Mel LeCompte, our Junior Rockhounds teacher, helps run the day and night dig; he is always looking for additional personnel to help out. If you can provide time and manpower, please see Mel at the next meeting.

MARK YOUR CALENDARS – Saturday, March 3, 10am - 6 pm & Sunday March 4, 11am - 5 pm Delaware Mineralogical Society’s annual show at Delaware Technical Institute, I-95, Exit 4 – first right turn after you exit. **THEME – “Made Mined in America”;** see website for DISCOUNT coupon: <http://www.delminsociety.net/marchshow.htm>

March 31 – April 1, 2012 - Plymouth Meeting, PA. - The **Philadelphia Mineralogical Society** and the **Delaware Valley Paleontological Society** present a joint show and sale at the LuLu Temple, 5140 Butler Pike in Plymouth Meeting, PA. Saturday (March 31) 10am to 5pm and Sunday (April 1) 10am to 4pm. Fossils, Minerals, Gems, Speakers, and Exhibits. Learning activities include a Fossil Dig and a Kid’s Mineral Corner. Also, food, door prizes and Scouting Merit Badge information. Admission: \$5.00; \$1.00 kids under 12. All uniformed Scouts are free. Show Chair Karenn Snow 609-953-1987 Check the website at www.philamineralsociety.org

WEBSITE OF THE MONTH

<http://www.tgms.org/> 58th Annual Tucson Gem and Mineral Show Feb. 9 – 12, 2012

WILDACRES

Wildacres is a private retreat nestled just off the Blue Ridge Parkway near Little Switzerland, NC. Organizations such as the Eastern Federation (EFMLS) have the opportunity to utilize this facility for workshops during the year - all at a very, very nominal rate. Lodging is in modern private rooms; all meals are included and because Wildacres is on its own private mountain, we’re away from traffic noise, pollution, blaring radio and TV. We do get to hear the sounds of birds chirping and happy voices!

The Spring session of fun and learning is April 10 - 15. World renowned photographer Jeff Scovill will be our keynote speaker. Jeff will share six illustrated programs with us during the week. In addition, all participants will have an opportunity to take one or two classes taught by an outstanding cadre of instructors.

The fall session will be held from September 3 - 9 and will feature Julian Gray, curator at the Tellus Museum in Cartersville, GA as keynote speaker. As in Spring, participants will have an opportunity to take one or two classes during their time together, again taught by outstanding instructors.

A list of class offerings for each session can be found on pages 6 and 7 of the January EFMLS Newsletter at <http://www.amfed.org/efmls/efjan12web.pdf> and an application form is on page 8. Register as early as possible since class size is limited.

AND if you’ve never been to an EFMLS Wildacres Workshop, you can apply for one of two scholarships being given this year. Information and an application form can be found on the Wildacres web site <www.amfed.org/efmls Just click on the Wildacres tab. Tuition for the April session is \$350 per person. For September it will be \$370 per person. The only additional cost to participants will be for materials used in the class or classes taken and we make every endeavor to keep these reasonable.

Registration opens for both sessions on January 1. Why not bring a few of your fellow club members with you and perhaps make it a club field trip? I’m looking forward to seeing you at Wildacres in 2012!

MYSTERY MINERAL OF THE MONTH

PSUEDOMORPHS

A pseudomorph occurs when a crystal changes chemically or structurally but keeps the shape of the original. Four classes of pseudomorphs (false forms) are:

- 1) **Incrustation** – substitution of one mineral with another. (Example: crusts of quartz over fluorite.)
- 2) **Replacement** – gradual removal of the original, material and a replacement by another. (Example: fossilized wood – original fiber replaced by silica).
- 3) **Alteration** – nucleus of original crystal in center of altered crystal. (Example: cuprite in octahedral malachite).
- 4) **Paramorphism** – composition unchanged. (Examples: aragonite to calcite (both are CaCO₃), rutile after brookite (both are TiO₃).

Thanks to the Rock and Mineral Club of Lower Bucks County for this information from their January 2012 newsletter "Rock Chatter"

K-T Extinction of Birds

Bob Sheridan September 18, 2011

used with permission of *The Paleontograph, Vol. 1, Issue 1, January, 2012*

Birds originated in the Late Jurassic (if you count Archaeopteryx as the first bird) and diversified in the Cretaceous. (Most well-preserved Early Cretaceous birds are found in China.) In the Cretaceous there were two major classes of birds: Enantiornithes and Ornithurae which are distinguished by how the ankle and foot bones are fused. The Enantiornithes were the most abundant and diverse, but only the Ornithurae survive to the present day. The families of modern birds definitely existed in the Paleocene. Since data is scarce, two scenarios for the later evolution of birds have remained plausible:

- Modern bird families existed in the Cretaceous and most survived the K-T extinction.
- Almost all birds were wiped out at the K-T and the modern families arose later from the few survivors.
- One way of addressing this is to see if "archaic" birds, i.e. not in modern families, survived to the end of the Cretaceous.

Longrich et al. (2011) examined bird fauna fossils from the Maastrichtian (the latest 1.5 Myr. of the Cretaceous). These are from the Hell Creek Formation (Montana), Lance Formation (Wyoming), and the Frenchman Formation (Saskatchewan). The main approach is to generate a phylogenetic analysis of the species existing at that time.

Interestingly, these authors confined their analysis mostly to characteristics of the coracoid bone. In mammals, the coracoid is part of our shoulder blade, but in birds, the coracoid is a long bone. The humerus articulates at one end of the coracoid, and the other end braces against the sternum. The clavicle (in birds called the furcula-- or wishbone) also articulates with the coracoid. Apparently the coracoid is very distinctive for different types of birds. The authors also include some data about the tarsometatarsi bones for which the coracoid is not preserved in this set of fossil. In birds the ankle bones (tarsi) and foot bones (metatarsi) are fused, and these also differ among birds, especially between enantiornithes and ornithurines, as stated above.

The authors identified 17 types of coracoid, 15 of which could be assigned to a previously known fossil species. There are a number of enantiornithines and ornithurines. The coracoids show a reasonable range of bird sizes, from 200 grams to 5 kg.

This is somewhat narrower than the range of modern birds, and the difference is probably due to the small number of samples, but it does suggest birds already filled a variety of ecological roles. We know from this sample that archaic birds such as enantiornithines survived until the end of the Cretaceous, although they were not as abundant as ornithurines at that time. Earlier work from the authors showed that no enantiornithines survived to the Paleocene. Also, there are no modern families of birds represented in this sample.

Overall the data is consistent with a model where birds were diversified in the Mesozoic, almost all were wiped out at the K-T extinction, and the few survivors diversified into modern bird families.

Sources: Longrich, N.R.; Tokaryk, T.; Field, D.J.

"Mass extinction of birds at the Cretaceous-Paleogene (K-Pg) boundary."

Proc. Natl. Acad. Sci. USA 2011, 108, 15253-15257.

CLUB BROCHURES – Please pick up one or two yellow club brochures and have them on hand in your vehicle or handbag to give out to folks. If you see a parent and child, strike up a conversation by asking, “Does your child like rocks or dinosaurs?” Offer them a club brochure; if they’re not from our area, addresses and websites for the American Federation and EFMLS are on the back of the brochure. Your small gesture may make a world of difference to that child, his/her family, and to our club. New folks, especially kids, are the lifeblood of every club! If we want this club to continue providing us with speakers, activities and lots of fun, we **MUST** invest just a little bit of effort to get the word out.

MARK YOUR CALENDARS – The East Coast Vulture Festival will be held in nearby Wenonah, NJ on Saturday, March 3, 2012 from 2 pm-5 pm at the Wenonah Community Center (former train station) See <http://www.eastcoastvulturefestival.org/> for more info. all events are FREE.

The current issue of EFMLS News now available at <http://www.amfed.org/efmls/effeb.12web.pdf>. Check out the latest news & views from the Eastern Federation and get up-to-the-minute details of the 2012 Wildacres program.



QUOTE OF THE MONTH: “If you wish to make an apple pie truly from scratch, you must first invent the universe.”

~ ~ Carl Sagan, astronomer and writer (1934-1996)

Each One-Teach One: **DO YOU HAVE** knowledge or a skill that you could share with other members? Talk to Gary about scheduling a meeting, or a Saturday workshop, to teach other members how to do what you do so well (or simply enjoy doing). The Eastern Federation offers recognition annually for clubs that participate in the Each One Teach One program.

MINUTES OF January 2012 GENERAL MEETING

No minutes as the meeting was a visit to the Planetarium at Rowan University.

KEEP THOSE VALUABLES OUT OF SIGHT!

Our friends the MINERAL MEN from TV were robbed at the Tucson show. The window of their truck was smashed with a sledgehammer or something similar), and a bag containing three Campos was stolen along with various personal items. Just in case you are offered the opportunity to purchase the stolen goods, here’s a description:

- 1) Small individual, less than 100 grams, resembles a human face with a hole in the middle.
- 2) Very distinctive triangular or knife blade-shaped iron with flat faces (no thumbprints) maybe about 800 grams, with a natural hole near the edge that makes it look very much like an alligator or dinosaur head. Stands up naturally with the hole near the top long edge.
- 3) Roundish individual, approx 1.5 kilos with smallish natural hole.

It is suggested that you state you'd like to buy them and ask if you can hold onto the pieces for a couple of hours to get them evaluated. Then call 911 and report stolen merchandise. The proper owner can be reached at [520 742 3333](tel:5207423333) and info@aerolite.org

A substantial reward has been offered for any information leading to the arrest of the thieves.

PLEASE be extra vigilant with your property. Theft is on the rise and seems to get worse every year. We’ve heard of a lot of showroom thefts, but this is the first gem show-related vehicle break-in that I we are aware of.

DUES ARE STILL DUE – It’s not too late to renew your membership! Kindly pay by PayPal; check or cash at the meeting; or check sent thru snail mail (DVESS, P.O. Box 372, Maple Shade, New Jersey 08052). You know how much this club means to you – keeping your membership current entitles you to insurance thru the Eastern Federation (no insurance, no field trips)!!

DUES – Get Eastern Federation insurance for field trips!!!

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 family member

\$10.00 for Rowan University Students with College ID

Sponsoring Membership (+\$5.00 for each additional family member):

“Silver” \$50.00 for 1st family member – receive a Geode Specimen

“Gold” \$75.00 for 1st family member – receive Native Gold Specimen

“Platinum” \$100.00 for 1st family member – receive Premium Specimen

THIS IS YOUR NEWSLETTER, FOLKS – what’s new? Drop a line to Carol DeCuzzi: decuzzic@comcast.net or Ann Benson SeleniteQueen@gmail.com

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>)

DVESS 2012 Officers & Positions

<p>President Newsletter Editor Special Events Coordinator <i>Ann Lynne Benson</i> (856) 783-0969 (h) (856-418-6121 (c) SeleniteQueen@gmail.com</p>	<p>1st Vice President <i>Mark Leipert</i> 609-567-7551 (h) mark.leipert@yahoo.com</p>	<p>Treasurer Program Chair Membership Chair <i>Gary Weinstein</i> (856) 234-0708 – h (856) 795-5077 – work garyskyrock@comcast.net</p>
<p>2nd Vice President <i>Lou Detofsky</i> <u>“Doc Rock”</u></p>	<p>Recording Secretary <i>Grant Elliott</i> (856) 728-1731 gle@verizon.net</p>	<p>Website Coordinator <i>Terry Wilson</i> terry@dvess.org</p>
<p>Junior Rockhounds Teacher ages 8-13 <i>Mel LeCompte</i> (856) 783-0969 RocksandBadges@yahoo.com</p>	<p>Backup Secretary <i>Val Korszniak</i> KNVN32F@Yahoo.com</p>	<p>Junior Rockhounds Teacher ages 14-18 <i>Gerald Feigin</i> gfeigin@co.gloucester.nj.us</p>