

**Meeting place:** Evergreen Avenue School  
Woodbury, New Jersey

**Meeting Time:** 7:30 PM, 2nd Wednesday of month

**Meeting Date:** **March 12th, 2003**



## This Month's Meeting

*March 12th, 2003*

**Dr. Phillip Betancourt**

*Of*

*University of Pennsylvania*

*DVESS Life Member*

*Will present:*

**Silver Minerals**

## Junior Rockhounds Club

Mini-lesson 7:40 - 8:00PM

New members welcome!

No additional fees

Junior members will build a display case and fill it with fossils!

Shark teeth and other Fossils from PCS Phosphate Mine, Aurora NC. will be provided.

## **Don't Forget!** **Trotter/Buckwheat/Sterling Annual Trip**

April 26<sup>th</sup> & 27<sup>th</sup>, 2003

Contact: Jeff Winkler, [TripMaster@UVworld.org](mailto:TripMaster@UVworld.org), 973-835-2582

<http://www.UVworld.org>



American Federation  
of  
Mineralogical Societies



Eastern Federation  
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Special Congress  
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# DVESSCAPADES

Newsletter of the Delaware Valley Earth Science Society – DVESS

## BACKGROUND

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. The Society supports the conservation of natural resources, advocates the availability of collecting sites, and maintains close contact with those in the academic field.

## MEETINGS

The Society meets the 2<sup>nd</sup> Wednesday of each month from September through June, at the Evergreen Avenue School in Woodbury, New Jersey. At 7:30 pm members meet to socialize, view displays, sign the registry and receive a door-prize ticket, toward a specially chosen specimen. Meetings start promptly at 8:00 PM and include the evening’s program followed by the monthly business meeting, concluding around 10:00 PM. Meetings are open to the general public.

## MEMBERSHIP

See the Membership Chairperson for an application for membership in the Society. Regular memberships are entitled to participate in all DVESS activities and to receive a newsletter when published. Sponsoring memberships are entitled to all of the above plus a specially chosen mineral specimen. Membership rates for the Society are:

### Regular Membership

\$15.00 for the 1<sup>st</sup> family member + \$5.00 for each family member  
\$10.00 for the 1<sup>st</sup> Senior (65+ ) member + \$5.00 for each family member

### Sponsoring Membership

<u>Level</u>	<u>1<sup>st</sup> Member</u>	<u>+</u>	<u>Additional Members</u>	<u>=</u>	<u>Receive</u>
“Silver”	\$50.00	+	\$5.00	=	Geode Specimen
“Gold”	\$75.00	+	\$5.00	=	Native Gold Specimen
“Platinum	\$100.00	+	\$5.00	=	Premium Specimen

*Dues are renewable each year in January*

Delaware Valley Earth Science Society Inc., - DVESS  
P.O.Box 372  
Maple Shade, New Jersey 08052

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

EFMLS Website:  
<http://www.AmFed.org/EFMLS>

### 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 editors.

To submit an article for publication in the DVESScapades contact the Newsletter Editor.

### DVESS 2003 SPONSORS

“Platinum” - Gerald Feigan  
“Platinum” - Harvey Cantor

Evergreen Avenue School  
160 N. Evergreen Ave.  
Woodbury, N.J. 08096  
Privilege to enter the school is limited to the night of the meeting between the hours of 7PM & 10PM under the direction of the school staff.  
Permission from the school staff is required to enter the school at any other time.

## DVESS 2003 Officers & Positions

### President

Grant Elliot  
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### 1<sup>st</sup> Vice President

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### 2<sup>nd</sup> Vice President

Lou Detofsky

### Treasurer

### Program Chairperson

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### Corresponding Secretary

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Len Morgan  
George Petreshock

### Membership Chairperson

### Newsletter Editor

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Paul Funk  
Jeff Winkler

### Website Coordinator

Terry Wilson  
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### Special Events Coordinator

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## President's Message

By Grant Elliot

A former student of Lou Detofsky emailed our group this past month detailing how Lou was a significant influence on his life: "...professionally and academically he was my biggest role model". This person has gone on to be an R&D engineer and successful family man.

This student related how he would tell Lou to take the highway on geology club trips-It's faster. Lou would respond "Ah yes, but you will miss the natural beauty of the area." The student would always seek out the elevator, while Lou took the steps. Lou would defy gravity and common sense by running around the classroom on the top of the lab tables to interact with his students-"He was a maniac"(The first geology super-hero)

We should not forget what influence we have in other people's lives, young and old, that taking the back roads can sometimes lead to a greater appreciation and understanding of all that makes life rich and worthwhile. Ironically, Lou did not receive this email, since he eschews computer technology. He is somewhere off the highway.

## Upcoming Events

### **Bus Trip!**

Saturday, March 15<sup>th</sup>, 2003

American Museum of Natural History & Rose Center

\$10 Adult Members

\$5 Children to age 16

\$15 Non-members

*Seats are filling up fast!!!*

### **Annual Pot Luck Banquet!**

Sunday, April 13<sup>th</sup>, 2003

Save the date, details next newsletter.

### **Trotter/Buckwheat/Sterling Annual Trip!**

April 26<sup>th</sup> & 27<sup>th</sup>, 2003

Contact: Jeff Winkler, [TripMaster@UVworld.org](mailto:TripMaster@UVworld.org), 973-835-2582

<http://www.UVworld.org>

## Dues are Due For the Year 2003

<u>Category</u>	<u>1<sup>st</sup> Member</u>	<u>Each Additional</u>	<u>Sponsor Gift</u>
Basic	\$15	\$5	N/A
Senior Citizen (65+)	\$10	\$5	N/A
“Silver” Sponsor	\$50	\$5	Geode Specimen
“Gold” Sponsor	\$75	\$5	Native Gold Specimen
“Platinum” Sponsor	\$100	\$5	“Premium” Specimen

Pay Your Dues before or at the February 12<sup>th</sup> meeting to enter the  
“Early Dues Specimen Drawing”  
at the March meeting.

Pay Your Dues at Any Meeting or Mail to:

**DVESS**  
**P.O. Box 372**  
**Maple Shade, N.J. 08052**

Please be sure to give us your correct Email address and whether you prefer to receive the DVESScapades newsletter via Email or a printed version via snail-mail. Remember, an Emailed newsletter saves the club significant money and you will get it several days sooner.

## Minutes of the February 12<sup>th</sup>, 2003 DVESS General Meeting

By Terry Wilson

February's meeting officially began at 8:15, and was well attended by members who turned out to hear Don Peck speak. Another Don attended too, our member Don Halterman, who put into motion our annual Trotter Dump field trip several years ago. Tonight, we presented him with a plaque and fluorescent specimen named (tongue in cheek) in his honor: "Doncretite", for its composition of fluorescent minerals in a concrete matrix, collected from the Trotter Dump by yours truly a few years ago. Gary Weinstein made the presentation to a surprised Don, who thanked the club for its support, saying that without the help of Alice and Rick Harty and the other helpers, the event couldn't have happened. He encouraged people attending to make the trip this year, then returned to his seat to enjoy the night's presentation.

Don Peck's program was entitled "Geology from Space" and was a tour of the planet via LandSat and SkyLab photos. Don's background as a geology teacher made for an informative and interesting interpretation of the photos. Vegetation, cities, hot spots, salty regions, and so forth, all appear in specific colors. We could see geographical features affected by many factors, such as the border between Mexico and the US. Here, farming regions differed markedly because of our heavier use of fertilizers and irrigation. In other slides, we saw features such as faults and volcanoes. Don also talked about mineralization deep within the earth and how the earth is in constant flux. He recommended a few books "The Way the Earth Works", and "The Earth From Space" for further exploration.

After the presentation, Gary opened the general meeting with discussion of the field trip to the Natural History Museum in New York City. As it turns out, many of the exhibits of interest to the rock hound will be closed, as noted in the newsletter. Still, a trip to the Natural History Museum has a lot to offer, and we have most of the bus filled up already. The trip is the Saturday following our March meeting, so if empty seats are still available by then, there's still a chance to get them.

The minutes were approved as published in the newsletter. Gary, the treasurer, gave his report, and Mike Jacob, membership, reported 38 paid members and 15 renewals. Gary again reported on upcoming programs, and that we were still unsure about the April Pot Luck banquet, but that the regular meetings were set for the next several months.

We still need a Librarian, it was noted. Nathan Schachtman donated a lot of books to the club, and Paul Funk volunteered to inventory the library. Gary questioned the function of the library, and how no one has been checking out the books.

In Old Business, Gary showed us Lapis Magazine and encouraged people to give this handsome publication a look.

In New Business, the Bucks County Micromount Show was announced. George Askew, an artifact collector, is seeking NJ specimens for an upcoming exhibit at the Walt Whitman Stafford House. And there was discussion on a state proposal in Maine to purchase the Newry Quarry for a public park dedicated to mineral collecting. They are seeking donations for the purchase.

Vicki Marks won the door prize of Labradorite, and the meeting adjourned around 9:40.

## Junior Rockhound Report

By Paul Funk

Our specimen larvikite, a rock, began a discussion of petrology. The difference between the igneous rocks granite and syenite were shown by the way granite has quartz (clear spots) and is a light color. Larvikite is dark with no quartz and called a syenite. The Petrologist, using various high powered equipment, can examine minerals hidden in rock. A root word for hidden, from Greek, is crypto-. Structures in rocks that are not easy to see are called cryptocrystalline. The shiller effect in the feldspar crystals of our larvikite was due to microscopic layers of potassium and sodium feldspar. Only the shiller tells us that the layers are there by the way light is reflected or absorbed depending on the angle we observe. Feldspar with layers we can see is called perthite. Feldspar with hidden layers is called cryptoperthite. Microcline is a good example of visible perthite and moonstone represents cryptoperthite. Petrologists also use the amount of feldspar crystal grains to classify rocks as granites or syenites, etcetera. Larvikite contains only one type of feldspar grain that is made of potassium and sodium so it is called a monzoite syenite. A true syenite contains two types of feldspar grains. One grain type potassium (orthoclase) feldspar is more abundant than the other sodium (plagioclase) feldspar grains. Regular syenite does not have shiller.

When larvikite is extracted, from quarries in Norway, great care must be taken to orient the shillerizing crystals in the blocks with the block faces. Ironically, although 90% of larvikite is cryptoperthite; even with care; 90% of the total rock mined is rejected. Some waste is being exported as jetty rock. England consumes tons of this to fight beach erosion. Ironically again, England is one of the few places outside of Norway where larvikite already occurs naturally, as rounded glacial erratics. These are the best websites that offer historical and petrological facts on larvikite: For petrology from the University of Ottawa, this is a school project: [http://137.122.151.31/GEO4367/mystery\\_rock\\_project.htm](http://137.122.151.31/GEO4367/mystery_rock_project.htm). These two are the actual mining companies in Norway and they both offer a wealth of informal information: [www.lundhs.no](http://www.lundhs.no) and [www.larvik-granite.no](http://www.larvik-granite.no).

Larvikite is only one example of the beauty of igneous rocks. Our specimens came from the dumpster of a countertop factory. There were many other types of igneous rocks too. Granite floor tile and counter companies are good places to look for specimens. Don't know where it is from? (ask someone in the store) then identification will be easier. However, names in stores are not always correct for example 'blue pearl granite'. Understand dumpsters are dangerous places to be! Piles of granite slabs grow quickly as you rummage down. These piles can fall fast and quickly injure your feet and fingers! Also, trucks driving around industrial zones may not see children. If you see trucks be friendly, wave if you can. Don't try to hide from them. Stay out of their way most importantly.

The February Junior Rockhound Club was well attended and ten members were present. One of our members is doing a report on Norway. His dad picked up his information for him, that is great! Maybe he would let us put his report on our website. Jonathan Feigin has perfect attendance so far! Joshua Jackson is the only other member to collect all the specimens so far this year. The Jr. Rockhounds present were: David Anderson; Matthew Anderson; Michael Anderson; Thomas Anderson; Eamonn Fitzpatrick-Ruth; Michael Fitzpatrick-Ruth; Josh Jackson; Jonathan Feigan; Mark Carchidi. I must apologize to the members who missed previous meetings and did not receive catch-up specimens and handouts for stilbite and apophyllite. Your attendance is noted and specimens will be supplied at a later date.

## **Wildacres News**

By Cathy Gabor

Mineral lovers alert!

Do you know that Wildacres is a great place for mineral lovers? Minerals come in all sizes. This year, in both sessions, there is an opportunity to study minerals through the microscope in the micromount class. Many minerals do not come in large sizes, and even if they do, they are often not as perfectly formed as the smaller minerals. In class, you will learn to trim and mount specimens provided by the instructor into standard micromount boxes. You will also learn how to photograph them through the microscope. You will be amazed at the beauty and precision of these tiny specimens.

Did you know that there are three displays of minerals at Wildacres? Almost everyone who enters the dining room from the upper level has probably noticed the clever dioramas of North Carolina minerals and miners. There is also an adjacent case of minerals from other places. Some people know there is another mineral display in the lobby of the auditorium. Most if not all of these specimens were donated by past Wildacres attendees such as Peg and Roger Marble and Charlie Hall. But how many of you have discovered the display of fluorescent minerals in a closet in the craft house?

Fun with minerals doesn't end there. Field collecting trips are usually arranged for free day. Previous trips have been to local mines for garnet, kyanite, mica, fluorescent hyalite, beryl and other minerals. For those who like to silver pick, Spruce Pine and the surrounding area is loaded with rock shops. Some of them carry local specimens that are seldom found in markets further away. You can even buy a bucket of gravel at some of the shops and sluice for your own gemstones (often from Brazil, but it is fun anyway).

The Wildacres auction is another chance to see and buy minerals. Many of the donations are self collected or from old collections, which means that you may find some unusual minerals that are otherwise infrequently available. Feel free to bring some contributions of your own!

To check out all the activities and classes offered and to find a registration form, check out <http://amfed.org/efmls/wildacres.htm>. Classes offered are subject to change depending on the availability of the instructors. Whichever session you choose (or choose both!), you are sure to have a great time. See you there!

## In the News

Fossil Plant and Insect Communities Key to Understanding Global Change  
Pennsylvania State University  
February 16, 2003

Denver - Insect damage recorded in fossil plants and the types of plants present in the fossil record are helping researchers to understand how ecological communities recover from climate change and mass extinction events, according to a Penn State paleontologist and his colleagues.

Researchers looking at plant communities and insect predation on leaves at both the Cretaceous-Tertiary boundary 65.51 million years ago and 10 million years later at the Paleocene-Eocene boundary, can track the changes in plants and insects through time. The K-T event, which marked the extinction of the dinosaurs and more than 50 percent of all plant species, was caused by the impact of an extraterrestrial object, while the P-E interval was a more gradual change from one climate regime to another caused by a long-term global warming trend.

"The early Eocene 52 million years ago was the warmest the Earth has been in the last 100 million years, and that warming lasted for 2 million years," says Dr. Peter Wilf, assistant professor of geosciences at Penn State. "There is strong evidence for high diversity when temperatures were warm," Wilf told attendees at the annual meeting of the American Association for the Advancement of Science Feb. 16 in Denver.

Plants respond to climate change by migrating, evolving and going extinct. However, Wilf notes that due to human activity, global change is occurring at breakneck speed today. Because of the geologically rapid pace of human-induced extinctions, habitat loss and climate changes, land plants currently face a situation more closely resembling the K-T than the P-E boundary.

Both the plant and insect studies used three fossil areas for samples; the K-T was represented by fossil beds in North Dakota, while the P-E was represented by two areas in Wyoming. Reporting on the fossil plant communities were Wilf; Kirk R. Johnson, curator of paleontology, Denver Museum of Nature & Science; and Scott L. Wing, National Museum of Natural History, the Smithsonian Institution. In a subsequent paper, Wilf, Johnson and Conrad C. Labandeira, National Museum of Natural History, the Smithsonian Institution, discussed the role of insects in teasing out climate change influences on ecological communities.

Fossilized leaves show a record of insect predation not unlike what is seen on leaves today. On



some leaves, the imprint of piercing and sucking insects is visible. Others show the ragged margins or holey centers of leaves chewed by hole feeding and margin feeding insects. Evidence of mining insects is also preserved, as are galls. The fossil record preserves even the totally skeletonized leaves that show only veins.

By looking at the damage, the researchers can categorize the types of insects that infested these forests 65 and 55 million years ago, and trace the extinction and evolution of species. Labandeira looked at 13.5 thousand leaves across the K-T and identified 51 types of insect feeding damage. The researchers found that the K-T impact was associated with a significant and enduring loss of plant and insect species. Among insects, the most affected were the specialized feeders, those insects that fed on leaves of only one type of plant.

Insects died both from the impact and because the trees that they fed on died. Specialized feeders were less able to adapt and eat off any tree available and so were more greatly effected.

"At the K-T boundary, we see the largest spike of the last appearance of species, both for plants and insects that ate them," says Wilf. "Although climate change was occurring for a long time before the K-T, its effects could not hold a candle to the extinctions brought on by the impact."

Only 21 percent of species made it across the K-T boundary and only 11 species originate in the Paleocene indicating the recovery was not immediate. In fact, diverse vegetation does not return in the area studied until the warm early Eocene 12 million years after the impact.

"The P-E transition was a relatively long, slow change that allowed the plants and insects to adapt to the shifting environment," says Wilf. "At the K-T, species could not adapt in time because the change was so rapid. These rapid changes were much more like what we have today than the gradual ones that occurred at the P-E. Organisms cannot migrate in response to climate changes as they did during the Eocene because of because of freeways and parking lots, and the ongoing loss of habitat imposes severe and geologically sudden stress on ecosystems."

EDITORS: Dr. Wilf is at 814-865-6721 or at [pwilf@geosc.psu.edu](mailto:pwilf@geosc.psu.edu) by e-mail.

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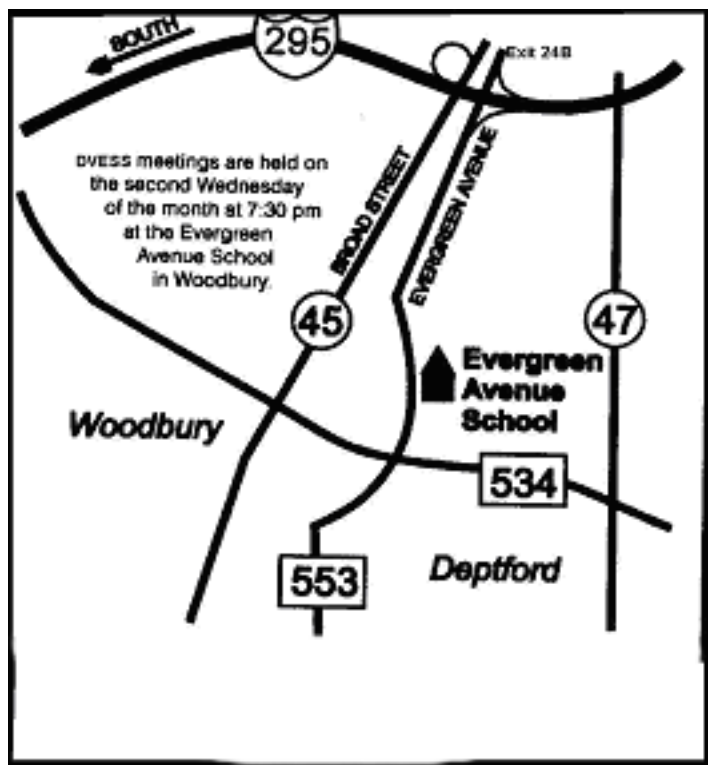
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## **This Month's Meeting: Wednesday, March 12th 2003**

7:30 PM at the Evergreen Avenue School

**Dr. Phillip Betancourt**

*Of*

*University of Pennsylvania*

*DVESS Life Member*

*Will present:*

**Silver Minerals**

*Don't miss it!*

## **DVESScapades**

*The Newsletter of the*

*Delaware Valley Earth Science Society*

**PO Box 372**

**Maple Shade, New Jersey 08052**



**Birthstone: [Aquamarine](#)**