DVESSCAPADES

Year 48, Volume #4

Newsletter of the Delaware Valley Earth Science Society – DVESS

April 2005

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

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

Meeting Date**: **April 13**, **2005

Main Program

Derek Yoost will be lecturing on the dinosaurs of NJ. Derek has entertained us previously on meteorites. He has extensive collections of meteorites and Sayerville, NJ amber.

Junior Rockhounds

G. Feigin will be conducting a junior rockhound educational experience in **Carbonates**

Annual Club Pot Luck Supper – April 17, 2005
Centenary United Methodist Church, Rt. 30, Berlin, NJ

Field Trip - Trotter Dig, Franklin, NJ April 23, 2005
& Sterling Hill, Ogdensburg, NJ April 24, 2005

American Federation
of
Mineralogical Societies

Eastern Federation
of
Mineralogical & Lapidary Societies

Special Congress
Representing
Involved Bulletin Editors

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 2nd 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 1st family member + $5.00 for each family member
$10.00 for the 1st Senior (65+) member + $5.00 for each family member

Sponsoring Membership

Level	1st Member	+	Additional Members	=	Receive
"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

DVESS 2005 SPONSORS

Harvey Cantor – Platinum
Gerald Feigin – Platinum

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.

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
2005 Officers & Positions

President
Special Events Coordinator
Ann Lynne Benson
(856) 783-0969
SeleniteQueen@comcast.net

1st Vice President
Jr. Rockhound Coordinator
Field Trip Coordinator
Gerald Feigin
gfeigin@co.gloucester.nj.us

2nd Vice President
Lou Detofsky

Treasurer
Program Chairperson
Gary Weinstein
(856) 234-0708 – Home
(856) 795-5077 – Work
garyskyrock@comcast.net

Website Coordinator
Terry Wilson
(609) 714-1309

Recording Secretary
Open
Grant Elliot(acting)
(856) 728-1731
gle@bellatlantic.net

Corresponding Secretary
Open

Sage
Len Morgan
George Petreshock

Newsletter Editor
Chuck O'Loughlin
ac.oloughlin@att.net
(856) 663-1383

Membership Chair
Librarian
Stu Cleveland
cleveland@rowan.edu

President's Message by Ann Benson

Welcome to new members! It's great to have you among us. Whether your love is fossils, minerals, micromounts, fluorescents, field trips or programs, we have something for everyone. Why not invite a friend to join you at the next meeting?

After missing last year's Delaware Mineralogical Society show due to back surgery, I happily returned March 5 with 7-year-old grandson Joey Szumowski (who has a mineral and fossil museum in his bedroom) and long-time friend Michael Patrick Murphy (my oftentimes traveling companion).

This was my first trip to the Delaware Institute of Technology. Getting there was easy, but getting back to I-95 was an adventure due to construction. The show was much larger and the selections much more interesting and varied this year; many of the familiar dealers were present and it was nice to renew old acquaintances.

To me, a trip to a gem and mineral show is like a trip to an "art and science" museum. I love seeing the beautiful colors, the fascinating fossils and the diversity of God's creation. I was able to purchase a slice of a **stromatolite**, the most ancient fossil on this planet. I had heard of them before, but knew nothing about them. Much research produced the article to be found elsewhere in this issue of **DVESScapades**. I hope you enjoy it.

I also did much research on some of my own fossils for a presentation to be given to the Vineland Nature Club on "Tales Told by Fossils". Unfortunately, that presentation was cancelled due to a snow storm. I am delighted, however, to have learned so much in the process of doing my "homework". I encourage all of you to take advantage of that most wonderful of new resources – the internet – to explore our planet (and solar system) and its marvelous contents. One cannot but be inspired by the amazing world around us.

And if you know anyone who needs a presentation on fossils from an amateur but ardent student of nature, please let me know.

"Forget not that the earth delights to feel your bare feet and the winds long to play with your hair." -Kahlil Gibran, mystic, poet, and artist
(1883-1931)

March 9, 2005 General Meeting Minutes by Chuck O'Loughlin acting for Grant Elliott, Acting Recording Secy.

The meeting was called to order by Ann Benson, President at 8:30 PM following the junior rockhound program presented by Mr. Scott Neiman.

Mr. Neiman also presented the program for the general meeting with a slide presentation on the Calvert Cliffs fossil areas of Maryland.

Following the evenings program, numerous door prizes were awarded, all donated by our guest speaker.

As a result of the late start to the presentation the evening was getting on and combined with the general pandemonium that broke out when Mr. Neiman pulled out a large box of fossils for the juniors to help themselves from, no business was conducted.

Club News by Chuck O'Loughlin

The membership has spoken and a pot luck supper has been organized for Sunday, April 17, 2005 from 2 to 5 PM. A program titled "Birth of the Universe" is on the agenda, along with door prizes for all plenty of good camaraderie and an opportunity to sample some of the finest cuisine in South Jersey. You can sign up and indicate the covered dish you will be bringing at www.whosbringingwhat.com/dvess The web site also contains a link to directions and a map. If you are not a cook, there are opportunities to contribute by bringing other items. Don't have access to a computer? I will have a sign up sheet at the April meeting with directions, or give me a call. **Volunteers are needed to set up at 1PM and to tear down at the end.**

Junior Rockhound News by Gerald Feigin

March's Junior Rockhound program was an outstanding success. Mr. Scott Neiman from Flag Pond presented a fantastic program on fossils in the Calvert Cliff area of Maryland and had many gifts for both juniors and the regular members. Everyone I hope got their bag of sharks' teeth?

While March's program will be a hard act to follow, I will do my best by continuing with the program I started in February, we will be study minerals organized by chemical associations. Be sure to invite your parents and friends to come along and participate in this informative program

Programs by Gary Weinstein

The program for our April meeting will be a presentation by Derek Yoost, who will be speaking on the dinosaurs of New Jersey. Mr. Yoost was originally scheduled for later in the spring, but due to family illness, our scheduled speaker Carrie Papa, had to cancel. We are ever grateful to Mr. Yoost for his willingness to accommodate the last minute change. You might wish to check out Mr. Yoost excellent web site for a taste of what you might expect http://www.njfossils.net/

Upcoming Field Trips

Triple Digg (Trotter Dump, Buckwheat Dump & Sterling Hill) April 23 & 24, 2005 Franklin/Ogdensburg, NJ by Jeff Winkler

THE 2005 TRIPLE DIGGG IS ON!!!

Along with the 32nd Annual NJESA Gem & Mineral Show & Outdoor Swap & Sell!

The Delaware Valley Earth Science Society (DVESS) and the North East Field Trip Alliance (NEFTA), in cooperation with the Franklin Mineral Museum and Sterling Hill Mining Museum, invite you to share an international collecting experience.

This field trip has attracted dedicated collectors from across the globe. Be one of them this year!
Trip Master for 2005 is: Jeff Winkler, 55 White Way, Pompton Lakes, NJ 07442 tel. 973-835-2582

For more information contact Jeff or visit www.uvworld.org

Remember we need 100 advanced registrations to make this happen so please sign up now.

Calendar of Shows and Events compiled by Chuck O'Loughlin from various sources

April 9 – 10, 2005 – Philadelphia Mineral Treasures and Fossils sponsored by the Philadelphia Mineralogical Society and the Delaware Paleontology Society, Lulu Temple, 5140 Butler Pike, Plymouth Meeting, PA

April 23 – 24, 2005 – 33rd Annual New Jersey Earth Science Association Gem & Mineral Show sponsored by the Franklin Ogdensburg Mineralogical Society, the New Jersey Earth Science Association and the Sterling Hill Mining Museum, Franklin School, Washington Avenue, Franklin, NJ

May 21, 2005 – Annual Chesapeake Show at Goucher sponsored by the Chesapeake Gem & Mineral Society. Goucher College, Kraushaar Pavilion, Dulaney Valley Rd. at I-695, Towsand, MD.

June 4, 2005 – PESA Spring Mineralfest sponsored by the Pennsylvania Earth Science Association, Inc. Macungie Memorial Park Building, Macungie, PA.

Additional shows are listed on the Eastern Federations Web site www.amfed.org/efmls

Articles of Interest

An original article by Ann Benson

Stromatolites are the oldest known fossils, dating back more than 3 billion years. They are colonial structures formed by photosynthesizing cyannobacteria and other microbes. Stromatolites are prokaryotes (primitive organisms lacking a cellular nucleus) that thrived in warm aquatic environments and built reefs much the same way as coral does today. Cyanobacteria were likely responsible for the creation of earth's oxygen atmosphere. They were the dominant lifeform on Earth for over 2 billion years. Today they are nearly extinct, living a precarious existence in only a few localities worldwide.

Their layers were produced as **calcium carbonate** precipitated over the growing mat of bacterial filaments; photosynthesis in the bacteria depleted carbon dioxide in the surrounding water, initiating the precipitation. The minerals, along with grains of sediment precipitating from the water, were then trapped within the sticky layer of mucilage that surrounds the bacterial colonies, which then continued to grow upwards through the sediment to form a new layer. As this process occured over and over again, the layers of sediment were created.

The cyanobacteria have an extensive fossil record. The oldest known fossils, in fact, are cyanobacteria from the Early Archaean rocks of western Australia, dated 3.5 billion years old (all life during the more than one billion years of the Archaean was bacterial). This may be somewhat surprising, since the oldest *rocks* are only a little older: 3.8 billion years old! In the Proterozoic, stromatolites were widespread on earth, and were ecologically important as the first reefs. By the close of the Proterozoic, the abundance of stromatolites decreased markedly,

Cyanobacteria are among the easiest microfossils to recognize. Morphologies in the group have remained much the same for billions of years, and they may leave **chemical fossils** behind as well, in the form of breakdown products from pigments. Small fossilized cyanobacteria have been extracted from Precambrian rock, and studied through the use of SEM and TEM (scanning and transmission electron microscopy).

Cyanobacteria are otherwise rarely preserved in rocks other than chert, though some possible blue-green bacteria have been recovered from shale.

Origional article on Stromatolites (continued)

Stromatolites are formed through the activity of primitive unicellular organisms: cyanobacteria (which used to be called blue-green algae) and other algae. These grow through sediment and sand, binding the sedimentary particles together, resulting in successive layers which, over a long period of time, harden to form rock. For at least three-quarters of the earth's history stromatolites were the main reef building organisms, constructing large masses of calcium carbonate.

However their most important role in the history of the earth has been that of contributing oxygen to the earth's atmosphere. The organisms which construct stromatolites are photosynthetic. They take carbon dioxide and water to produce carbohydrates, and in doing this they liberate oxygen into the atmosphere.

When stromatolites first appeared on earth about 3.5 billion years ago there was little or no oxygen in the atmosphere. It was through the oxygen-generating activity of stromatolites that other animal life on earth was able to develop. Conversely, it is believed that the decline in numbers of stromatolites is related to the evolution of animals that consumed cyanobacteria and algae.

Stromatolite fossils are evidence of the earliest life on the earth. Western Australia perhaps has the best stromatolite fossils, giving a record through the eons of time. Fossils of the earliest known stromatolites, about 3.5 billion years old, are to be found near Marble Bar in the Pilbara.

Hamelin Pool gives an indication of what the earth may have looked like 3.5 billion years ago when stromatolites were widespread. Because of their range and numbers it is a place of great interest to botanists and geologists alike. A jetty has been constructed allowing the stromatolites to be viewed without doing them irreparable damage.

Stromatolites are

- formerly defined as: "laminated organo-sedimentary structures formed by the trapping and binding, and/or precipitation of minerals by microorganisms", can be thought of as microbial mats in which a rock-like layer of either sand or precipitated minerals is also present. Fossil stromatolites constitute our earliest and most pervasive record of life on Earth. Although many stromatolites are fossils, there are a number of locations on the modern-day Earth where stromatolites are still forming.
- fossils which show the life processes of cyanobacteria (formerly called blue-green algae). The primitive cells (Prokaryotic type), lived in huge masses that could form floating mats or extensive reefs. Masses of cyanobacteria on the sea floor deposited calcium carbonate in layers or domes. These layered deposits, which have a distinctive "signiture" are called laminar stromatolites. This is an example of a layered stromatolite from the Ozark Precambrian. Most often, stromatolites are appear as variously-sized arches, spheres, or domes. *Ozarkcollenia, a distinctive type of layered Precambrian stromatolite,* pushes the appearance of life in the Ozarks to well over a billion and a half years ago.
- the oldest living organisms on the planet. Some scientists believe they were the first living things on mother earth.

Articles of Interest (continued)

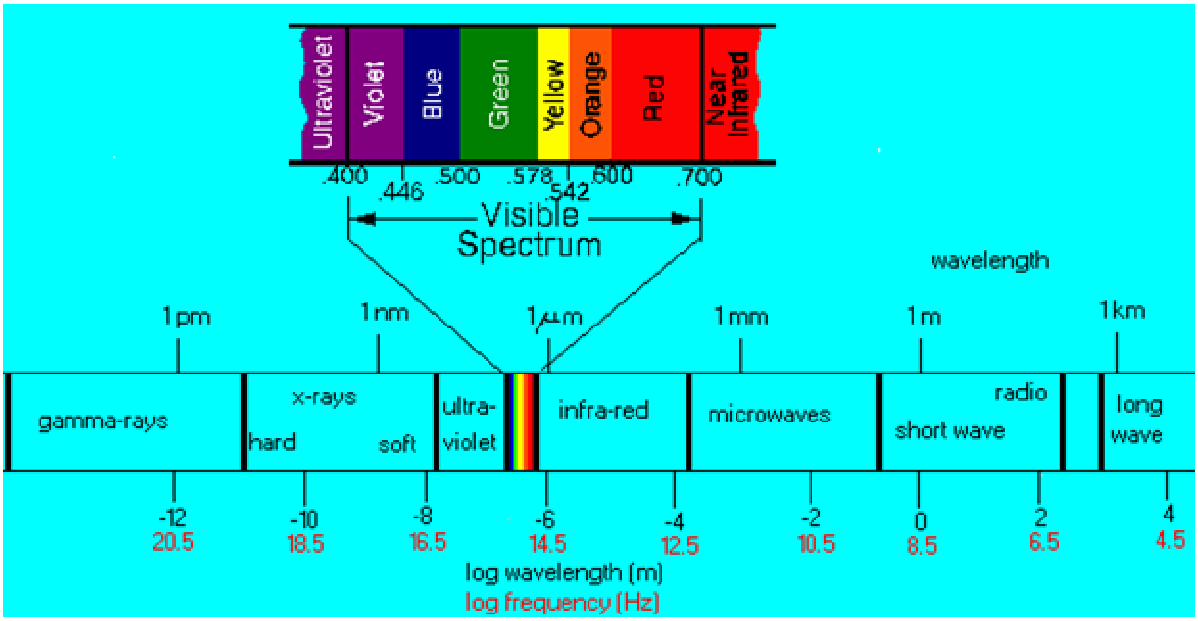
Editor's note: In anticipation of our upcoming field trip to the "Fluorescence Capital of the World" I hope the membership will find this article as fascinating as I did.

Experiencing Fluorescence

by Bruce H. Fine

We all experience fluorescence more than we realize. Ever notice how *bright* white clothing appears in sunlight? The reason is that many laundry detergents and bleaches contain trace amounts of fluorescent dyes in them. Why? Since there is a component of UV light present in bright sunlight, clothes washed in these detergents appear, due to the fluorescent affect, to be brighter than clothes not washed with fluorescent soaps.

Light is a form of energy. To create light, another form of energy must be supplied. There are two common ways for this to occur, incandescence and luminescence.



Incandescence is light from heat energy. If you heat something to a high enough temperature, it will begin to glow. When an electric stove's heater or metal in a flame begin to glow "red hot", that is incandescence. When the tungsten filament of an ordinary incandescent light bulb is heated still hotter, it glows brightly "white hot" by the same means. The sun and stars glow by incandescence.

Luminescence is "cold light", light from other sources of energy, which can take place at normal and lower temperatures. In luminescence, some energy source kicks an electron of an atom out of its "ground" (lowest-energy) state into an "excited" (higher-energy) state; then the electron gives back the energy in the form of light so it can fall back to its "ground" state.

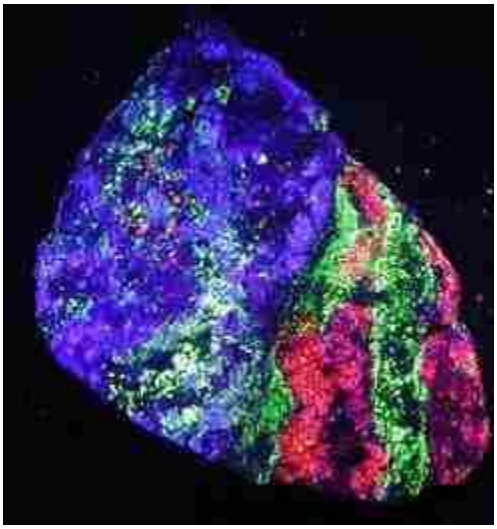
Phosphorescence is delayed luminescence or "afterglow". When an electron is kicked into a high-energy state, it may get trapped there for some time. In some cases, the electrons escape the trap in time; in other cases they remain trapped until some trigger gets them unstuck. Many glow-in-the-dark products, especially toys for children, involve substances that receive energy from light, and emit the energy again as light later.

Triboluminescence is phosphorescence that is triggered by mechanical action or electroluminescence excited by electricity generated by mechanical action. Some minerals glow when hit or scratched, as you can see by banging two quartz pebbles together in the dark.

Thermoluminescence is phosphorescence triggered by temperatures above a certain point. This should not be confused with incandescence, which occurs at higher temperatures; in thermoluminescence, heat is not the primary source of the energy, only the trigger for the release of energy that originally came from another source.

It may be that all phosphorescences have a minimum temperature; but many have a minimum triggering temperature below normal temperatures and are not normally thought of as thermoluminescences.

Fluorescence and, a related phenomena called phosphorescence, are properties of materials that emit visible light when exposed to UltraViolet (UV) light and/or continue to emit such light after exposure to UV light.



Ultraviolet is closest to and just shorter than visible light in wavelength. Ultraviolet can be subdivided according to wavelength. From lowest to highest: longwave ultraviolet (UVA or near ultraviolet), middle-wave ultraviolet (UVB), short-wave ultraviolet (UVC), and extreme ultraviolet.

Longwave ultraviolet is part of sunlight. It is the lowest-frequency ultraviolet, and thus the nearest to visible light. Longwave ultraviolet passes easily through most transparent types of glass and plastic. Longwave ultraviolet lights are available, and they are the cheapest and longest-lasting ultraviolet lights. They cause some fluorescent minerals (perhaps 15%) to exhibit fluorescence.

Midwave ultraviolet is also part of sunlight. Longer wavelengths of midwave ultraviolet cause suntans, while shorter wavelengths of midwave cause sunburn. Midwave, especially shorter wavelengths, are partially stopped by clear glass. Midwave ultraviolet light is passed thru short-wave ultraviolet filters. Midwave tubes have recently become widely available, some collectors are starting to use midwave to study mineral fluorescence.

Short-wave ultraviolet is emitted by the sun, but it is stopped in the upper atmosphere of the earth by the ozone layer. Short-wave ultraviolet can also cause burns resembling sunburns (they are often called sunburns, even though the sun did not cause them). Short-wave ultraviolet is almost completely stopped by most forms of glass or plastic. Quartz or special glasses must be used in short-wave tubes to let the short-wave UV escape the tube. Short-wave ultraviolet over time cause failure in the short-wave filter used in short-wave ultraviolet lights; this process is called solarization. Short-wave ultraviolet is the most popular for seeing mineral fluorescence, causing fluorescence in perhaps 90% of fluorescent minerals.

Extreme ultraviolet is also emitted by the sun, but is stopped in the upper atmosphere, and in so doing forms ozone from the atmosphere's oxygen. It is this high ozone layer that stops part of the sun's middle-wave ultraviolet rays and all of its short-wave ultraviolet rays, and which may be in danger from some commercial chemicals. Extreme ultraviolet is closest to X-rays in frequency, and as with X-rays there is no practical equipment for its use. Few substances are transparent to extreme ultraviolet, and even air stops it within a fairly short distance.

Fluorescent minerals respond best to either short-wave UV light, which has a wavelength of 254 nanometers (nm), or longwave UV, at 366nm. Some minerals may fluoresce under both wavelengths with the same or a similar color, while some may show different colors under each. Most respond best to only one of the two. Well over 3600 mineral species have been identified at this time. Something over 500 of them are known to fluoresce visibly in some specimens. Arizona is a excellent location for fluorescent minerals hunting. There are over 140 mineral found in Arizona that have been know to Fluoresce at other locations around the world. Below are some of those minerals.

ADAMITE, ALLOPHANE, ANALIME, ANHYDRITE, ARAGONITE, AUSTINITE, AUSTINITE, BARITE, BASALUMINATE, BUSSAMITE, BAYLEYITE, BECQUERELITE, BERYL, BLODITE, BOLTWOODITE, BRUCITE CALCITE, CALOMEL, CASSITERITE, CELESTINE, CERUSSITE, CHABAZITE, CHLORAPAITITE CHRYSOBERYL, CLINOHEDRITE, COLEMANITE COOKEITE CORUMDUM COTUNNITE COWIESITE CRISTOBALITE DOLOMIT,E DICKITE, DIOPSIDE, DUMONTITE, DUMORTRERITE, EDENITE, ELBAITE, EPSOMITE, ETTRINGITE, EUCRYOTITE, FERRIERIT,E FLUORAPATITE, FLUORITE, GEARKSUTIT,E GLAUBERITE, GMELINITE, GONNARDITE, GREENOCKITE, GROSSULAR, GYPSUM, GYROLITE, HALITE, HARMOTOME, HAWLEYITE, HECTORITE, HELVITE, HEMIMORPHITE, HEVLANDITE, HUNITE, HYDROCERUSSITE, HYDROXYHERDRITEHYDROMAGNESITE HYDROZINCITE JUNITOITE, KUTNAHORITE, LAMONTITE, LEPIDOLITE, LEUCITE, LEVYNE, LIEBIGITE, MAGNESITE, MAMMOTHITE, MANGANOAXINITE, MARGARITE, MARIALITE, MATLOCKITE, MESOLITE, META-AUTUNTIC, METATORBERNITE, META-ZEUNERITE MINUM , MORSSANITE, MONTMORILLONITE, MORDENITE, NATROALUNITE, NEPHELINE, OPAL, ORTHOCLASE, PECTOLITE, PHLOGOPITE, PHOSGENITE, PLAGIOCLASE, POWELLITE,PREHNITE, PYROMORPHITE, PYROPHYLLITE, QUARTZ, REALGEAR, RHODOCHROSITE, SABUGALITE, SANIDINE, SCHEELITE, SCHOEPITE, SCHROCKINGERIT, SEPIOLITE, SODIUM-ZIPPEITE, SPHALERITE, SPINEL, STEVENSITE, STILBITE, STOLZITE ,STRONTIANITE, SULFUR, SWARTZITE, TALMESSITE, THAUMASITE, THENARDITE, THOMSONITE, THORITE, TILASITE, TITANITE, TOBERMORITE, TOPAZ, TORBERNITE, TERMOLITE, TRIDYMITE, URANOCIRICITE, URANOPHAN,E URANOSPINATE, UVORVITE, VANDANITE, WICKENBURGITE, WILLEMITE, WITHERITE, WOLLASTONITE, WULFENITE, WURTZITE, XONOTIME, XONOLITE ZUENERITE, ZINCITE, ZIRCON, ZUNYITE.

The phenomenon known as fluorescence occurs at the subatomic level by a process called electron excitation. Electrons are subatomic particles that orbit the nucleus of an atom at specific distances known as electron shells. These shells are arranged in layers around the nucleus, the exact number of electrons and their shells depending on the type of atom (element). The electrons contained in the shells nearest the nucleus carry less energy than the electrons in the outer shells.

When certain atoms are exposed to ultraviolet (UV) light, a photon (particle of light energy) of UV will cause an electron residing in a lower-energy inner electron shell to be temporarily boosted to a higher-energy outer shell. In this condition, the electron is said to be excited. It will then drop back to its original inner electron shell, releasing its extra energy in the form of a photon of visible light. This visible light is the fluorescent color that our eyes perceive. The exact color depends on the wavelength of the visible light emitted, with the wavelength itself being dependent on the type of atom undergoing the electron excitation. The specific atoms which undergo the fluorescence are known as activators. They are usually present as impurities in the normal molecular structure of the mineral, but sometimes are an intrinsic part of the mineral's composition. In fluorescent minerals, very often the activators are cations, which are atoms or molecules which carry a net positive charge (due to the loss of one or more electrons, each of which display a negative charge). Because the activators are usually impurities, the same mineral species may fluoresce in some locations and not others, depending on whether the activator was present when the mineral was formed. It also may contain different

activators depending on location, and therefore fluoresce in various colors. The intensity of the fluorescence depends on the concentration of the activator in the mineral, but too much activator may actually block fluorescence.

There are a few minerals that will fluoresce when pure. These are called "self-activated" minerals, and include scheelite, powellite, and several uranium minerals. Others suspected of being self-activated include benitoite, cerussite, anglesite and perhaps many other lead minerals.

The best time to hunt for fluorescence is at night. Your eyes become adapted to the dark and you can pick up a weak fluorescence at greater distances. Rock hunting at night has a excitement all it own. Walking carefully to place you foot securely on a rocky ledge or backing in to a cactus. By night you discover the real meaning of "invisible" fluorescent minerals. In day light a ordinary rock specimen show several types of minerals of little to no interest , but at night under a UV light certain unnoticed specks or transparent crystals become very dominant. Turn your flash light on it and there are gone, their color blends in so closely with the adjoining rocks they are lost to sight.

As a field collector of fluorescence minerals you have 2 special needs the first is a portable source of ultraviolet light, and the second a means of creating enough darkness to view the minerals around you. The first is easy there are many different kinds of UV light out there. The Second is a little harder a black piece of plastic can be used or a blanket, viewing boxes are not that hard to make but both add extra weight to your pack. Believe me the rocks weigh enough by them selfs. I find the best way is just to hunt at night. Fluorescence mineral hunting is much easier for the most part than regular rock hunting. This depends on the quality of the black light and the amount of darkness. Another reason that they are easier to find is that portable UV light are a fairly new thing and were not around when many of the mines were active. Many of the mine dumps are just covered with color.

This article is part of a presentation given by Bruce H. Fine at the February 14, 2003 meeting of the Calgary Rock and Lapidary Club.

Web Sites of Interest

70 Million Year Old T-REX Soft Tissue Found submitted by Grant Elliott

Check out this link if you think you know and understand all there is to be known about Dinosaur Paleontology-
http://g.msn.com/0MNBUS00/2?http://www.msnbc.msn.com/id/7285683&&CM=EmailThis&CE=1

Can't get away from those friggin Triassic tracks! Submitted by Richard

I moved from Bucks County to Gettysburg and end up finding the second Triassic track site ever found in Maryland, and the first in over 100 years...
http://triassicpark.oceancityusa.com/triassic/temp1.html

I think these guys followed me from Bucks!

Editors Note: Gettysburg is located in the State of Pennsylvania. The triassic tracks are in Maryland but Gettysburg is not.

Due to the length of this months newsletter the DVESScape from Reality section was held for the next issue.

THE 2005 TRIPLE DIGGG IS ON!!!

Registration and Trip Information

April 23 & 24, 2005

Along with the 32nd Annual NJESA Gem & Mineral Show & Outdoor Swap & Sell!

**The Delaware Valley Earth Science Society (DVESS)
and the North East Field Trip Alliance (NEFTA),
in cooperation with the Franklin Mineral Museum
and Sterling Hill Mining Museum,
invite you to share an international collecting experience.**

**This field trip has attracted dedicated collectors from across the globe.
Be one of them this year!**

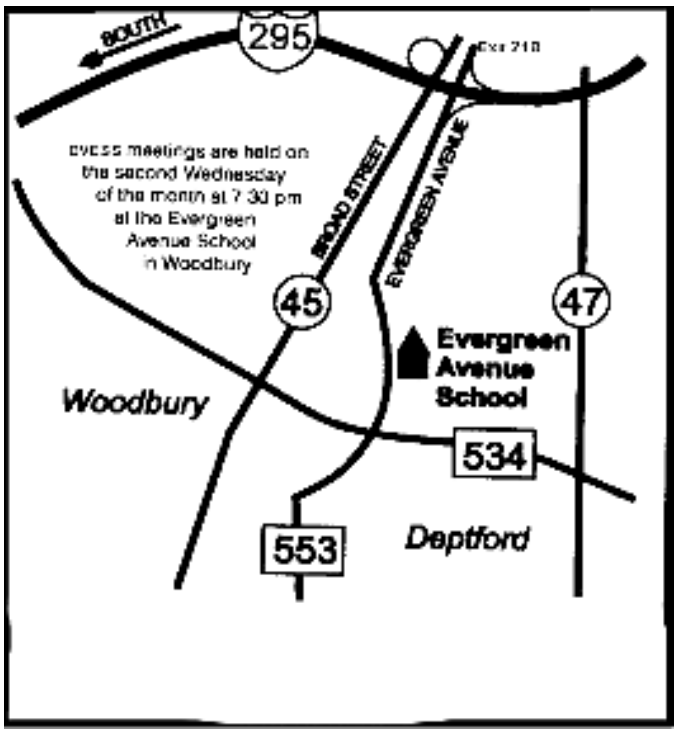
Read the following terms, and then contact the coordinator below to reserve your spot . . .

Trotter Mineral Dump	Buckwheat Dump	Sterling Hill Dig
Saturday April 23rd Facilities fee: $20 Daylight Hours: 9 AM to 7 PM Night Hours: 7:30 PM to 11 PM Daylight pound rate: $1/pound Nightlight pound rate: $2/pound Provided: · Running water · Restroom facilities · Darkroom for admiring your fluorescent minerals · Electricity (in darkroom) · Off-road parking area No one under 9 years old will be permitted on this site.	Saturday April 23rd Facilities fee: included in Trotter fee Daylight Hours: 10 AM to 4 PM Night Hours: Sorry :) NO night dig Daylight pound rate: $1/pound Provided: · Restroom facilities · Darkroom for admiring your fluorescent minerals · Electricity · Off-road parking area Children must be accompanied by an adult.	Sunday April 24th Facilities fee: $10 The $10 fee will be collected on-site by the Sterling Hill Mining Museum at time of first entry (bring cash!) and you will be credited against poundage fee. Daylight Hours: 9 AM to 3 PM Night Hours: Sorry :) NO night dig Daylight pound rate: $1/pound Provided · Restroom facilities · Electricity (in darkroom) · Off-road parking area · Darkroom for admiring your fluorescent minerals. No one under 13 years old will be permitted on this site.

• Tools and UV lights will be available for purchase at the Franklin Museum and the Sterling Hill Mining Museum. Both Trotter and Buckwheat will have excavation / turnover of fresh NEW soil areas for your digging pleasure.
• Attendance is by **advance reservation**. Sign up early! ***We MUST have at least 100 people***. and . . . in case you are wondering, it IS "rain or shine" -- so come prepared!!!
• All collectors must carry liability insurance that covers damage to the property, such as the insurance offered by the EFMLS to its affiliate clubs.
Your club must co-sponsor the activity in order to be covered by Federation policies.
If you have no other means of insurance, you may join the DVESS on-site (while registering) to get coverage by the DVESS insurance. (Proof of personal liability is acceptable.)
Collectors enter any site at their own risk and must sign a hold-harmless liability waiver when registering.
• Standard Federation safety rules apply – safety goggles and durable footwear are mandatory (no sneakers or sandals). Work gloves are strongly recommended.
PLEASE!!!! Note the age requirement at each site.
• All guests at Trotter/Buckwheat sites receive a $1 discount coupon for tour of Sterling Hill Mining Museum (good only on Sunday, April 24th)

DVESS*capades*
The Newsletter of the
Delaware Valley Earth Science Society
PO Box 372
Maple Shade, New Jersey 08052

DVESS*capades* April 2005



This Month's Meeting:

April 13, 2005

Main Program

Derek Yoost will be lecturing on the dinosaurs of NJ.

Junior Rockhounds

Carbonates