

DVESScapades

escapades: interesting, stimulating, exciting activities and adventures



Delaware Valley Earth Science Society Newsletter

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



Program : Lance will show a DVD on Columbian Emeralds.

President's message

PRESIDENT'S MESSAGE FOR "DVESScapades" MAY 2012

SPRING WILDACRES A HUGE SUCCESS

My dream of attending a Wildacres Retreat finally came true April 10 thru 15 when, thru the generosity of EFMLS Wildacres, I received a scholarship given in recognition of the 40th anniversary of EFMLS workshops there. A thousand thank-you's to everyone who made this wonderful week possible.

In my nearly 30 years with DVESS, I've amassed many minerals, fossils and even rocks I'd love to wear as jewelry; the beginning and intermediate Wire Wrapping classes I took gave me the skill to begin making this dream come true. Wildacres instructors volunteer their time and are reimbursed travel expenses; my teacher was master wire jewelry artisan Jan Stevens (<http://www.wrapsodyjewelrystudio.com>).

Although the week began quite cool and windy, by the third day temperatures had warmed into the 70's. The view from the patios was crystal clear and the dogwoods, rhododendrons and other flowers were beautiful; the Hiking Class even found trilliums in bloom. Hearty meals were served family style by a cheerful kitchen staff.

Lawyer, writer, mineral dealer (Octahedron Minerals) and Baltimore Chronicle editor Alice Cherbonnier was my traveling companion. We had a grand time getting to know each other. Later this year we'll be taking a Field Trip to Alice's home in Towson, MD to see her collection and do some "silver picking".

DVESS's first Junior Rockhounds Teacher Lorraine Campbell was my roommate. Despite her move to Tennessee several years ago, Lorraine has remained a good friend and DVESS member; she once traveled 18 hours from home to an Executive Board meeting at Grant's house, arriving only an hour late!

Speaker-in-Residence Jeff Scovil gave our group of 60 students, teachers and staff six colorful and fantastic talks including one on his technique for photographing minerals and gems. Jeff

also took classes in silversmithing and produced some very nice pieces despite having undergone hip replacement surgery less than a month ago! For more about Jeff, see elsewhere in this newsletter.

YOU can join in the fun by registering for the September 3 - 9 session. Speaker-in-Residence Julian Gray is busy preparing his talks; the wide variety of wonderful classes includes faceting, soapstone carving, micromounting and gem trees with outstanding instructors and the usual "good stuff" auction, field trip, tailgate sale and "phun" night. Consider signing up! Registration and additional info can be found in the EFMLS Newsletter (<http://www.amfed.org/efmls/efapril12web.pdf>).

JEFF SCOVIL – WORLD MASTER PHOTOGRAPHER

Breathtaking, stunning and meticulous are the first words my brain could grasp after I caught my breath each time one of Jeff Scovil's photographs appeared on the screen during his six presentations at the Spring 2012 Wildacres Workshop.

Jeff travels the world, staying days and weeks at the homes of mineral collectors to photograph their million-dollar collections. His pictures have appeared on eleven posters for the Tucson Gem & Mineral Show, in Peterson Field Guides, and several other mineral books; his own *Photographing Minerals, Fossils, and Lapidary Arts* (Geoscience Press, 1996) is the only book ever written on the subject. He has been running the Seminar in Mineral Photography at the Tucson show for 20 years, and was the 2007 recipient of the Carnegie Mineralogical Award.

You can see some of Jeff's photos at <http://www.farlang.com/profiles/scovil-photography>,
<http://www.farlang.com/profiles/scovil-photography/portfolio>,
http://www.palagems.com/fotogfocus_scovil.htm,
<http://www.mineralmarket.com/Scovil/index.htm>.

* * * * *

SUPER DIG 2012

DVESS is the ORGANIZER of the Sterling Hill Mine Super Dig, held annually on the last Saturday of April. Required for admittance to this event is insurance thru membership in either Sterling Hill Mine, DVESS or another sponsoring American Federation of Mineralogical Societies (AFMS) club.

This year's Super Dig was spectacular. Nearly 300 Glowhounds from all over the USA participated. During the day I assisted Master Beader Herb Kropnick of the Rock and Mineral Club of Lower Bucks County with the newly offered "child-care beading session" which had parents dropping off their kids for a couple of hours. Garrett and some of the Hauck family children really enjoyed this opportunity! A big "thank-you" to Herb for his outstanding effort. After dark, I treated myself to a walk out into *Fluorescent Land*. My trusty fluorescent lamp brought these homely-by-daylight rocks to light and life!! At one point I was walking and chatting with a gentleman from Rhode Island and we ran into a man from Arizona. I cannot tell you how proud I feel to be part of the team that has made this exceptional opportunity possible for so many dedicated collectors.

Thanks also to our set-up crew: Junior Rockhounds teacher Mel LeCompte, who was on-site for seven days; long-time member Stu Cleveland and first vice-president Mark Leipert and his friend Stacey who were there for 3 days; Trip Master Jeff Winkler and his superb staff who, in addition to being on-site for 3 days, logged countless hours of behind-the-scenes prep time; and, of course, Alice and Rick Harty who travelled up from North Carolina to spearhead the

Registration crew.

Several corporations also sponsored the Dig, including Google, Waste Management (my son Jim's long-time employer), our printing sponsor PFL (www.PrintingForLess.com), and U-Haul, which gave out bags emblazoned with a graphic of fluorescent rocks; see elsewhere in this newsletter for information on fluorescent minerals from the U-Haul website. We thank and deeply appreciate the generous contributions of all our corporate sponsors.

FLUORESCENT MINERALS from www.Uhaul.com

INTRODUCTION

Miners accidentally stumbled upon fluorescent minerals near the end of the 19th Century, when the light of emitted sparks from poor connections on electrical contacts emitted ultraviolet light, revealing the fluorescent quality of the minerals. And in the highlands of New Jersey, in Sussex County, miners worked the two most extraordinary mineral deposits on the planet.

Approximately 10 percent of all the mineral species known in nature occur in the Franklin and Sterling Hill mining district of Sussex County. In this one area, a number of world records are held.

345 species of minerals known in nature occur here

35 species of minerals found nowhere else in the world

84 species fluoresce under ultraviolet light

69 new mineral species have been initially discovered from these deposits

This area is famous for its zinc deposits. They were immense, easily worked and exceedingly rich. The Mine Hill deposit in Franklin eventually yielded 22 million tons of zinc ore, and the Sterling Hill deposit in Ogdensburg yielded 11 million tons! The ores were mined principally for zinc metal, of which about 6 million tons was recovered - enough to galvanize every roof in the United States and Canada.

This ore consisted of the minerals zincite, a zinc oxide, willemite, a zinc silicate and franklinite, a zinc iron manganese oxide. These three principal zinc-ore minerals are practically unique individually and in the combination, and serve to set these deposits apart - there are no other zinc deposits on Earth like these.

Both of these intimately related ore deposits are of great interest to science. After 180 years of scientific investigation, the characterization of over 345 minerals and the publication of more than 1,000 papers, reports and monographs, their origins are still shrouded in mystery.

GEOLOGY from www.Uhaul.com

Geological Development of Franklin and Sterling Hill Minerals

Billions of years ago, Earth began as a mixture of molten metals and slag that eventually cooled with a crust enveloping its surface. The dense molten minerals moved toward the center of the smoldering globe by gravity. And successive shells of slag formed and solidified, each with varying composition, in a layered arrangement. Through convection, molten materials containing metallic elements moved out at certain points, cooled over a period of millions of years, and finally deposited as minerals in the outer crust. These deposits contain appreciable quantities of metal-bearing minerals known as orebodies.

One billion years ago, the most unique deposits of zinc ore in the entire world were created in the Franklin/Ogdensburg area in New Jersey. Ore deposits containing more than 345 mineral species - 35 found nowhere else on the surface of the Earth - all of which, mineralogically speaking, are true wonders of nature.

"It's an enigma... how it got here in the first place. It's like trying to solve a murder mystery

when all the witnesses are dead," explained Richard Hauck, president of the board of directors for the Sterling Hill Mining Museum in Ogdensburg. "There are a number of theories, but not one of them adequately explains how these mineral deposits got here."

"These orebodies were created more than 1.1 billion years ago," added John Cianciulli, curator of the Franklin Mineral Museum in Franklin. "We think a series of geological events took place - sedimentation, igneous injection, geological metamorphosis, volcanic activity - all combining over millions of years to create this unique deposit."

More than 15,000 years ago, in the Pleistocene Ice Age, the area was covered by a major ice sheet called the Wisconsin Ice Sheet, which eventually retreated, shaped and formed the area's topography of bedrock, rift deposits and bodies of water.

As the glaciers retreated, they exposed portions of the orebodies known as "outcroppings." The glacial exposures of the orebodies permitted groundwater to infiltrate, causing oxidation and resulting in the formation of even more mineral species.

The great mineral wealth created not only an economic engine for the area for more than 100 years, but also a classroom, found nowhere else on Earth, where scientists and researchers could study so many minerals in one place.

"Minerals and mining have been important to human development from the beginning," Hauck declared. "Name one product made by man that didn't require mining in its production - there isn't one. This science translates into applications, like lasers. Lasers were made possible by using simple rubies."

"The open pits allow the student of geology to see every phase of geological development," Cianciulli explained. "You can see igneous, sedimentary and metamorphic assemblages. You can see folding and faulting. There are very few places on Earth like this. This area has been the world's classroom of geology for more than 100 years."

While mining brought people to the area in the first place, it was the discovery and abundance of fluorescent minerals that has excited and attracted scientists, educators and collectors ever since.

FLOURESCENCE from www.Uhaul.com

Fluorescence in minerals is a selective transformation of incoming ultraviolet energy, which is invisible to the human eye, into emitted visible light. Ultraviolet means "beyond violet," and is the name given to that region of the electromagnetic spectrum just shorter in wavelength (and higher in energy) than violet light. Mineral fluorescence takes place when the ultraviolet energy is absorbed by a mineral and is immediately given off as visible light. Fluorescent colors are exceptionally vivid and present the viewer an eerie glow because they are emitted, not reflected, light. The emission is often confined to a narrow band of light, thus yielding a pure, intense color. This phenomenon has nothing to do with radioactivity, although some radioactive materials fluoresce. The willemite, calcite and other local minerals that fluoresce are not radioactive.

Mineral fluorescence was discovered near the end of the 19th Century, when mines were electrified. Sparks from knife switches and the mine "trollies" emitted ultraviolet light, revealing the fluorescent quality of willemite and other minerals. Before long, crude iron-arc spark devices were being used to sort willemite in the mills, and to further analyze fluorescence and

phosphorescence. By the 1930's, portable filtered mercury-arc lamps, direct ancestors of those used today by collectors, were being taken underground. There, geologists and surveyors could trace the ore at Sterling Hill and Franklin by fluorescence of willemite. A substantial number of local minerals fluoresce; they emit visible light when subjected to ultraviolet radiation. The fact that there are more spectacularly colored fluorescent minerals found at Franklin-Sterling Hill than anywhere else in the world prompted the New Jersey State Legislature on September 12, 1968 to declare the Borough of Franklin the "Fluorescent mineral Capital of the World."

The introduction of low-cost, low-pressure, mercury-vapor, portable ultraviolet lamps stimulated a whole new emphasis in mineral collecting at Franklin. This branch of local mineral collecting emerged energetically and fostered intense collecting and preservation of fluorescent mineral specimens on a grand scale. The bountiful supply of material fed an increasing demand and ensured the permanent role of fluorescence in the public aspects of Franklin's mining history and mineralogy.

To most collectors of fluorescent minerals, "Franklin" is typified by the red-and-green-fluorescing combination of calcite and willemite. While these two are found together at a dozen or more other localities, at none of them is this combination abundant or typical. At Franklin and Sterling Hill it was a substantial proportion of the millions of tons of ore mined there. At present, 84 fluorescent mineral species are known from the Franklin and Sterling area. Of these, about 10 are of sufficient brilliance that specimens of them are widely regarded as "classics." Some of the factors which make Franklin specimens the best known in nature are the intensity, depth and brilliance of their colors of fluorescence; the sharp contrasts where several fluorescent species are present on one specimen (commonly two to four, but up to seven); the textural variations for a variety of species; and the large size of some specimens.

* * * * *

On their website, U-Haul also has a story of DINOSAUR TRACKS IN CONNECTICUT. See their complete SuperGraphic presentations at

<http://www.uhaul.com/SuperGraphics/50/1/Venture-Across-America-and-Canada-Modern/Connecticut/Prehistoric-past-uncovered-in-Connecticut>

We thank U-Haul for making this valuable information available to the general public. Their website is owned and operated by Web Team Associates, Inc. Copyright © 2012 U-Haul International, Inc. All rights reserved. U-Haul International, Inc.'s trademarks and copyrights are used under license by Web Team Associates, Inc.

Scientist: Dinosaurs May Rule Alien Worlds By [Mark Whittington](#) | Yahoo! Contributor Network – Fri, Apr 13, 2012
Do dinosaurs rule other planets, as they used to rule the Earth more than 60 million years ago? That is the suggestion of [Ronald Breslow, Ph.D.](#), a noted Columbia University researcher, in a paper published in the Journal of the American Chemical Society.

What is Dr. Breslow's theory?
[According to the ACS's Eureka Alert](#), Breslow discusses the nature of amino acids as the building blocks of life on Earth. Amino acids can have a left handed (or L-geometry) or right handed (or D-geometry) orientation. For life to arise, proteins, which are made up of amino acids, must have one or the other kind.

Except for some forms of bacteria, life on

Earth is made up of L-geometry proteins. Sugars, also made up of amino acids, are D-geometry.

Breslow suspects that the reason why terrestrial life is oriented this way is that billions of years ago, meteorites brought amino acids to the Earth which started the evolution of life.

Could there be planets in which the other kind of amino acids started life?

Breslow theorizes that amino acids with the D-geometry could have been carried by meteorites to other planets, starting evolution of a different sort of life. Where do dinosaurs come in?

Breslow suggests that on other planets, intelligent life could have evolved from dinosaurs, similar to *tyrannosaurus rex* and *velociraptors*. Such creatures would combine intelligence with predatory orientation that would make them dangerous to meet by future space explorers on Earth

Why didn't dinosaurs evolve into intelligent species on Earth?

Earth may still be dominated by dinosaurs except for a catastrophic event that took place tens of millions of years ago. Two years ago, [the New York Daily News related](#) the ongoing discussion of how the dinosaurs, which dominated the Earth for

tens of millions of years, came to be extinct. The most accepted theory is that an asteroid hit the Earth in the vicinity of the Yucatan 65.5 million years ago. This resulted in an explosion a billion times more powerful than the atomic bomb that devastated Hiroshima. A heat wave was generated that burned all life that it touched. Debris and water vapor were shot into the air and covered the Earth, blotting out the sun for a decade. 90 percent of all life that existed at the time was wiped out. What was left included the ancestors of mammals, including modern human beings.

Did the Yucatan strike seed other worlds with dinosaurs?

[The Register relates](#) another paper published in the Cornell Earth and Planetary Astrophysics Journal that the Yucatan strike shot out meteors laden with bits of dinosaur DNA which in turn found root on other planets, eventually evolving into dinosaur-like life forms.

*Mark R. Whittington is the author of [Children of Apollo](#) and [The Last Moonwalker](#). He has written on space subjects for a variety of periodicals, including *The Houston Chronicle*, *The Washington Post*, *USA Today*, *the L.A. Times*, and *The Weekly Standard*.*

Contributed by our esteemed secretary, Grant Elliot

This space reserved for your article or photos. Ed

The Royal Canadian Mint just can't sit still. Like a hyperactive kid, it has revamped Canadian cash, first introducing [plastic bills](#) and then [killing the penny](#). Now it wants people to play with glow-in-the-dark quarters.



Heads or bones? Invisible during the day, the Pachyrhinosaurus's skeleton glows in the dark. (Credit: Royal Canadian Mint)

The mint's latest [collectible coin](#) features a dinosaur whose skeleton shines at night from beneath its scaly hide. It's actually two images on one face, which could be a world's first. The other side depicts Queen Elizabeth. Her Majesty does not glow in the dark.

Made of [cupronickel](#), the coin has a face value of 25 cents but is much larger than a regular Canuck quarter. It shows an artist's rendering of *Pachyrhinosaurus lakustai*, a 4-ton, 26-foot dinosaur discovered in Alberta in 1972. It's the first in a four-coin series of photo-luminescent prehistoric creatures. The mint says the skeleton can best be seen after the coin is exposed to sunlight, or to fluorescent or incandescent light for 30-60 seconds, adding that the luminescence won't fade with time.

Related stories on CNET.com [So long, Canadian penny. I won't miss you](#) : [Canada launches anti-fraud plastic banknotes](#) : [These 'Star Wars' coins are mint](#)

The glowing novelty is a first for the mint, but sadly it won't be for general circulation. The dino's mintage is limited to 25,000, and collectors who want to count their dinosaurs at night will have to pony up to the tune of \$29.95. Canadian, of course. It launches April 16. The shiny Pachyrhinosaurus may not be as cool as New Zealand's Star Wars, but at least it can keep you company in the dark. And if the mint can do something similar for coins in circulation, I might just enjoy wearing wearing holes in my pockets with them.

Executive Board meeting was held at Gary Weinstein's house.

Attendance: Gary Weinstein- Treasurer/Program Chair, AnnLynne Benson- President/Special Events Coordinator, Grant Elliott- Recording Secretary, Mark Leipert- 1st VP , Val Korszniak- Backup Secretary, 2nd VP Lou Detofsky, and Whiskers the cat were in attendance.

Ann gavelled the proceedings to order at 8:35pm. The March 2012 minutes were read by Grant and approved by those in attendance.

PROGRAMS:

May 2012- Gary will be away doing a presentation, and in his stead, Lance will take over and show a DVD on Columbian Emeralds.

Dick Bostwick, John Sanfacon, Bob Thompson (Indian Artifacts), Earl Verbeek and Gene Hartstein are in the works.

Mark will contact "Dino Don" Lessem as a prospective speaker.

MEMBERSHIP: Carol DeCuzzi has resumed newsletter editorship effective March. Need membership cards.

SPECIAL EVENTS/FIELD TRIPS:

Ann will try to nail down July Pool Party date with Gerald Feigin.

Rutgers Museum, Assembly Room, Winant's Hall, Old Queen Campus- Dr. Clive R. Neal was scheduled to talk on "The Moon 40 years after Apollo and why we should go back to stay" (4/17/2012) NOTE: Dr. Neal had to cancel; therefore, a replacement is in the works. Under the circumstances, Gary will not be attending and will not be transporting any attendees.

Magician/geologist/professor Dr. Steve Okulowitz will lead an expedition to Staten Island in 2012.

Discussed Sterling hill Digg coming up April 28th and Mil LeCompte plans in regard to the event. Minimum 100 people needed has been met. Volunteers to assist include Mil. Stu, Meredith Taylor, Mark Leifert, Evelyn Vickovich, Rick & Alice Harty, and three others (Stacey, Joe, Jeff).

Wrist bands and membership cards are ready.

C & D canal in Smyrna, Delaware still a possibility.

Mark will explore Big Brook, Inversand (See Lou grand tour-below), and other opportunities.

Lou's "grand tour"- Inversand(NJ), Irish Hill(NJ), NJ State Museum, Titusville(NJ) (Passaic Formation), Byrum(NJ), Fenchtown(NJ) (Hammer Creek Conglomerate), Milford(NJ), Kaufman Hill Ringing Rocks, and Bowman's Tower (South of New Hope) has been rescheduled to June 23, 2012.

Gary to provide proof of insurance for Inversand visit.

PS: From subsequent email from Ann

LOU DETOFSKY FIELD TRIP

GEOLOGY GRAND TOUR – June 23, 2012 – leaving from Washington Twp. 7 am

This is a geology study and collecting trip conducted by DVESS Field Trip co-Chair and Geologic Assn. of NJ founding member Lou "Doc Rock" Detofsky and our other Field Trip co-Chair, first vice-President Mark Leipert.

ITINERARY

NJ: Sewell – Inversand Marl Pit; Runnemede – Irish Hill; Trenton – State Museum; Titusville; Lambertville; Byram; Frenchtown; Milford. PA: Coffman – Bucks County Park; Hellertown, New Hope

WHAT WE'LL SEE

Vistas including the Philadelphia skyline, all 3 types of rocks; Triassic lowlands; Piedmont uplands; dinosaur tracks & raindrop impressions; faults and reverse faults, Ringing Rocks, Bucks County's largest waterfall, Lower Paleozoic cave, Bowman's Tower

WHAT WE'LL COLLECT

We'll collect a suite of rocks from well-studied areas,

WHAT TO BRING

Tools: rock hammer, boots for wet areas? Collecting Equipment: collecting bag, notebook,

newspaper, zip lock bags, ball point pens, index cards (specimen name, locality, formation, age), vials, Crystal Light cans, ? Safety Equipment: hard hat, gloves, first aid kit, sun screen, OFF, ? Misc: camera, plenty of water, snack bars,

ATTENDEES

This trip is intended for adults who are members of DVESS or another club covered by American Federation insurance. Trip is limited to the first 30 who sign up; contact Mark (mark.leipert@yahoo.com) or Ann (856-783-0969 or 856-418-6121 text) to register.

LEAVING

We will be meeting 7-7:15 am and leaving at 7:30 am sharp from the park adjacent to Washington Twp. high school on Hurffville-Cross Keys Rd. [Directions: from Rt. 42 and GreenTree Rd. (the Dump) proceed to the light at Ganttown Rd.; turn Right. At the Hurffville-Cross Keys Rd. traffic light turn Right again.

SUPPLIES

Expect tall grass, dirt and ticks; wear long-sleeve shirt and light-colored slacks or jeans (easier to see the ticks).

FOR MORE INFO

<http://www.davidhanauer.com/buckscounty/ringingrocks/>,

CYBER CONNECTIONS: Lance Schnatterly has set up Facebook and Twitter:
www.facebook.com.dvessnj : www.twitter.com.dvess_nj

Meeting adjourned at 10:00pm.

:

UPCOMING FIELD TRIPS

GEOLOGY GRAND TOUR – June 23, 2012 – leaving from Washington Twp. 7 am

STATEN ISLAND (collecting calcite, aragonite, etc.)

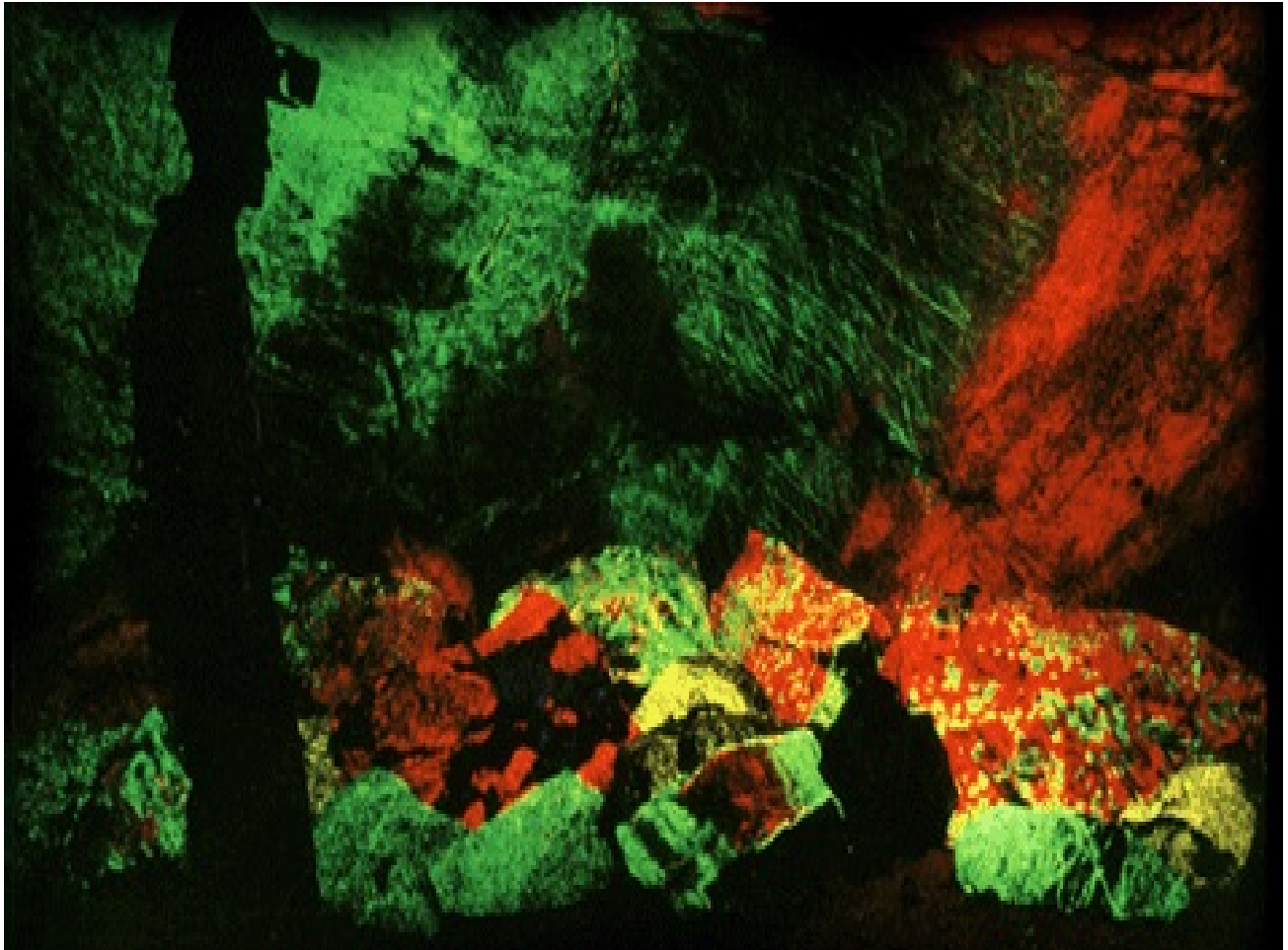
TOWSON, MD (see the Alice Cherbonnier/Larry Krause collection and "silver picking")

Don't FORGET DUES ARE 5 MONTHS PAST DUE !!!!

DON'T MISS OUT ON ANY OF THE FABULOUS TRIPS THAT ARE PLANNED FOR THIS YEAR

Check your info on the membership section of dvess.org

Did you know... (See info at beginning of newsletter this is more from Uhaul)
Found only in a small mining district in New Jersey is an extraordinarily rare composition of fluorescent mineral ores. What makes the geochemistry of these deposits completely unique on Earth?



It was dusty and noisy down in the mine shaft. The day shift had been working for hours with picks and shovels. It was dirty, backbreaking work and the men were tired. Suddenly the crude electric lights flickered. The knife switch shorted and sparked. Some were frightened, some prayed-all looked with awe at the eerie glow of rainbow colors that suddenly surrounded them...colors emitted by the rocks around them.