DVESScapades

escapades: interesting, stimulating, exciting activities and adventures









President's Message - by AnnLynne Benson, DVESS President and EFMLS Director

Ring out the old, ring in the new \bigcirc \bigcirc We welcome our returning members and extend an especially hearty greeting to recent and prospective members. A particularly warm welcome goes to 2nd Vice President Richard Murray - a new addition to our once again reshuffled and recycled Executive Board.

We have a fresh lineup of programs, we're getting settled into our new "digs" in the Education Building behind Centenary United Methodist church in Berlin. The dates for the **Spring pot luck dinner**, **Fall banquet**, **Super Dig**, and annual FREE tour of **Sterling Mine and Mineral Museum** will likely be decided at this month's Executive meeting.

If you have a collection, large or small – even tiny – that you would like to show off, we encourage you to invite the Executive Board meet in your home on the 2^{nd} Wednesday of any month.

GOOD STUFF - the annual convention of the Eastern Federation of Mineralogical and Lapidary Societies (EFMLS - our parent organization) will be held on Oct. 17-18,
2009 in Bristol, CT. Why not plan to attend?

GOOD FREE STUFF - you can read the newsletter of the American Federation of Mineralogical and Lapidary Societies (our grandparent organization) online at http://www.amfed.org/news/n2008 12.pdf The Houston Gem and Mineral Society has a wonderful website with an exceptional K-12 Education page <u>www.hgms.org</u>. Jim Brace-Thompson, the American Federation Chair of Junior Activities, "strongly encourages" everyone to check it out and says, "Without doubt, it's one of the finest club-constructed web sites l've seen, with superb resources for kids, parents, teachers, and scout leaders."

Paleolist - this link <u>http://www.paleozoic.org/paleolinks.htm</u> will open the door to new world for you.

May all your dreams of beautiful rocks and special friends come true. Ann Benson President

PUBLICITY - The best way for DVESS to attract public interest and provide the community with news and information as a means of gaining public attention or support would be to have a Publicity / Public Relations / Public Information Chair (or co-Chairs) and cooperation from all members. This would undoubtedly result in our gaining at least a few new members and might result in receiving requests from schools or other groups to present programs.

There are just one or two activities we would like the Chair(s) to do, which can be done without leaving the comfort of your home, in just one or two hours per week.

Please call Ann for details.

Here are some suggestions for all members: Have you ever patronized a place of business and felt, as a customer, that you were not appreciated, or even that you were an annovance or unwelcome intrusion to the person helping you? If so I am sure you were not anxious to return. Our club is like a business - we want people to feel welcome. It does not matter how much great publicity we have if we don't make people feel welcome and excited about what we offer. Just one negative comment or failure to project a positive attitude by just one member, which may then be passed on to a couple of friends or relatives, who then pass it on to a couple more, and who knows how many potential members may be lost. Public relations is everyone's job.

Delaware Mineralogical Society show March 7 - 8 2009

The **Delaware Mineralogical Society**, **Inc.** will hold its 46th Annual Earth Science Gem and Mineral Show at Delaware Technical and Community College [Rt. I-95 Exit 4B, Churchmans Road (Rt. 58) Newark (Stanton), DE 19713]. Hours Saturday are 10:00 a.m. to 6:00 p.m. and Sunday 11:00 a.m. till 5:00 p.m. The show features educational exhibits of mineral, lapidary and fossil specimens, displays from regional and university museums, an expanded roster of fine dealers of minerals, fossils, gems, jewelry and lapidary supplies, door prizes, demonstrations of gem cutting and polishing and a children's table, where youngsters may purchase inexpensive mineral and fossil specimens. Admission is \$5.00, \$4.00 for seniors, \$3.00 for youngsters between 12 and 16, and free for children under 12 accompanied by an adult. The Delaware Mineralogical Society is a non-profit organization, affiliated with the Eastern Federati on of Mineral Societies, and dedicated to learning and teaching about the earth sciences, rocks, minerals, fossils and the lapidary arts. Membership is open to all who are interested in these areas. Info and Coupons at <u>http://www.delminsociety.net</u> or contact <u>gene@fossilnut.com</u>. **For further information, contact**:

Gene Hartstein, (E-Mail- <u>gene@fossilnut.com</u>) (Publicity) Wayne Urion (302) 998-0686 (E-Mail- <u>wurion@aol.com</u>) (Show Chair)

PROGRAMS: A number of speakers are being lined up, including Chet Lemanski (After February 2009 Tucson show). Since we will have meetings at the Centenary United Methodist Church in Berlin, NJ during the summer, Gary will show/plan additional programs.

New Year - New word/info

BIOTURBATION

Geology – sedimentary rock strata Almost all sedimentary beds are thinly laminated when they are first deposited.

Bioturbation is a process, caused when the action of burrowing organisms such as insects, worms and crustacea disrupts the original bedding, making it gradually indistinct. As years and then centuries pass, the bedding surfaces are trampled, ingested, and homogenized; fine-scale differences in the sedimentary composition are destroyed. The resulting rock is massive, featureless, red in color and free of bedding-plane surfaces. Thinly laminated green strata, showing fine-scale bedding planes and sedimentary structures – no burrows, no evidence of plant material - indicate that burrowing organisms were not present. Rock which is completely barren of any evidence of life tells of a world which existed in the absence or near absence of animals.

The green laminated beds of the Lootsberg Valley in the Karoo Desert, South Africa, were deposited during the Permian extinction, in a world bereft of life.

Have you visited a good internet site about minerals?

There are a lot of really great mineral websites available from which you can learn a lot. <u>www.rockhounds.com</u> This terrific site is safe and has hundreds of links to interesting information. One of its highlights is an entire section about NASA's Mars Rover Expedition. You can also find information on crystal system, on cutting gemstones, how to wire wrap a crystal, articles on mineral stamps, and much, much more.

www.mineralofthemonthclub.org visit the Mineral of the Month Club run by Diamond Dan Publications especially for education.

MEMBERSHIP Thank you to all of those who already renewed your membership for 2009 – this is a good start to the new year. I would like to get filled out renewal forms for all renewals this year to put in a Membership Binder so I have current records for everyone. I have attached a renewal form with this issue of the DVESS Newsletter for that purpose, and I would appreciate all of you renewing, including those of you who have already renewed, but make sure I get a filled out Renewal form with current information. Thank you. CDC. Editor, DVESScapades

The following articles are taken with permission from





©2008 Diamond Dan Publications. All pictures and articles in this newsletter are property of Diamond Dan Publications and can not be copied or reused in any format (printed or electronic) without written permission of Diamond Dan Publications, P.O. Box 143, Manchester, New York 14504 or diamonddan@rochester.rr.com. Subscriptions: 12 issues (1 year) \$19.95. 24 issues (2 years) \$36.95. Make checks payable to Diamond Dan Publications.

Mineral of the Month: Azurite



Chemical Formula: Cu₃(CO₃)₂(OH)₂ Crystal System: Monoclinic Hardness: 3.5 - 4 Specific Gravity: 3.8 Cleavage: 1 good, 2 poor Fracture: Conchoidal (shell-like) Luster: Dull to Glassy Color: Light blue to very dark blue (so dark that it is almost black). Streak: Blue

Name: From the azure blue color of this mineral. One of the earliest names of this mineral was Blue Malachite (because they are both copper carbonate minerals).

Uses: Today, azurite is a minor copper ore. Malachite is more important as a copper ore. Many years ago, crushed azurite was used to give paint a deep blue color. However, blue azurite turns into green malachite over time. So, some blue paint in old paintings is now green! Above: Azurite blades from Tsumeb, South West Africa.

Below Left: A single, dark blue azurite crystal sitting in green malachite from China.

Right: A deep blue, glassy azurite crystal from Africa. Notice that circles of green malachite are forming on the azurite.



Ø

©2008 Diamond Dan Publications. All pictures and articles in this newsletter are property of Diamond Dan Publications and Can not be Copied or reused in any format (printed or electronic) without written permission of Diamond Dan Publications, P.O. Box 143, Manchester, New York 14504 or diamonddan@rochester.rr.Com. Subscriptions: 12 issues (1 year) \$19.95. 24 issues (2 years) \$36.95. Make Checks payable to Diamond Dan Publications.

Carbonates

In September we began to talk about the chemical formulas of minerals and we learned that minerals are put into groups based on their chemical formulas. Many young collectors find that it is easier to learn about these chemical groups by studying one group at a time. So that is what we will do. InOctober we started with the simplest group, the Native Elements. Then in November we looked at the group called The Sulfides. This month we will look at the carbonates. "Carbonate" minerals are minerals that contain a carbonate molecule. A "carbonate molecule" is made up of one carbon atom and three oxygen atoms. Here are some carbonate minerals with which you are probably familiar.



Carbonate minerals contain a molecule that is made up of one carbon atom and three oxygen

atoms. The formula looks like this: CO_3 Pull out your mineral field guide and look up calcite, malachite, azurite, rhodochrosite, siderite, and cerussite and look for the carbonate molecule.

Above Left: Gray calcite from Brushy Creek mine, Reynolds County, Missouri. Above Right: Green-brown siderite crystal from Canada.





DVESS Newsletter December 2008

More Carbonates





Above Left: Green malachite balls in dark brown matrix from Bisbee, Arizona.

Above Right: Green Malachite crystals on tan calcite from Africa.

Carbonate minerals all have similar properties. They are light colored (unless they contain impurities of other minerals or elements); they have a white streak; they are soft, usually around 3 on the hardness scale; they form, most often, in sedimentary rocks sedimentary rocks are rocks that are made up of sediments or pieces of other rocks that were deposited by wind or water); and they form near the surface of the earth.

Below Left: Pink smithsonite from Mexico. Below Right: Light blue anhydrite from Mexico.





(more info from Diamond Dan Publications Newsletter)

DVESS December 10, 2008 General Meeting/Holiday Party Minutes

By Grant Elliott, Recording Secretary

Meeting/Holiday Party was held at the organization's new location: Centenary United Methodist Church in Berlin, New Jersey.

Officers present were President - Ann Lynne Benson, Treasurer /Programs/Membership Gary Weinstein-, Grant Elliott- Recording Secretary, Lou Detofsky- 1st VP, Gerald Feigin- 2nd VP, Terry Wilson- Website Coordinator, Mel LeCompte- Junior Rockhounds /Field Trips Designate and Carol De Cuzzi- Newsletter Editor.

Others attending were Ann's grandson Joey, Peter De Cuzzi, Jane Feigin and son Jonathan, and Val Korszniak, newcomer/refugee from Gary's Astronomy Club.

PROGRAM: It was Gary's intention to regale attendees with two fascinating videos, but hard working MeI and other brain trusters could not make the VCR operate properly. Apparently, the old generation VHS tapes and/or machines are going the way of the fossils we seek. In its place, everyone engaged in lively conversation and good food - old fashioned, but tried and true. The gift exchange then took place with surprises galore.

ELECTIONS: After Ann gaveled (thumping the table) the general meeting to order at 9:32pm, Peter De Cuzzi presided over the election of officers for 2009. Without FOX NEWS present, the exciting results were as follows:

President- Ann Lynne Benson (Another year under the iron thumb)

1st VP- Gerald Feigin (After Lou declined to run- *"If drafted, I will not accept/ If nominated, I will not run/ If elected, I will not serve"*)

2nd VP- Richard R. Murray (In absentia)

Treasurer- Gary Weinstein (Boy, does he have a lock on this position!)

Recording Secretary- Grant Elliott (Just cannot catch a break!)

The meeting adjourned at 9:45pm.

To whom it applies, remember your dues payment next month.

Other Happenings:

Hadrosaurus foulkii - THE DINOSAUR THAT CHANGED THE WORLD special exhibit at the Academy of Natural Sciences opens on November 22nd and runs thru April 19th, 2009, or six months to celebrate the 150th anniversary of the discovery of this important fossil. 1868 the Academy became the first museum in the world to display the complete skeleton of a dinosaur. See Hadrosaurus foulkii again, remounted and reinterpreted for the 21st century and learn of its fascinating discovery 150 years ago. **Academy Of Natural Sciences, Philadelphia**

UPCOMING EVENTS

1/31/2009 Rutgers Open House, which appears to be a good one.

An event tentatively called Fossil Palooza thatwill take place at the Academy in February 2009, more info to follow

New Jersey State Museum Sunday Science Lecture Series

Jan. 11, 2009 Dr. Daniel Rubenstein, Princeton University "Zebra Societies & Conservation: Different Types for Different Stripes" Feb. 8 Dr. Chet Sherwood, The George Washington University

- "A Natural History of the Human Brain"
- March 8 Dr. Ian Burrow, Hunter Research
- "Secrets of the Ancients: Myths & Mysteries in Archaeology"
- April 5 Dr. Chung Shih, Infineum USA

"Silent Stories - Fossil Treasures from Liaoning, China"

May 3 Dr. Kenneth Miller, Rutgers University "Sea-level & Climate Change: Should I Sell My Shore House?"

June 14 Robert Denton, Discoverer and leading paleontologist of the famous Ellisdale Fossil Site

Space is limited. Reserve your seats early!

WHAT YOU NEED TO KNOW Free Admission - Free Parking, Museum Auditorium Each lecture begins at 4pm. Light refreshments will be served. For more information, or to make reservations, please call (609) 292-8594

DVESS MEETING LOCATION: Centenary United Methodist Church, 151 South White Horse Pike,

(route 30) in Berlin, 856-767-3881 or 856-767-7453. Located between Estaugh Ave and W Taunton Ave on your left, the church is on the right hand side.

MEMBERSHIP INFORMATION

Regular members are entitled to participate in all DVESS activities. Sponsoring members are entitled to the same plus a specially chosen mineral specimen. Dues are renewable each year in January. Membership rates for the Society:

Regular Membership:

\$15.00 for the 1st family member + \$5.00 for each additional family member \$10.00 for the 1st Senior (65+) member + \$5.00 for each additional family member

Sponsoring Memberships (each additional family member - \$5.00):

"Silver" \$50.00 for 1st family member - receive a Geode Specimen *"Gold"* \$75.00 for 1st family member - receive a Native Gold Specimen *"Platinum"* \$100 for 1st family member - receive a Premium Specimen SOCIETY INFORMATION

The **D**elaware **V**alley **E**arth **S**cience **S**ociety, Inc., (DVESS), a non-profit organization, was founded in 1956 and incorporated in the state of New Jersey in 1957. The Society:

- * promotes interest, knowledge and the development of skills in the "earth sciences". These interests include mineralogy, paleontology, lapidary arts, archeology and local preservation.
- * supports the conservation of natural resources, advocates the availability of collecting sites and maintains close contact with those in the academic field.
- * is a member club of the Eastern Federation of Mineralogical and Lapidary Societies (http://www.AmFed.org/EFMLS)

MEETINGS

The Society meets the 2nd Wednesday of each month throughout the year at Centenary United Methodist Church, 151 South White Horse Pike, (route 30) in Berlin

Anyone with info for the newsletter please share with me. You can be published! Stuff you did in school, on a trip etc., see my info below.

Editor's Notes: Editor is not responsible for authenticity of information in any articles submitted for publication. Nor are the opinions expressed in the "DVESScapades" necessarily those of the officers of the Delaware Valley Earth Science Society, Inc., and/or the editor.

To submit an article for publication in the DVESScapades contact the Newsletter Editor. <u>decuzzic@comcast.net</u>, or Delaware Valley Earth Science Society Inc., DVESS, P O Box 372 Maple Shade, New Jersey 08052 or DVESS Website: http://www.dvess.org garyskyrock@comcast.net

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

Study Of Polar Dinosaur Migration

ScienceDaily.com Oct. 22, 2008 Contrary to popular belief, polar dinosaurs may not have traveled nearly as far as originally thought when making their biannual migration. University of Alberta researchers Phil Bell and Eric Snively have suggested that while some dinosaurs may have migrated during the winter season, their range was significantly less than previously thought, which means their treks were shorter. Bell and Snively's findings were recently published in Alcheringa: An Australasian Journal of Paleontology. The idea that these animals may have travelled distances nine times further than mule deer or four times those of wildebeest would have made them the greatest migrators

in history. "There are strong opinions regarding dinosaur migration, but we decided to take a different approach, looking at variables such as energy requirements," said Bell. Their research led them to suggest that migrating dinosaurs could have traveled up to 3,000 kilometers in a round trip—lasting perhaps up to six months—half of the distance suggested previously. According to Bell, the notion of migrating polar dinosaurs is not new; however,

previously-held beliefs were that the animals followed the centrally shifting sunlight, or latitudinal "sun line," as part of their migration and would travel as far as 30 degrees of latitude, or 3,200 kilometers, in order to survive. Given their size and physiology, Bell and Snively have concluded that dinosaurs would have been incapable of sustaining the effort needed to make the trip. "When we looked at the energy requirements needed to support a three-ton Edmontosaurus over this distance, we found it would have to be as energy efficient as a bird. No land animal travels that far today," said Bell. Bell does not dispute the evidence of migration and points to discoveries of large bone beds as evidence that many dinosaurs also traveled. In order to sustain the herd, "it seemed to make sense that they would be moving to and from the poles," he said. While this view of migration is feasible for some species of polar dinosaurs, it does not hold for all, Bell noted. "Many types of dinosaurs were surviving in polar latitudes at the time, and getting along guite fine," said Bell. "They were not physically able to remove themselves from the environment for a variety of reasons and had to adapt to the cold, dark winters just as the rest of us mammals do today."

The following article is excerpted from the DVPS Newsletter V 32 I 4 Page 5 info about other local clubs. More info can be found at **DVPS WEB SITE** www.dvps.org

FIELD TRIP REPORT ______ C&D Canal / Petrified Wood site By *Don Miller* - Past President Sunday December 7th, "a date which will live in infamy." The weather reports indicated a rather nasty day would be brewing, but in true DVPS Hard Core Tradition, I decided not to cancel the collecting trip. I arrived at the Canal site at the appointed time to find a grand total of NOBODY there except the co-field trip leader, John Wolfe. Just because it was 30 degrees, winds of 40 mph, and a chance of snow, I thought somebody would show up. Eventually some Hard Cores did show up – it did my heart proud. I believe we had nine adults, two teens, and 5 children. Collecting at the canal was trying. That kind of weather is not the best for collecting small fossils. But the kids played, the adults tried their best at collecting and Louise Gibbs came up with the find of the day – a very nice *Squalicorax* shark tooth. An executive decision was made to shorten the time for collecting at the canal and to caravan down to the petrified wood site which was about 20 minutes away. After a group stop at a convenience store that was very convenient, we arrived at the wood site.

The wood site is a working farm, but the owner is kind enough to let people collect on the land after the growing season. It being plowed regularly, the wood has been broken into hand sized chunks and smaller over the years so there are no big pieces, but there are lots of pieces. And visually speaking, there is no doubt that the stuff is wood.

AFMS CODE OF ETHICS

I will respect both private and public property and will do no collecting on privately owned land

without the owner's permission.

- I will keep informed on all laws, regulations of rules governing collecting on public lands and will observe them.
- I will to the best of my ability, ascertain the boundary lines of property on which I plan to collect.
- I will use no firearms or blasting material in collecting areas.
- I will cause no willful damage to property of any kind fences, signs, buildings.
- I will leave all gates as found.
- I will build fires in designated or safe places only and will be certain they are completely extinguished before leaving the area.
- I will discard no burning material matches, cigarettes, etc.
- I will fill all excavation holes which may be dangerous to livestock.

I will not contaminate wells, creeks or other water supply.

I will cause no willful damage to collecting material and will take home only what I can reasonably

use.

I will practice conservation and undertake to utilize fully and well the materials I have collected and will recycle my surplus for the pleasure and benefit of others.

I will support the rockhound project H.E.L.P. (Help Eliminate Litter Please) and will leave all collecting areas devoid of litter, regardless of how found.

I will cooperate with field trip leaders and those in designated authority in all collecting areas.

I will report to my club or Federation officers, Bureau of Land management or other authorities,

any deposit of petrified wood or other materials on public lands which should be protected for the enjoyment of future generations for public educational and scientific purposes.

I will appreciate and protect our heritage of natural resources.

I will observe the "Golden Rule", will use "Good Outdoor Manners" and will at all times conduct myself in a manner which will add to the stature and Public "image" of rockhounds everywhere.

DVESS Directory 2008	President Ann Lynne Benson 856-783-0969 SeleniteQueen@comcast.net
1 st Vice President Gerald Feigin gfeigin@co.gloucester.nj.us	2 nd Vice President Richard Murray
Jr. Rockhound Coordinator Mel Compote	Recording Secretary Grant Elliott 856-728-1731 gle@verizon.net
Website Coordinator Terry Wilson 609-714-1309 terry@dvess.org	Special Events Coordinator Ann Lynne Benson 856-783-0969 SeleniteQueen@comcast.net
Treasurer, Program Chair, Membership Chair Gary Weinstein 856-234-0708 - home 856-795-5077 - work garyskyrock@comcast.net	DVESS Newsletter Editor Carol De Cuzzi 856-428-0621 - home decuzzic@comcast.net

Membership Form

First Name:	Last Name:
Address:	City:
State:	ZIP+4:
Phone:	Email:
Cell Phone:	Profession, School or Major Work
Okay to let other members see your email and other orange-starred information?	Okay to share Do NOT share
Newsletter Delivery via	Email Postal Mail
Type of membership Regular Membership: \$15.00 for the 1 st family member + \$5.00 for each additional family member \$10.00 for the 1 st Senior (65+) member + \$5.00 for each additional family member	First Name: Last Name (if different) First Name: Last Name (if different)
	First Name: Last Name (if different)
Sponsoring Memberships (each additional family <i>"Silver"</i> \$50.00 for 1 st family member - receive a Geo <i>"Gold"</i> \$75.00 for 1 st family member - receive a Nat <i>"Platinum"</i> \$100 for 1 st family member - receive a Pre	member - \$5.00): ode Specimen ive Gold Specimen emium Specimen
Interests Minerals Fossils Lapidary Trotter Sterling Hill of	Collecting Museum Trips ther, list
How did you learn of DVESS?	
Other clubs you belong to	
Comments	
What NON-DVESS interests or hobbies do you h	ave?

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

RETURN SERVICE REQUESTED







Electronic newsletter only

Philadelphia Mineral and Fossil Treasures. Show & sale of minerals, fossils, books, gems and jewelry; free specimens and a fossil dig; educational displays, personal collections, scouting merit badge information. Sunday, April 4, 10 am to 5 pm Saturday April 5, 10 am to 4 pm \$5.00 admission; 1.00 kids under 12; uniformed scouts enter free. Location: Lulu Temple, 5140 Butler Pike, Plymouth Meeting. Information: <u>dklieger@verizon.net</u>; 610-644-2492

You may want to include these links relating to fossil preservation and conservation in the newsletter- Grant http://www.flmnh.ufl.edu/natsci/vertpaleo/resources/prep.htm

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

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

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

(more info from Diamond Dan Publications Newsletter)

Can Light Damage My Mineral Collection?

by Darryl Powell

There are some minerals that can be harmed by sunlight. If you leave them on a desk or shelf and sunlight shines on them every day, they will change. But the change will be very little each day. After many months or years, you may notice that some specimens are different. Some will lose their color. Some will get darker. Others will fall apart. When you know more about light and minerals, you will be able to take better care of your specimens and they will last for a very long time.



Minerals which are affected by light are called **photosensitive**. The problems that light causes include bleaching, color changes, and decomposition. Let's look at these one at a time.

Bleaching. Bleaching means that color is taken out of something. When sunlight shines on some minerals, the color gets lighter and lighter until the mineral is white. The minerals that can be bleached by the sun are celestite, topaz, and anhydrite. Once the color is lost in these specimens it will not return. If you have these minerals, do not display them near a window which allows strong, direct sunlight to fall on the specimens. Keep these specimens in a shadowed corner of a room or cabinet and only put light

Can Light Damage My Mineral Collection? Continued

on them when you want to show them off for a short time. Here's a bleaching experiment for you: Take a colorful advertising page from the news-paper and put it on a table where sunlight will shine on the page. Let it sit in the direct sunlight for many days. Each day look at the paper. What do you see? In time, you will see that the colors are changing. Some colors will actually disappear!

Color Changes. Another problem caused by light is that it can cause some minerals to change color over time. Some minerals that can change color when exposed to sunlight include calcite, rose quartz (which fades), topaz, fluorite, barite and vanadinite. If you ever wonder if light will harm a particular mineral specimen, place a less valuable piece from the same locality in light and observe it for a number of days and weeks.

Only after doing this experiment should a collector take the chance of displaying better specimens in direct light. Some green fluorites, for example, are known to change to purple. This is true of the specimens from Weardale, Durham County, England. If you want to be very careful, put specimens that you know will fade or change color in drawers where they will be in the dark most of the time.

Decomposition. There are some mineral species that actually decompose (that is, break down) in the presence of light. The light helps create a chemical situation where certain elements in the minerals combine with oxygen in the air (a process called oxidation). This oxidation can destroy the color and the luster of the minerals. These minerals are said to be photosensitive.

The minerals that contain silver, like proustite and pyrargyrite are photosensitive. They will change from striking red to dull black as the oxidation takes place. As long as they are kept in complete darkness and looked at only once in a while, and then for a very short time, they will be red. But every time light hits them, oxidation is happening and they are, a little at a time, getting darker and dull!



The mineral realgar is famous for its bright red crystals. However, over time, it changes into the golden-yellow, powdery mineral called orpiment. This change happens faster when a realgar specimen is exposed to light. So, if you ever have a decent realgar crystal, keep it in the dark or, someday, you will notice that it is powdery, yellow and now should be called orpiment!

The mineral vivianite, like proustite and pyrargyrite, oxidizes in the presence of light. As it oxidizes its color changes from almost colorless when pure to greenish blue and then to blue and then dark purple (which looks almost black) when the process is done. The specimen will also begin to fall apart.



If you have any of these specimens, be careful to keep them out of direct light. Keep them safe in boxes or cabinet drawers and show them off or look at them once in a while. If you do, you will be able to enjoy these specimens - in their original conditions - for many years.

