



THE VIRGINIA PEN



GEM AND MINERAL SOCIETY OF THE VIRGINIA PENINSULA

February 2017



PRESIDENT'S CORNER

Sara Phillips

Special Points of Interest:

- GMSVP Monthly Meeting
 - March 2nd, 7 PM; Sandy Bottom Nature Park's Nature Center Hampton, VA
- TGMS Auction
 - Friday, March 20th, 7 PM at 3396 Stoneshore Road, VA Beach, VA
- TOTE Show
 - March 24th—26th; Hampton Roads Convention Center, Hampton, VA
- Spring EFMLS Wildacres Workshop
 - May 22nd to 28th, Spruce Pine, NC

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Happy February GMSVP! We are off to a great start this year. During our February 2nd membership meeting, we approved our club's 2017 budget. After going over the budget, I gave a quick presentation on gold and beginners level gold panning. We have a possible field trip coming up in March/April, and I wanted everyone to be well informed on the subject!

Our next membership meeting is on March 2nd and will consist of a chili cook-off and rock show and sale. Please bring your best chili and your rocks/minerals/fossils for the rock show and sale. This should be a good time!!

We have an upcoming Treasures of the Earth (TOTE) Show from March 24th to 26th in Hampton, Virginia. We do need volunteers to help with equipment setup, geode cutting/selling, demonstrations, and equipment pack-up. Our club currently has no committee chair running this program. If anyone has time to volunteer for this (even if it's just a few hours) it would help immensely. Remember, if a club member volunteers 4 hours of their time and either helps with equipment pack-up and setup on Thursday or equipment breakdown and storage on Sunday, you can buy any geode for half price (and we will cut it for you too!). Below I have a list of areas where we will need help:

Thursday March 23rd: 12 PM (Noon) – We need volunteers to meet at the GMSVP shed at Sandy Bottom Nature Park and pack up equipment in the truck. After the truck is packed, we will still need volunteers to meet at the Hampton Roads Convention Center to get everything setup at our booth. This entire process usually takes about 3 to 4 hours. (Cont'd on next page.)

GMSVP Purpose: The purpose of the GMSVP is to: facilitate the exchange of information and general cooperation among its members by promoting the study of lapidary techniques, mineralogy, paleontology, and allied fields of Earth sciences; provide the community with a knowledge of the hobby through lectures, demonstrations, and exhibitions; and enjoy good fellowship.

Visitors Welcome: The GMSVP welcomes any visitor with an interest in geology, mineralogy and the lapidary arts. Whether you are a hobbyist, artist, collector or interested in Earth Science, the club has something for everyone.

Dues: Individual \$15, Couple \$20, and Family \$25. Dues information is under: [Documents and Membership Information on the GMSVP Website Homepage.](#)

Meeting Location: Our meetings are held at [Sandy Bottom Nature Park](#) in Hampton, VA. Check the GMSVP website [Events](#) page for actual dates and times. The upcoming meeting information is in the Special Points of Interest area on the left of this page.



GMSVP

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President's Corner (Cont'd)

Sara Phillips

(Cont'd from prior page) **Friday March 24th: 12 PM (Noon) to 6 PM, and Saturday and Sunday March 25th and 26th: 10 AM to 5 PM** – We need volunteers for geode sales, cutting geodes, wire wrapping demonstrations, polishing demonstrations, and just talking to the general public about GMSVP.

Sunday March 26th: 4 PM – We need volunteers to help clean up our booth area and pack up equipment in the truck. After the truck is packed, we will still need volunteers to meet at the GMSVP shed for storage. This entire process usually takes about 2 hours.

In case you forget - with your GMSVP membership card, you get into the TOTE shows for FREE! Please bring your membership card with you to get into this event.

Have a Gneiss Day!!! Sara Beth

February Meeting—Gold Panning

Michael Griffith



Our gold panning skills were honed at the February 2nd meeting. With the help of some research, Sara Phillips shared where it is best to look for gold in a stream and discussed the various equipment needed from gold pans to tweezers. The just-in-time training will come in handy for our next gold panning field trip in the Spring!



Help Needed—Please Volunteer!

There are several positions that offer volunteer opportunities for anyone looking to make a difference in their lives as well as in the lives of others. Please consider volunteering for one of the available positions.

- **Pebble Pups Co-chair** - Great opportunity to make a difference in the lives of the younger generation. This is a co-chair; you are not alone in this position.
- **Tote Show Coordinator** - Lead the planning and club's participation in gem and mineral shows.
- **Property Manager** - Keep track of club equipment and order parts as needed.
- **Silver Jewelry Instructor** - Instruct club members in the techniques of silver jewelry fabrication.
- **Club Librarian/Historian** - Keep track of the club's library books and the history of the club. Prepare and submit All American Club Yearbook.

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We are going to try something a bit different for our March 2nd meeting.

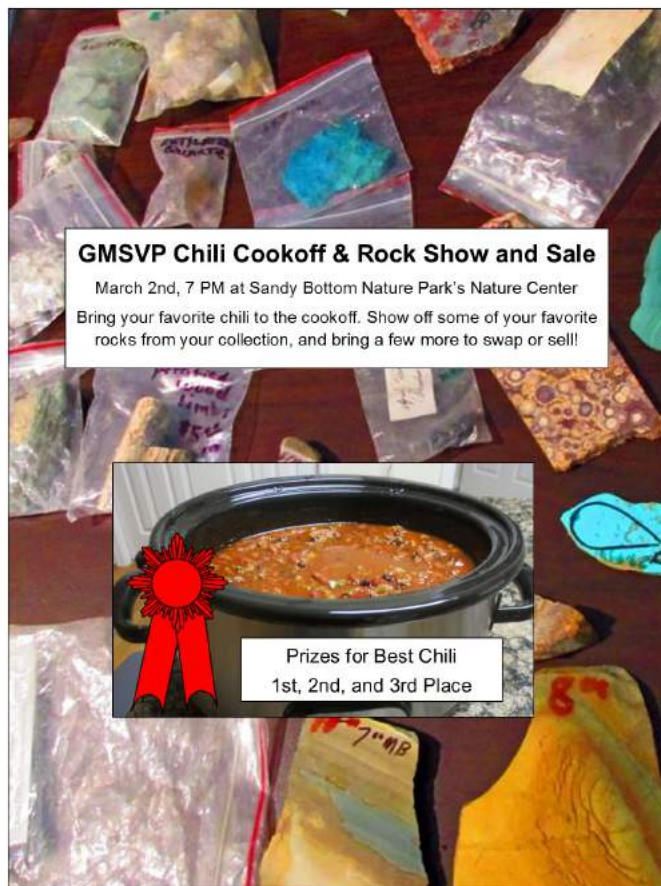
With the colder weather, our hospitality theme is a Chili Cookoff. So dust off your family recipes and bring a batch of your favorite chili to the cookoff. Prizes will be given to 1st, 2nd, and 3rd place best tasting chilies!

Many of us have our favorite specimen from a club or family field trip. Bring them to the meeting to show off to our fellow club members. Of course, these specimens will not be available for swap or sale.

The meeting also will include a rock swap/sale. Bring in some specimens from your collection that you wouldn't mind selling

or trading. Your excess specimens may be someone else's treasure.

This promises to be an extra special meeting. Come hungry with your chili and specimens!



GMSVP Website Updates

Holly Worsham



I have added links to our website for geodes, thundereggs, and nodules and will continue to update as I find great resources for the club members to use. You can access the links by going to our website (www.gmsvp.org), clicking the "More" link at the top, clicking on "Links and Downloads," and finally clicking on the pop down link for "Geodes and Thundereggs." Here's the links that I've added so far:

- <http://www.cutthatagate.com> - Resource for agates and agate geodes.
- www.thundereggs.co.uk - Website that tracks thundereggs found all over the worlds, interactive globe map to locations. This is a living site and is continually being updated.
- www.zianet.com/geodekid/ - Robert Colburn, aka "Paul, the Geode Kid," maintains a website on thundereggs and has also written a historical theory with his research on thundereggs titled, "The Formation of Thundereggs (Lithophysae)," that can be found at: <http://www.zianet.com/geodekid/thndregg.htm>.

Other website updates include: the contact information for the 2017 board members and committee chairs as well as current vacancies under the "Contact" page, a welcome to Mary Hood as our new Field Trips Coordinator and a call for volunteers to fill current Committee Chair vacancies under the "Announcements" page, and Mary's contact information on the Field Trips page.

IMPORTANT:

- Our club currently has no **SHOW COMMITTEE CHAIR** running this important program. Board members and current committee chairs are taking this on as an additional effort. We are in urgent need to fill this important show committee chair, as our participation in the Treasures of the Earth (TOTE) shows provides an opportunity for our club to interact with the community and get the income to run our club through the selling and cutting of geodes.
- Please consider volunteering to lead this important committee chair. We can help with training and there will be lots of support!
- If anyone has time to volunteer for the upcoming March TOTE Show (even if it's just a few hours), it would help immensely. **Remember, if a club member volunteers 4 hours of their time and either helps with equipment pack-up and setup on Thursday or equipment breakdown and storage on Sunday, you can buy any geode for half price (and we will cut it for you too!).**

GMSVP has a booth at the Treasures of the Earth (TOTE) Show being held at the Hampton Roads Convention Center, in Hampton, VA on March 24—26. The booth will include displays about Virginia's natural resources and our club. Members also will display their collections and demonstrate the equipment. As a fund raising activity, our club sells geodes at the show, which we cut with our rock saws. These shows also are a great way to increase awareness of our club and gain new members. *Being on the Peninsula, this is a great chance for you to support our booth.*

Volunteers are needed for the following 2 to 3 - hour TOTE Show shifts and can sign up at the March meeting or by contacting Sara Phillips at:

SPhillips@ecslimited.com.

Schedule:

- **Thursday, March 23rd:**
 - ◇ **12 PM (Noon):** Volunteers should meet at our club shed at the Sandy Bottom Nature Park to load the truck and caravan over to the show site or can meet us at Hampton Roads Convention Center at 2 PM.
 - ◇ **~1 PM:** Truck unloading and GMSVP booth/equipment setup. Booth and equipment setup takes about 3 hours; more volunteers, less time.
- **Friday, March 24th (Noon to 6 PM) and Saturday & Sunday, March 25th and 26th (10 AM—5 PM):** During the show, GMSVP booth/equipment have four areas that need manning: demonstrations, education/youth programs, geode/slab cutting, and sales. Please let Sara know which activity and day you can to support; no experience is necessary (training is available).
- **Sunday, March 26th (4 PM):**
 - ◇ Booth and equipment cleanup, teardown, and loading at the end of the show.
 - ◇ Truck unloading at the club's shed in Sandy Bottom Nature Park.



While any GMSVP member may use the club's equipment, priority will be given to volunteers at the show. While Members will be available to provide training on equipment proper use and safety for new rockhounds. Volunteers will have ample time to also see the show.

Members are reminded that we get free access to the show (bring your GMSVP membership card) and we are not competing with the other vendors or clubs. Questions should be directed to Sara Phillips at:

SPhillips@ecslimited.com.

While researching for an article on thundereggs, I stumbled across a great website: www.thundereggs.co.uk. The website tracks the different type of thundereggs found all over this planet and is a living website, in that it is updated with new finds as the webmaster/collector, David Rix, is notified. David started the website as a hobby to keep track of his collection, and it grew into what it is today—a wealth of information on thundereggs. In writing to David, he mentioned that he has some additional articles to add to his site coming up. David gave me permission to use the photographs from his website and any information that I found of interest for others.

In the blog section of the website, David discusses thundereggs as follows:

- The crystallographers report that geodes (as many thundereggs are) can aid breaking addictions. I am inclined to agree from my own experience. The things themselves are so darned addictive that no other addiction stands a chance!
- Put simply, thundereggs (or lithophysae) are a structure, not a mineral. They form in rhyolitic lava flows, probably as nodules split on cooling, creating a hollow space inside. This then fills with a agate, quartz, jasper, opal, and other things in various combinations. The result is a rock that, when cut in half, reveals a self-contained center of sometimes magical beauty, surrounded by a rock matrix. The filling is as varied as agate can be, and this variation can be highly location specific. Every bed (site where thundereggs are found) has it's own characteristics – its own flavor, like some unique variety of wine. Thundereggs from just a few miles away can be almost unrecognizable. That is part of their charm and what makes them so highly collectable. Set a French Esterel next to an American Friend Ranch egg, next to a Buchanan Ranch egg, next to a vivid agate from St. Egidien, and you might well wonder how these things can be related at all. But the similarities are there in the shapes and structures – the sense of torn rock and the seeming 'energy' in their history, which is very different to a sedate classic geode or agate window ornament.
- The name thunderegg comes from American Indian legends, but the appearance of these things – the way they seem filled with the frozen energy of torn and stretched rock (far more so than a sedate classic agate) and the layering of colors inside them . . . they really seem to merit their name. Sometimes they look almost organic or as though made of gel or water. Some even seem to have swirling storm clouds frozen inside. Or jagged crystalline lightning or murky rockpools. The Eibonvale Thunderegg Gallery seeks to classify them according to location as far as possible, though true completeness is utterly impossible.

Here are some pictures of thundereggs from around the world from the www.thundereggs.co.uk website. This is in no way inclusive of all the different types of thundereggs found worldwide, but it gives the reader an idea on the vast differences in thundereggs formations. Some of these look like they would make some interesting cabochons. (Cont'd on the next page.)

GMSVP Invited to TGMS Annual Auction

Robin Stoughton, TGMS President








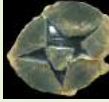
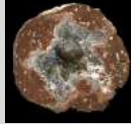
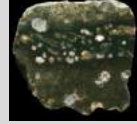
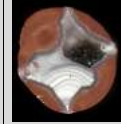
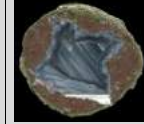



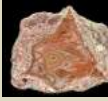
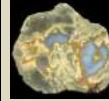
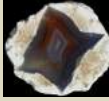










Greetings fellow Rockhounds! GMSVP members are cordially invited to the Tidewater Gem and Mineral Society (TGMS) Annual Club Auction. The TGMS Auction is on Friday, March 20th at 7 PM at St. Luke's United Methodist Church, 3396 Stoneshore Road, VA Beach, VA.

Hope to see you there! Robin

New GMSVP Members—Welcome New Rockhounds!

There were no new members during the last month.

(Cont'd from prior page.)

Agate Creek - Australia	Yita Ridge (Mezezo) - Ethiopia	Rotterode #2 / Koppenstein - Germany	Maiskoje Deposit - Kazakhstan	Piedra Parada - Argentina	Star Spirit, Haida Gwaii - Canada	The oldest thunder egg - Wisconsin Fluorite Thunder eggs – est 1.1 billion years old	Smallest Thunder egg - Little Naches River, Bed 2 Green Conglomerate – Washington - >2mm Zoom in close and it looks like a surreal artwork depicting the night sky.	Smallest stand-alone thunder egg Keweenaw / Lake Superior Michigan 1cm	Earthquake thunder egg Mojave National Preserve California. This is a tilt, where the horizontal layers indicate that it has moved in the ground.
									
Agate Core - Seascapes	Opal Core	Agate Core	Content not disclosed	Content not disclosed – double thunderegg	Agate – Starlike Pattern				
The Lava Road - Hollow Moor UK	Cubuk Turkey	Esterel - Le Louve France	Nowy Kosciol Poland	Yadrino Russia	Dumbrava Romania	'Metal' thunder egg - Wingshausen Germany - Steinhorst Thunder egg with Metallic Core - 350-400 mya	Most fragile thunder egg - Kemmlitz Kaolin Mine Germany with water clear quartz, when trying to polish it's more like trying to polish a clump of cat litter	Most flawed thunder egg All Gottlob Germany Thunder eggs have flaws, but this one is something else entirely. It has been totally pulverized - disintegrated - mashed - pureed, creating what is actually quite a unique-looking specimen.	New Location - First Creek in Washington State. This is an obscure but very interesting location producing relatively large eggs with distinctly elongated and sometimes lens-shaped appearance. The cores tend not to contain fancy agate, but a complex blend of minerals, sometimes very attractive in an earthy way.
									
Chalcedony	Opal, agate and crystal with Seascapes bottom	Content not disclosed with leveling lines (aka seascapes)	Pseudomorph agate	Blue agate	Four pointed star with red agate				
Little Naches River, Bed 2.5 Oregon	Gold Basin California	Triple Tavernier New Mexico	Contact Nevada	Richardson Ranch Oregon	Chinati Mountain Texas				
									
Clear brown agate - looking almost like some kind of plant cone	Cores are composed of blends of crystal and a distinct red mineralisation	Rich and dark agate – Triple chambers	Called Thundernuts because they are the size of walnuts – agate and crystal 4 point star	Opal with moss garden – triple chambers	Muddled core of pale agate and crystal within a greyish brown matrix				

Disclosure; I am not a geologist or mineralogist. My background is in the tech field, and I am just your typical rock hound/hobbyist. Information for this article came from the internet. I hope you find this information educational as well as entertaining. If by chance you

see a correction, please feel free to contact me (gmsvp.web@gmail.com) or the newsletter editor (maineguy@cox.net) and a follow up correction will be printed.

Online Resource: Eibonvale Thunderegg Gallery <http://www.thundereggs.co.uk/>

Virtual Museum of Geology

Dan Fontaine

Here is a website that you may want to explore: (http://www.virtualmuseumofgeology.com/store/c1/Featured_Products.html).

The website provides an online geological archive and mineral and fossil shop. The site is an online museum for fossils and minerals and has rockhound resources, including a directory of rock shops and geology attractions; geology clubs; mineral and fossil shows; online presentations and educational resources; recommended locations to visit; an online rock shop; and a highlighted specimen.

Disclaimer: I am not promoting this site. It is merely shared as a site that may be of interest to our club members.



New Year, New Items in our rock shop!

Visit the Virtual Museum of Geology's Online Rock Shop and check out all of the new mineral and fossil specimens just added!

www.virtualmuseumofgeology.com
CLICK BELOW to visit the VMG Rock Shop

Virtual Museum of Geology
Herbarium Collection • Minerals & Fossil Shop



If you are seeing the light, the ultra violet (UV) light that is, there may be a problem. Many of the shows I visit offer a display/exhibit/darkened booth highlighting the amazing effects of UV-reactive minerals for show patrons to see. Such displays are really great to see at shows, because they offer a view of minerals and rocks most folks never have the opportunity to see.

While many of the UV exhibits I have seen offer sufficient safe guards for the public, some could be better at protecting the club members working the display and the general public.

In your exhibit are folks provided with sufficient eye protection and bare skin protection? Is sufficient attention being paid to reflective surfaces? Are the lights angled sufficiently well to illuminate the minerals and rocks and keep the UV rays out of patron's eyes?

Even short term exposures to UV can have harmful effects. One of the examples I like to cite is about UV reflections. Take the story of a group of people out on a boat and enjoying some sport (catch and release) fishing. Imagine that all the folks are wearing baseball caps with visors to protect their heads and faces from harmful UV ray sunburn effects. At the end of the day there will be folks showing no signs of sunburn, because they wore the proper amount of sun screen. There are also most likely going to be folks at the end of the day who are quite sunburned, right to the very underside edge of the baseball cap where its head band touches the forehead.

How might the sun's harmful UV rays have reached under the visor right to the persons forehead to create a sunburn in an area the should have been protected by the visor? In a word, the answer is -- reflections. The surface of the ocean is not flat, it is covered by waves. Those waves act as curved reflectors to reflect the sun's harmful UV waves upward and right underneath a persons visor-covered forehead. The same can happen on a smaller scale in a show's UV mineral booth. UV can be reflected by some mineral surfaces up onto the bare skin and unprotected eyes of show patrons and club members tending to the booth.

Under most circumstances the amount of exposure is relatively minimal, except for those who remain in the booth for extended periods of time - such as the folks tending to the booth and those curious show patrons who just can't get enough of the beauty and curiosity of UV illuminated minerals. Some suggested solutions to UV overexposure include:

- Wear eye protection for extended viewing or working in the vicinity of UV light.
- Wear sunscreen protection on exposed skin.
- Minimize reflections of UV light toward viewers - reflections may come from the display material and/or the minerals themselves.
- Angle the UV lights so no one, especially small children, can kneel down and look up into the UV lamp housing or bulbs.
- Offer protective eye-wear temporarily to patrons who wish to use it, even if for short exposure times.
- Take periodic breaks from being under strong UV illumination.

We encourage shows to offer exhibits of UV minerals and rocks, because such displays always seem to be a great attraction. We also encourage sufficient protections and safeguards be utilized with such exhibits. As always, we hope you safely see the light because your safety matters.

Source: EFMLS Newsletter, Vol. 64, Number 4, February 2017

Mark your calendar for the 2017 EFMLS Annual Convention—the weekend of October 20 - 22, in Bristol, Connecticut. Mid-October is typically peak time for fall color, which can be spectacular. We'll have lots of activities planned for those who come, including road logs for those who want to drive and experience quaint New England, with the reds and golds of fall foliage juxtaposed with rock walls, winding roads, old cemeteries, and white churches.

Connecticut is a small state in size, but is very rich in mineral diversity. The pegmatites in the central valley region produced many fine gem-quality beryl and tourmaline crystals, as well as most other pegmatite suite minerals. Thanks to being at the site of multiple plate collisions, Connecticut is composed of all three rock types, and minerals occur in a wide variety of geologic terrains. The metamorphic terrains produced abundant garnet (the state mineral), kyanite, and other metamorphic minerals. World-class Bristol chalcocite crystals were formed at the contact of sedimentary rocks and volcanic extrusive rocks. The theme of the show is "Connecticut Rocks," with a focus on the mineralogy of the state, and there will be a Saturday talk on the Geologic History of Connecticut. Yale's Peabody Museum and the Connecticut Mining Museum are short drives from the show location, and the Harvard Museum is only a 2-hour drive away.

We hope to see you all at the convention.

EFMLS Region IV Annual Picnic/Rock Swap

Sara Phillips, EFMLS Region IV VP

Source: <http://www.smrnc.org/region-iv-rock-swap--sale.html> (click on link for directions & times)

The Southern Maryland Rock & Mineral Club is proud to host the 2017

Eastern Federation of Mineralogy and Lapidary Societies (EFMLS)

Region IV Annual Swap and Sale Picnic & Auction

Open to all Rock Club members in the Eastern Federation

Gilbert Run Recreational Park
(Brookside Pavilion)

Charlotte Hall, MD

Saturday, June 17, 2017
9 am - 5 pm

Admission to the Park is \$5 per carload

This is a fun event for rock club members to meet and socialize with other rock club members and trade and sell their specimens. It is open to all EFMLS rock club members, and their families.

Each person (or family) is asked bring a potluck dish to share. We also ask that each person (or family) donate one labeled specimen for the auction.

When you arrive at the Brookside Pavilion, you will be directed to an area where there is ample parking and room for your displaying tables. You will need to bring your own tables and chairs. Please try to confine your space to a 10' x 10' area directly behind your vehicle. A 10' x 10' pop-up tent works well.

There will be a "Treasure Box" available for anyone who wishes to donate rocks, tools, etc. These items will be FREE for anyone to take (no junk please).

There are onsite restrooms and handicap access.

The Southern Maryland Rock and Mineral Club will provide plates, cups, plastic ware, sodas, and bottled water. Please help clean up after the swap --- so we can get our deposit back. Please THANK all the volunteers who have donated their time/energy to make this picnic/swap happen.

Contact Person: Dave Lines (240)-427-7062, Dave.Lines@earthlink.net

ADJUSTABLE CHUCK FOR DREMELS

Many of us have a Dremel motor tool to use at home or when out to a class or workshop. The one thing that makes this tool much more productive is the addition of one inexpensive option, an adjustable chuck.

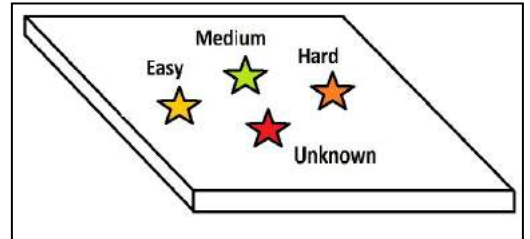


The basic motor tool as sold typically comes with a collet chuck. This means you have to use a wrench to change every tool bit, you have to switch collets to use different shaft sizes (3/32 or 1/8-inch bits), and you can't use ordinary drills at all - only the special ones that have a 3/32 shaft.

A simple and inexpensive (\$12) adjustable chuck solves all of this. It's available in most large local hardware stores or modelmaking outlets. Tightening the chuck is done easily by hand to any size shaft. No key is required.

IDENTIFYING UNMARKED SOLDERS

There are plenty of ways to mark your sheet or wire solders, but suppose you forget and have a couple that you can't identify. The answer is to compare the melting temperature of the unknown with that of a known solder. What I do is take a thick scrap of copper or nickel and arrange several solders on it. Ideally, I have a sample of easy, medium and hard known solders surrounding the unknown solder. Then I heat the plate from the bottom and watch the order in which the solders melt.



See all Brad's jewelry books at: www.Amazon.com/author/BradfordSmith.

Gem Tree Workshop

Gary Bergtholdt is holding 2-3 hour gem tree workshops at his home. If interested, contact Gary at: gbergtholdt@gmail.com.



TREASURES OF THE EARTH

2017 TOTE Shows

- March 24—26, Hampton, VA
- April 21—23, July 14—16, & October 6—8, VA Beach

GMSVP Regular Meeting

Thursday, March 2nd, 7 PM

Program: Chili Cookoff & Rock Show and Sale

Sandy Bottom Nature Park's Nature Center, Hampton, VA (Enter from Big Bethel Road)

Please see the minutes on page 16 for GMSVP committee reports.



Get ready to be a part of a fabulous fall EFMLS Wildacres Workshop! The dates are September 4 - 10, 2017 and our speaker in residence is Timothy Morgan. The line-up of classes as always is stellar so you can exercise your creative juices and learn (or reinforce) a new skill. See page 11 for the complete list.

And don't forget about the spring session either. Speaker-in-Residence Bob Jones is planning on his usual six entertaining and educational talks and like Tim, will be with us on campus for the entire session. Like cannot be better!

A week long session at the lovely Wildacres Retreat is \$410 per person which includes your tuition, room and board plus gratuities for the Retreat permanent staff. Meals are served family style in the lovely Wildacres dining room and bedrooms are lovely, each with it's own private bathroom. Classes are held in the numerous, well-equipped Wildacres classroom facilities.

EFMLS has been holding workshops at the Wildacres Retreat since 1973 and over the years, our sessions have grown in both content and variety. Past Speakers-in-Residence have included a variety of museum curators, gem and jewelry experts, authors and mineralogists. Over the years, many of our speakers have asked to come back and we've been delighted to have them because of their popularity. Bob for example is making his 10th? or so appearance with us and he's never failed to enthuse us with his personality and knowledge.

Wildacres sessions include other activities besides classes. Our activity day usually includes the opportunity to participate in an organized field trip, a fun tail gate session where you and your friends can sell or swap items you've brought, a few short educational programs given by some of your fellow participants, or a chance to go off and explore the area on your own. We also have a terrific auction where we sell hobby related items and on another evening a "show and tell" where we can all learn about the "other" classes that were offered during the session and see things that were made in them. We also sometimes have a fun night with humorous stories and skits, musical interludes, and horrific puns.

If you've never attended an EFMLS Wildacres Workshop, or if you've been there before, now's your chance. Look over the classes being offered, fill in that registration form (page 12) write your tuition check, and pop it in the mail. The earlier you register the better your chance of getting into the class or classes of your choice!

Related links:

- EFMLS Wildacres: <http://efmls-wildacres.org/>
- Spring Wildacres Classes: <http://efmls-wildacres.org/page10/index.html>
- Fall Wildacres Classes: <http://efmls-wildacres.org/page5/index.html>
- Wildacres Registration: <http://efmls-wildacres.org/styled-7/index.html>



Mineral of the Month—Obsidian

Source: Southeastern Massachusetts Mineral Club (SEMCC) Outcroppings Bulletin, February 2017 (www.semcc.com/)
Wikipedia

Obsidian is a naturally occurring volcanic glass formed as an extrusive igneous rock.

It is produced when felsic lava extruded from a volcano cools rapidly with minimal crystal growth. Obsidian is commonly found within the margins of rhyolitic lava flows known as **obsidian flows**, where the chemical composition (high silica content) induces a high viscosity and polymerization degree of the lava. The inhibition of atomic diffusion through this highly viscous and polymerized lava explains the lack of crystal growth. Obsidian is hard and brittle; it therefore fractures with very sharp edges, which were used in the past in cutting and piercing tools, and it has been used experimentally as surgical scalpel blades.



Origin and properties: ... among the various forms of glass we may reckon Obsidian glass, a substance very similar to the stone found by Obsidian in Ethiopia.

The translation into English of *Natural History* written by Pliny the Elder of Rome shows a few sentences on the subject of a volcanic glass called Obsidian, so named from its resemblance to a stone (*obsiānus lapis*) found in Ethiopia by Obsius, a Roman explorer.

Obsidian is the rock formed as a result of quickly cooled lava, which is the parent material. Tektites were once thought by many to be obsidian produced by lunar volcanic eruptions, though few scientists now adhere to this hypothesis.



Obsidian talus at Obsidian Dome, California



Polished snowflake obsidian, formed through the inclusion of cristobalite crystals

Obsidian is mineral-like, but not a true mineral because as a glass it is not crystalline; in addition, its composition is too complex to comprise a single mineral. It is sometimes classified as a mineraloid. Though obsidian is usually dark in color similar to mafic rocks such as basalt, obsidian's composition is extremely felsic. Obsidian consists mainly of SiO₂ (silicon dioxide), usually 70% or more. Crystalline rocks with obsidian's composition include granite and rhyolite. Because obsidian is metastable at the Earth's surface (over time the glass becomes fine-grained mineral crystals), no obsidian has been found that is older than Cretaceous age. This breakdown of obsidian is accelerated by the presence of water. Having a low water content when newly formed, typically less than 1% water by weight, obsidian becomes progressively hydrated when exposed to groundwater, forming perlite.

Pure obsidian is usually dark in appearance, though the color varies depending on the presence of impurities. Iron and other transition elements may give the obsidian a dark brown to black color. Very few samples are nearly colorless. In some stones, the inclusion of small, white, radially clustered crystals of cristobalite in the black glass produce a blotchy or snowflake pattern (*snowflake obsidian*). Obsidian may contain patterns of gas bubbles remaining from the lava flow, aligned along layers created as the molten rock was flowing before being cooled. These bubbles can produce interesting effects such as a golden sheen (*sheen obsidian*). An iridescent, rainbow-like sheen (*rainbow obsidian*) is caused by inclusions of magnetite nanoparticles.

Occurrence: Obsidian can be found in locations which have experienced rhyolitic eruptions. It can be found in Argentina, in Argentina, Armenia, Azerbaijan, Guinea, Peru, Scotland, Turkey and the United States. Obsidian flows which may be hiked on are found within the calderas of Newberry Volcano and Medicine Lake Volcano in the Cascade Range of western North America, and at Inyo Craters (Cont'd on the next page.)

Mineral of the Month—Obsidian (Cont'd)

Source: Southeastern Massachusetts Mineral Club (SEMNC) Outcroppings Bulletin, February 2017 (www.semnc.com/)
Wikipedia

(Cont'd from prior page.) east of the Sierra Nevada in California. Yellowstone National Park has a mountainside containing obsidian located between Mammoth Hot Springs and the Norris Geyser Basin, and deposits can be found in many other western U.S. states including Arizona, Colorado, New Mexico, Texas, Utah, Washington, Oregon and Idaho. Obsidian can also be found in the eastern U.S. states of Virginia, as well as Pennsylvania and North Carolina.



Glass Mountain, a large obsidian flow at Medicine Lake Volcano

There are only four major deposit areas in the central Mediterranean: Lipari, Pantelleria, Palmarola and Monte Arci. Ancient sources in the Aegean were Melos and Giali. Acigöl town and the Göllü Dağ volcano were the most important sources in central Anatolia, one of the more important source areas in the prehistoric Near East.

Historical Uses: The first known archaeological evidence of usage was in Kariandusi and other sites of the Acheulian age (beginning 1.5 million years BP) dated 700,000 BC, although the number of objects found at these sites were very low relative to the Neolithic. Use of obsidian in pottery of the Neolithic in the area around Lipari was found to be significantly



Arrowheads

less at a distance representing two weeks journeying. Anatolian sources of obsidian are known to have been the material used in the Levant and modern-day Iraqi Kurdistan from a time beginning sometime about 12,500 BC. The first attested civilized use is from excavations at Tell Brak dated the late fifth millennia. Obsidian was valued in Stone Age cultures because, like flint, it could be fractured to produce sharp blades or arrowheads. Like all glass and some other types of naturally occurring rocks, obsidian breaks with a characteristic conchoidal fracture. It was also polished to create early mirrors. Modern archaeologists have developed a relative dating system, obsidian hydration dating, to calculate the age of obsidian artifacts.

Middle East: In the Ubaid in the 5th millennium BC, blades were manufactured from obsidian extracted from outcrops located in modern-day Turkey. Ancient Egyptians used obsidian imported from the eastern Mediterranean and southern Red Sea regions. Obsidian was also used in ritual circumcisions because of its deftness and sharpness. In the eastern Mediterranean area the material was used to make tools, mirrors and decorative objects.

Obsidian has also been found in Gilat, a site in the western Negev in Israel. Eight obsidian artifacts dating to the Chalcolithic Age found at this site were traced to obsidian sources in Anatolia. Neutron activation analysis (NAA) on the obsidian found at this site helped to reveal trade routes and exchange networks previously unknown.



Obsidian tools from Tilkitepe, Turkey, 5th millennium BC. Museum of Anatolian Civilizations

Americas: Lithic analysis can be instrumental in understanding prehispanic groups in Mesoamerica. A careful analysis of obsidian in a culture or place can be of considerable use to reconstruct commerce, production, distribution and thereby understand economic, social and political aspects of a civilization. This is the case in Yaxchilán, a Maya city where even warfare implications have been studied linked with obsidian use and its debris. Another example is the archeological recovery at coastal Chumash sites in California indicating considerable trade with the distant site of Casa Diablo, California (Cont'd on next page.)

Mineral of the Month—Obsidian (Cont'd)

Source: Southeastern Massachusetts Mineral Club (SEMMC) Outcroppings Bulletin, February 2017 (www.semhc.com/)
Wikipedia

(Cont'd from prior page.) in the Sierra Nevada Mountains.

Pre-Columbian Mesoamericans' use of obsidian was extensive and sophisticated; including carved and worked obsidian for tools and decorative objects. Mesoamericans also made a type of sword with obsidian blades mounted in a wooden body. Called a macuahuitl, the weapon was capable of inflicting terrible injuries, combining the sharp cutting edge of an obsidian blade with the ragged cut of a serrated weapon. Native American people traded obsidian throughout the Americas. Each volcano and in some cases each volcanic eruption produces a distinguishable type of obsidian, making it possible for archaeologists to trace the origins of a particular artifact. Similar tracing techniques have allowed obsidian to be identified in Greece also as coming from Melos, Nisyros or Yiali, islands in the Aegean Sea. Obsidian cores and blades were traded great distances inland from the coast.

In Chile obsidian tools from Chaitén Volcano have been found as far away as in Chan-Chan 400 km (250 mi) north of the volcano and also in sites 400 km south of it.

Easter Island: Obsidian was also used on Rapa Nui (Easter Island) for edged tools such as Mataia and the pupils of the eyes of their Moai (statues).

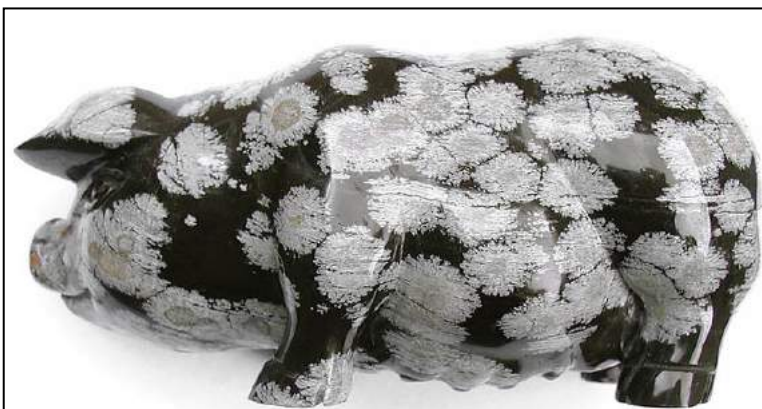
Current Uses: Obsidian can be used to make extremely sharp knives, and obsidian blades are a type of glass knife made using naturally occurring obsidian instead of manufactured glass. Obsidian is used by some surgeons for scalpel blades, although this is not approved by the US Food and Drug Administration (FDA) for use on humans. Well-crafted obsidian blades, as with any glass knife, can have a cutting edge many times sharper than high-quality steel surgical scalpels, the cutting edge of the blade being only about 3 nanometers thick. Even the sharpest metal knife has a jagged, irregular blade when viewed under a strong enough microscope; when examined even under an electron microscope an obsidian blade is still smooth and even. One study found that obsidian incisions produced fewer inflammatory cells and less granulation tissue at seven days, in a group of rats, although no differences were found after 21 days. Don Crabtree produced obsidian blades for surgery and other purposes, and has written articles on the subject. Obsidian scalpels may currently be purchased for surgical use on research animals.

Obsidian is also used for ornamental purposes and as a gemstone. It presents a different appearance depending on how it is cut: in one direction it is jet black, while in another it is glistening gray. "Apache tears" are small rounded obsidian nuggets often embedded within a grayish-white perlite matrix.

Plinths for audio turntables have been made of obsidian since the 1970s; e.g. the grayish-black SH-10B3 plinth by Technics.



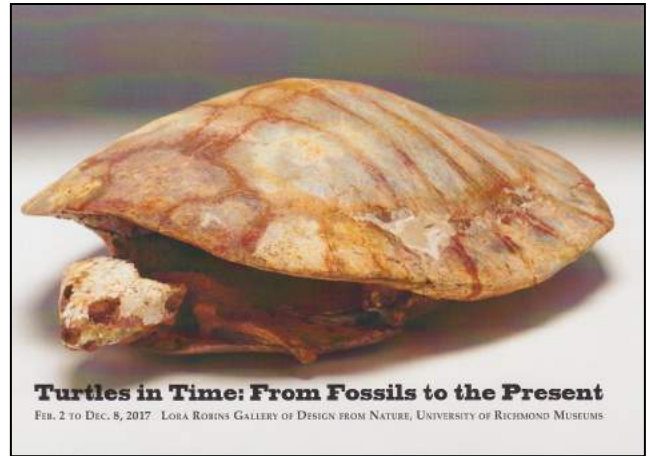
Obsidian worked into plates and other wares by Victor Lopez Pelcastre of Nopalillo, Epazoyucan, Hidalgo. On display at the Museo de Arte Popular, Mexico City



Pig carved in snowflake obsidian, 10 centimeters (4 in) long. The markings are spherulites.

I would like to extend a warm welcome to Mary Hood! She will be our new field trip coordinator for this year. She attended our first board meeting of the year and has lots of information and possible field trips to plan. Here is a quick list of possible field trips for the year:

Turtles in Time Exhibit: The "Turtles in Time: From Fossils to the Present" exhibit will be at the Laura Robbins Gallery at the University of Richmond through December 8th. The Museum's address is: University of Richmond, Lora Robins Gallery, 28 Westhampton Way, Richmond, VA 23173.



March or April (Date TBD): Buckingham County Gold Panning & Mine Spoils

Location: Seay Gold Mine, Dillwyn, VA

Details: Primitive collecting only. Minerals on-site include garnet, kyanite, gold fines and small nuggets, quartz, etc. Much of the garnet is cabbaging grade and takes a nice polish. You can pan for gold in the creek. Cost is \$10 per person for the day. A map of the area will be provided before the trip.



June 10th: Pipsico Boy Scout Reservation Fossil Hunt, Spring Grove, VA Saturday, June 10th – 9 AM until the afternoon (at your leisure). This field trip will happen rain or shine, so please plan your field clothes accordingly! There is a \$5 collecting fee, and a wavier will need to be signed prior to entering the site.

Location: Pipsico Boy Scout Camp Reservation; 57 Pipsico Road, Spring Grove, Virginia

Details: Opportunities to collect fossils (sharks teeth, whale jaw/vertebrae, scallop shells, coral, etc). Sunblock and bug spray are highly recommended, as well as bottles of water and food.

Please bring your own bags and tools for collecting. Camping is allowed the night before, if anyone is interested (\$5 per night). We are allowed to camp from Friday to Sunday.



Editor's Note: The article below is a reprint of an e-mail that I received from Justin Zzyzx. Justin was the "Speaker in Residence" at the EFMLS Wildacres Workshop that Pat and I attended.

Hello and Greetings!

First, let me thank you for taking the time to read this article! I really appreciate everyone involved with mineral clubs! You are an important key to keeping our hobby and passion living!

I have always been very heavily involved with rock clubs, starting with the Culver City club and on to the Mineralogical Society of Southern California. I've led dozens of field trips, given dozens of talks to various clubs and run a few mineral shows. So, I know how much behind the scenes work goes on and again, thank you for being a part of that!

Over the years, my wife and I have been very active in the mineral community, promoting minerals and rockhounding in our local community and beyond. We published 19 magazines about minerals, and we are working on issue 20 right now. We own a website called "WhereToFindRocks.com" and another called "CutThatAgate.com." You can read many of our magazines for FREE on "MineralMagazine.com."

Here is how we can work together - we have something to offer you and something we hope you can offer your club members from us.

To offer you, please take a look at "WhereToFindRocks.com" and know your club is given FREE rights to reproduce any of our articles in your printed bulletin. Yes, bulletin editors, I KNOW your pain! - If you need some space filler, please feel free to use any article from that site. All I ask is that you say "Originally Published on WhereToFindRocks.com" - So, I hope that helps!

If you would like to link any of our videos from YouTube from "CutThatAgate.com" on your website, I'd love that! Easy way to add some fun content to your club site.

We published a hardcover reprint of all 16 issues of our popular magazine, "The-Vug.com Quarterly," featuring articles about all sorts of topics, like our much requested "Guide to Mineral Fakes", the issue on "Mineral Oddities" is fun, and of course, our tributes to California, San Benito County, and so many other fun topics, all featuring full color photos of minerals, gems and a list of writers and photographers that many of you are very familiar with, like award winning photographer, Jeff Scovil. The retail price of this book is \$34.95, but I want to offer you a copy for your library for \$20.00! In fact, you can order a few of them for \$20.00 each, if you want 10 copies or more I can supply them for \$15.00 each. This price, believe it or not, is with SHIPPING INCLUDED! If it costs me around \$10 to post it to you, I'm sure you can understand what a super price I want to give you. You can use the books as door prizes, as gifts or as a fundraiser item. You are certainly going to want one for your club library. It is a big book, over 300 pages, oversized and I've never run into anyone who has not loved it, I know you will too! (<http://wheretofindrocks.com/rock-mineral-club-special-offer/>)

We also just printed our first field guide, a booklet featuring nearly 2 dozen locations you can collect minerals, agates and interesting geological items around Barstow, California. We hope to produce more guides like this in the future, for now, we are excited about this booklet and are now taking pre-orders, shipping around January 24th. You can read all about it and order a copy, or 3 or 10, for your club or yourself, using this link: <http://wheretofindrocks.com/rockhound-barstow-field-guide/>.

If you do not wish to use PayPal or a Credit Card to complete your order, you can send a check or money order to: Justin Zzyzx, 39184 Tami Road, Newberry Springs, CA 92365

Thank you again for reading this message and I hope that my offers can be of use to you and your club. This offer is good until the end of March, if you wish to promote it in your next newsletter, I'm happy to extend this offer of the \$20 price on "the-vug.com" book to all rock club members until then.



- The meeting was called to order by Sara Phillips, GMSVP President.
- Sara announced that the business meeting would focus on a review of the club's budget for 2017.
- Some of the highlights of this review included:
 - Insurance: Club insurance is based on the membership as of the end of December 2016.
 - Hospitality: This was lower last year as we cancelled one of the club's picnics.
 - Membership: Additional supplies for name badges will be needed this year.
 - Newsletter: The newsletter is USPS mailed to members (currently 5 members) without an e-mail account. Newsletter costs are mostly for stamps, envelopes, printer ink, and printer paper.
 - Pebble Pups: Our youth program will need additional minerals for the minerals of the month. The present stock has been depleted.
 - Programs and Meetings: The club needs a new video projector for meetings and programs.
 - Publicity: This money is used primarily for club business cards and flyers.
 - Scholarship: The GMSVP Board proposed giving funds to an educational scholarship program and/or a scholarship fund with a mineralogy association and, as more funds became available, we would contribute more. The club approved contributing to a scholarship program. The members did not agree with the identified school, educational program to contribute to, or the amendment.
 - Shows/Special Events: This budget is primarily used to purchase geodes and supplies that are specific for cutting, promoting the geodes, and cleaning up.
 - Truck Rental: The rental of a truck to transport the clubs equipment and geodes has continued to be much cheaper than using the trailer.
 - Website: The club's website is due to be renewed.
 - Income: The dollar amounts in the "income" box are the actual income for 2016 and the projected income for 2017.
- The budget was approved for 2017 while the amendment regarding the scholarship was tabled for further discussion.
- The business portion of the meeting was adjourned with a 10 minute recess.
- The program for the evening was Gold Panning and was presented by Sara Phillips.



February Birthstone—Amethyst (Picture Source: Chesapeake Gem and Mineral Society, Chippers' Chatter, Volume 59, Number 2, February 2015)

Minutes prepared by:
David Scharff February 9, 2017
/ original signed /

Visit a Show

Source: EFMLS News Volume 64, Number 4, February 2017

March: 4 – 5: 54th Annual Earth Science Gem & Mineral Show sponsored by the Delaware Mineralogical Society. NEW LOCATION: University of Delaware, Wilmington Campus, 2800 Penn Ave (Rt. 52), Wilmington, DE. Contact: Gene Hartstein <gene@fossilnut.com>.

11: 41st Annual Micromount Symposium sponsored by the Leidy Micromount Society. Northminster Presbyterian Church, 140 Trenton Rd; Fairless Hills, PA. Contact: Don McAlarnen don <mcalarnen@hpe.com> or 610-584-1364.

11-12: Gem & Mineral Show sponsored by the Island Rockhounds. Old Bethpage Restoration Village (Barn), Old Bethpage, NY. Contact: Cheryl Neary <ciervo.neary@gmail.com> or 516-449-5341.

18: Auction sponsored by the Southeastern Massachusetts Mineral Club. Mitchell Memorial Club, 29 Elm St; Middleboro, MA 02346. Viewing 10 am – 11 am; Auction 11 am – 3 pm.

18-19: 53rd Annual GLMS/MC Gem, Mineral and Fossil Show sponsored by the Gem, Lapidary & Mineral Society of Montgomery Co. MD. Montgomery Co. Fairgrounds, 16 Chestnut St; Gaithersburg, MD. Contact: Doug Baum <dbaum18@aol.com>, 240-888-7485 or <glmsmc.com>

24-26: Annual Catawba Valley Gem & Mineral Show sponsored by the Catawba Valley Gem & Mineral Club. Hickory Metro Convention Center, 1960 13th Ave Dr SE; Hickory, NC 28602. Info: Dean Russell 828-303-1448 or <cvgmcsecretary@aol.com>.

25-26: 48th Annual Rock & Mineral Club Show sponsored by the Che-Hanna Rock & Mineral Club. NEW LOCATION: Wysox Volunteer Fire Co. Social Hall, 111 Lake Rd., Wysox, PA. Contact: Bob McGuire at 570-928-9238 or <uvbob@epix.net>

25-26: CVMC 2017 Show sponsored by the Connecticut Valley Mineral Club. Hadley Farms Meeting House, Rt. 9, 41 Russell St; Hadley, MA. Contact: Lee Champigny, 413-320-9741 or <pullg4fun@gmail.com> or <westernmassmineralshow.com>

25-26: Annual Gem, Mineral & Fossil Show sponsored by the Delaware Valley Paleontological Society & Philadelphia Mineralogical Society. Lulu Temple, 5140 Butler Pike, Plymouth Meeting, PA (PA Turnpike, exit 333 at I-476, exit 20). Information: <www.phillyrocks.org> or Cheryl Leibold <cleibold@verizon.net>.

April: 1 – 2: Annual Show sponsored by the New Haven Mineral Club. Amity Middle School, 100 Ohman Rd; Orange, CT 06477.

28-30: Rock, Mineral, Gem, Jewelry & Fossil Show hosted by the Central Florida Mineral and Gem Society. Florida National Guard Armory, 2809 So. Fern Creek Ave; Orlando, FL. Contact: <phayes3@cfl.rr.com>



June

9-11: 2017 National AFMS-CFMS Show & Convention: Ventura, California

2017CFMS-AFMSShow.com or directly at (805) 312-VGMS (8467) or at: info@vgms.org.



October:

20: EFMLS Annual Meeting: Friday, October 20

21-22: 45th Annual Gem & Mineral Show and 67th & Eastern Federation Convention: Beals Community Center, 240 Stafford Ave., Bristol, Connecticut.

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.