



San Diego Mineral & Gem Society, Inc.
A Non-Profit Educational and Scientific Organization

THE PEGMATITE

JANUARY 2017

GENERAL MEETING

Monday, January 23, 2017

Camp Zzyzx, by Jennifer Haley

See details pg 3 >>



Official bulletin of the San Diego Mineral and Gem Society, Inc.

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American Federation of Mineralogical Societies
American Lands Access Association

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The mission of the San Diego Mineral and Gem Society, Inc., is to disseminate knowledge of mineralogy and earth sciences; to encourage the study of these subjects; to conduct classes in mineralogy and lapidary arts; to conduct field trips for the collection and study of specimens; to encourage interest in mineralogy and lapidary arts among young people; and to procure and maintain a collection related to the earth sciences and lapidary arts.



PRESIDENT'S MESSAGE

January 2017

by Shirley Leeson

sdmgpresident@sdmg.org

HAPPY NEW YEAR. We ended 2016 on a high note with some great holiday events. Our annual open house at **December Nights** (aka **Christmas on the Prado**) was a great success thanks to **Jim Parrish's** organization leading a band of merry elves. Read his review on pg. 6. There was more merriment at the **Christmas Potluck**, with 110 attendees who came out on a warm, cloudless night to come out and partake in a great feast, fellowship, and some traditional activities, including the annual Ornament Contest. Members got predictably creative with their yule tree adornments. **Anne Schafer's** review on pg. 8 chronicles some of the fun.

Looking forward, many of you will be off to Quartzsite this month. Remember what to look for while you are there – agates and jaspers from the Northwest. I'm sure you will find other items to make the trip worthwhile. Since I am a Director with the **American Lands Access Association (ALAA)**, I'd like to invite you all to two activities that will be held in Quartzsite, Arizona during the 2017 QIA Show. If you are going to Quartzsite in January, please plan on attending these activities. The second thing first: on Sunday, January 22nd, we look forward to hosting our **Fifth Annual Clean-Up: two hours, two tons of trash**. Over the past four years, Volunteers who gave a little of their time got a whole lot of appreciation back from the the **BLM** field office in Yuma, Arizona. Our annual effort has gone a long way toward forging a great relationship between the **BLM** and the Rockhound community. Let's keep that positive groove going, and join us on the 22nd. See pg. 28 for place and time.

The other event to pencil into your schedule is the **ALAA** meeting on Friday evening, January 20th, at the New Community Center in Quartzsite (see time and venue details on pg. 28). The meeting is free of charge and open to the public. **Lisbet Thoresen** will make a presentation on "Preserving Rockhound habitat on public lands." **Lisbet** is Public Lands Representative for **SDMG** and Chair of the Public Lands Advisory Committee (PLAC) – South for **CFMS**. Her presentation is a MUST for all Rockhounds who are concerned about shrinking access to our favorite collecting sites, especially in Southern California. She'll provide a practical perspective on what we can do to advocate our own interests. She'll be telling us what we need to do – 2017 is going to be a critical year for Rockhounds.

Recently, **Lisbet** has been working with the **Southern California Paleontological Society (SCPA)**, which is taking the lead on preparing a comment letter on "A Proposed Rule" on casual collecting of fossils under the **Paleontological Resources Preservation Act of 2009 (PRPA)**. The regulation will codify language that affects hobby collecting of invertebrate fossils, rocks, and minerals. **SCPA president Karol McQueary** has drafted an excellent comment letter on it. **SDMG** applauds her effort and we look forward to signing onto the letter. We encourage other **CFMS**-affiliate clubs, non-profits organizations, and credentialed professionals to support the letter, as well. The comment period deadline is February 6th, 2017. See pg. 21 for details on how to participate – the Paleontologists have done the heavy lifting for Rockhounds, so please support their effort.

Because the proposed regulation to **PRPA** is the equivalent of an eight-alarm fire for Rockhounds, this month's bulletin is dedicating a lot of coverage to the subject. **Andrew Hoekstra**, who is an **SCPA** member and editor of *Delvings*, the bulletin of the **Delvers Gem & Mineral Society**, in Bellflower, specializes in paleontological resources. He kindly allowed us to reproduce his article on "Fossils from

the ‘Imperial Sea,’” which is located in Fossil Canyon and the Coyote Mountains, south of Anza Borrego State Park (see pg. 9). It provides a fascinating glimpse of a beautiful landscape and its marvelous fossil resources. Did you know this amazing place was right in our backyard? See pg. 12 for a second article by **Andrew**, this one on the proposed **PRPA** regulation. It’s a primer to help Rockhounds understand the critical language that needs to be targeted in a comment letter (in case you could use some pointers on writing your own). A third editorial article appears in the January bulletin courtesy of **Mike Nelson**, member of the **Colorado Springs Mineralogical Society** and PLAC Chair of the **Rocky Mountain Federation of Mineralogical Societies (RMFMS)** (see pg 16). Both his and **Andrew’s** articles underscore some of the same concerns with the proposed Rule, but from different perspectives. **Nelson’s** article also drills down on its implications for research and permitting – he has some disturbing observations that few Rockhounds may have contemplated previously.

I also want to give you an update on our fabulous banquet coming in March. **Donna Beers** and her elves have a treat in store for you – it’s a beautiful new place on Mt. Soledad overlooking the San Diego bay and the Pacific Ocean. This will be an evening affair, with a very special couple, Honorary **SDMG** Members **Wayne** and **Dona Leicht**, giving us a super program on **GOLD**, which is one of **Wayne’s** specialties. More details from **Donna** on pg 5.



Gold crystals intergrown in a solid mass. Puertecitos, Baja Mexico, Mexico. Courtesy of Kristalle.



GENERAL MEETING

Monday, January 23, 2017
7:00pm, SDMG Bldg.

JENNIFER HALEY will be our guest speaker for the first meeting of the new year. **Jennifer** is past president of **CFMS**, and currently she is **CFMS** Earth Science Studies (ESS) Manager for **Camp Zzyzx**. Her presentation will be on **Zzyzx**, the Rockhound camp near Baker. **Camp Zzyzx** – it’s a funny and unusual name, and you are in for a world of fun and a terrific opportunity to learn various forms of the Lapidary Arts. The camp environment is something unique and very special to us. The presentation will introduce you to a spell binding, different world with wonderful moments and some humor to remember it by.



Denny Turner's students learn beginning silver fabrication at Zzyzx. Photo: John Martin.

Please remember to bring treats to share. The Club will supply coffee, tea, and punch.

This 'n' That...

General Announcements

Classes are in session

Classes resume on Monday, January 2, 2017, after a two-week holiday hiatus. If you need to contact an instructor or you have an inquiry about a class, please email school@sdmg.org. Include the instructor's name and/or class day and time. Don't forget to include your contact information with the best time to reach you. Remember, you have to be a member to take classes. [Download an application.](#)



JUNIOR DIVISION NEWS

Sponsored by
Lois Lukasky
and Marvin Dillard

Happy Holidays from the Juniors!

W E HAD TWO WEEKS OFF between the week before Christmas and New Year's day. We had a great time at **December Nights** at Balboa Park on December 2nd and 3rd. Lots of visitors came to our building and several **Juniors** demonstrated the art of cutting and polishing rocks.

Our **Christmas Potluck** was a big success. We had a **Silent Auction**, a **Tree Ornament Contest** and a **Door Prize Drawing**. The food was outstanding – turkey and ham and all the trimmings – and there were pies, cakes, and sweets.

Classes for the **Juniors** will start on Saturday, January 7th. Hope to see all **Juniors** there! We'll continue to work on cutting and cabbng. Some **Juniors** are ready to start doing metal working with silver. **Lois Lukasky**

Junior Division Chairperson
juniors@sdmg.org



MINERAL DIVISION

*Garry Cannon, Chairman
Jim Parrish, Treasurer
and Door Prizes*

Friday, January 13, 2017
7:00pm, SDMG Bldg.

THE MINERAL DIVISION meetings in 2017 will convene on the second Friday of the “odd” months – January, March, and May. For our first meeting **Jim Parrish** will be the speaker. His topic will be **Garnet**. **Jim** will tour the audience through a recitation of the end member species and the complex mixed-member intermediates in the **Garnet** group. He will talk about type localities, the storied history of **Garnet** dating to antiquity, and he'll highlight some world famous garnet-producing localities, including a few right here in San Diego County. Please be sure to bring your own specimens to share and discuss. It's going to be a fun evening!

We will also have our world famous door prize extravaganza! Please bring a treat to share, the Club will provide punch, coffee, and tea.

Garry Cannon

Mineral Division Chairman mindiv@sdmg.org



Spessartine with schorl from San Diego County's Little Three Mine. Reinhard Rauschegger coll.

SDMG's 83rd ANNUAL BANQUET

Saturday, March 18, 2017

Donna Beers, Chairperson

Honored Guests: Dona and Wayne Leicht

Program: "Gold!" by Wayne Leicht

Join us for a glittering evening



Where: Soledad Club
5050 Soledad Rd, San Diego, CA 92109

When: Saturday, March 18, 2017

Cost: \$38.00/person

Ticket Information: See below

Adjustment Hour: 5:30 – 6:30 pm
Light refreshments & coffee. BYOB*

Raffle drawing: Starts at 5:45 pm

Dinner: 6:30 pm

Program: 7:30 pm
"Gold!" by Donna and Wayne Leicht

Entertainment 8:30 pm

& More Prizes: Door Prizes, Raffle, live music and dancing

Website: <http://annualbanquet.sdmg.org>

**Tickets will be on sale
through Monday, March 13th at:**

- **The Village Silversmiths'** shop
in the SDMG Building,
11:00 am to 4:00 pm daily

**Tickets available
through Monday, March 6th
by mail from Chairperson:**

- Write a check for \$38.00 per
person payable to: **SDMG**

Send your check to:
Donna Beers
14735 Calle Diegueno
Rancho Santa Fe, CA 92091

EXCITING NEWS – our **Annual Banquet** has a new location at the Soledad Club, in San Diego. It will be an elegant evening affair featuring live music, a great program, door prizes, and raffle drawings.

SDMG member **Lee Bennett** belongs to a popular San Diego band. **Lee** and his band will be playing music before dinner and after the drawings. Come enjoy Live Music while you meet and greet and view the beautiful panoramic scene from the porch. Plan on arriving during daylight to take in the view and peruse the prize tables in the lounge area.

We are absolutely thrilled to have honorary **SDMG** members **Dona** and **Wayne Leicht** as our special guests. World-renowned collectors and dealers of fine minerals and crystallized gold specimens, **Dona** and **Wayne** have been proprietors of **Kristalle**, in Laguna Beach, for more than 45 years. **Wayne** will provide a pictorial tour of highlights from the collection of **Kristalle** – past and present – in his presentation on "Gold!"

There will be dancing after the presentation.

* No alcohol available at the bar. Bring your own wine and beer and give to the bartender to serve per Soledad Club rules.

*December Nights 2016
(aka Christmas on the Prado)*

– In Review –

by Jim Parrish

THE DECEMBER NIGHTS has once again come and gone. Just like holiday meals, there are hours of preparation, then all of a sudden it's all over and you wonder where it went.

Many volunteers – all working long and late hours – make this event happen. **SDMG** is very fortunate and receives many donations throughout the year. We use them for many educational and beneficial activities. During our **December Nights** event we get the opportunity to share our love of all things made of rock with the public. The public joins us for great deals on many fine specimens, and we get to educate them.

The museum and shop were packed visitors and shoppers. All those people touring the shop area created a lot of interest, and we now have some new members as a result.

Angela and **Garry Cannon**, **Sally** and **Jim Parrish** cleaned the museum and installed new LED lighting. This was followed by a couple of days of cleaning, labeling, and pricing specimens. This was accomplished by **Mike Harlow**, **Jim** and **Sally Parrish**, and **Garry** and **Angela Cannon**.

All the usual people helped set up the selling area and the potluck zone. They decorated the museum in preparation for the big nights. The sales booth was operated by volunteers **Donna Casey**, **Doug Peeler**, **Lois Lukasky**, **Rocio Bergum**, **Jill Williamson**, **Angela** and **Garry Cannon**, **Jim Parrish**, and two new volunteers, **Nancy Brescia** and **Letty Evans**. On behalf of the Society, thank you! What a team! Everyone worked so well together – it was a lot of fun. If it sounds interesting, let me know and we can sign you up for next year. There is always room for more.

Our shop area was kept open by numerous volunteers that included **Paul Williams**, **David Lipson**, **Bob Hancock**, **Rich Yarbrough** and others.

If I missed someone, I'm sorry, and thank you for your time and effort.



We all slept late on Sunday, but quite a few of you managed to still make it to the Lakeside show for a couple of hours.

A special thanks to all of you who donated time and materials to make this event such a success.

Happy New Year!

– Highlights from December Nights –

photos by Jim Parrish



Top. The throngs at the SDMG Open House.
Middle. Donna Casey and Doug Peeler staffing the selling table.
Bottom. Jim Parrish with his niece Maryland Mayer.



Top. Angie Cannon, Darcy Salzl, and Nancy Brescia.
Bottom. Copper "splatter" sculptures in iridescent colors are among the decorative items for sale.

Christmas Potluck 2016

– In Review –

by Anne Schafer

WHILE CHRISTMAS POTLUCK Chair-lady **Rocio Bergum**, her husband **Alan** and helper **John Kruzel** loaded up supplies at the **SDMG** Building at 4 p.m., some of her crew sneaked into Room 101 of Casa del Prado early on the afternoon of Monday, Dec. 19. **Robert Hanson, Anne Schafer** and others set up more tables and chairs, and moved everything around until it matched the floor plan. Once supplies were delivered, **Debra Clough, Donna K. Casey, Lois Lukasky** and a host of others decked the halls, tables and all immobile objects with garlands and ornaments. **Tom Strutton, Jennifer Stapp** and other elves set out the Society's **Silent Auction** goodies. Seven additional sellers added their private stock.

Five food tables were set up this year, and boy, did we need them! There was plenty of good food to feed the 110 attendees all they wanted. **Doug Peeler, Donna Beers** and **Lee Bennett** cooked turkeys, while **Jim** and **Sally Parrish, Dave Smith, and Andy Anderson** supplied lots and lots of tasty ham.

Simon King and **Gladys Walker** entertained everyone during the door prize drawing, while **Sally Parrish, Angie Cannon, Anne Schafer,** and **Letty Evans** collected monies at the end of the **Silent Auction**. **Jane Roush** announced **Christmas Ornament** winners. And the clean-up crew did an excellent job at the end of the evening. Thank you, **Rocio**, for all your hard work. We appreciate it!

Next year's **Christmas Potluck** date has been set for Monday, Dec. 18th. See you then!



SAN DIEGO COUNTY FAIR GEMS, MINERALS & JEWELRY DEPT.

The new classes for 2017 are:

Mineral of the Year: Lead Family Minerals

Fossil of the Year: Trilobites

New Fossil Class: One marine fossil

Fair Theme Jewelry #1: How the West was Fun!

Fair Theme Jewelry #2: Handmade Bola Tie

Carryover Jewelry Class: Steampunk Jewelry

Beaders: There has been a change for 2017. The beading classes in the Gems & Minerals Dept. have been consolidated with, and moved to, the Home and Hobby Dept.

THE SCHEDULE:

Brochures available: Mid-February

Online entry opens: Early March

Entry deadline: Fri, April 28, at 11:59 pm

Entry delivery: Sat & Sun, May 27-28,
9 am to 6 pm

First day of Fair: Fri, June 2, 4 to 11 pm

Exhibitor

Appreciation: Wed, June 7, 6 to 9 pm

Last day of Fair: Tue, July 4.

Exhibit pickup: Thu, July 6, 9 am to 8 pm

Got questions? Contact:

Anne Schafer, Gems & Mineral Coordinator
sdfair@sdmg.org



Fossils from the “Imperial Sea”

by Andrew Hoekstra

ABOUT 6 MILLION YEARS AGO, the Gulf of California extended northward through the Coachella Valley, and even reached Whitewater, north of Interstate-10. The water was warmer than that along our present coastline, as evidenced by fossils of animals now living in the southern Gulf of California or on Mexico’s Pacific coast. We know the water was clear from the nine species of colonial corals found as fossils. The giant megalodon shark roamed the sea. Left behind is sandstone with limestone layers – the Latrania Formation of the Imperial Group.

Fossils of this warmer “coral sea” can be found in the Coyote Mountains, south of Anza Borrego State Park, including at the suggestively-named Fossil Canyon. Besides many corals, there are tropical marine snails such as cones, conchs and helmet shells. Also

common are tropical sand dollars and “sea biscuits.” Many of the species have close relatives in the Caribbean Sea. At the time there was no Isthmus at Panama: the Pacific and Atlantic oceans were joined, allowing animals to migrate in either direction. Most of these fossils are poorly preserved and the shell has dissolved, leaving only molds and casts (casts of shell interiors are called “steinkerns” and can sometimes be identified to species). Certain fossils retain shell material, including scallops and sand dollars, because their shells are made of the mineral calcite (more resistant to acidity than the aragonite of which most

Pictured above. The “Elephant Knees” above the Mud Hills, Fish Creek, Carrizo Badlands, Anza Borrego State Park. Behind (around to the south) and atop the ridge are beds of oyster fossils. Photo: A. Hoekstra.



Top left. Fossil Cone Shell from the Imperial Sea.



Top right. Fossil corals from the Coyote Hills, Latrania Formation, Imperial County.

Right. Fossil "sea biscuit" and sand dollars from the Latrania Formation.

Collection of the Invertebrate Paleontology Department, Natural History Museum of Los Angeles County. Photos: A. Hoekstra.



mollusk shells are made) or because of a higher magnesium content in the shell. Calcite and aragonite are both calcium carbonate, but different molecular structures result in different physical properties.

After 5 million years ago, the Colorado River began to dump increasing amounts of silt, scoured from cutting the Grand Canyon. Corals and most other animals are absent from the mudstone and siltstone badlands left behind as the lowermost Deguyos Formation. The later, upper portions of the Deguyos are silty sandstones with layers of

shells, deposited by storms or in channels of the ancient delta. Among the marine mammal remains found are bones of walrus, which also lived along the Southern California coast at that time (walrus were temperate or subtropical before one variety evolved to become an arctic specialist).

Badlands left by the silting delta can be seen at places both inside and outside the state park. Although fossils are generally scarce in the badlands, oyster shell coquinas are locally abundant. At the Yuha Buttes (south of Interstate-8) fossils to look for include a

large, thick and heavy oyster (*Pycnodonte beermanni*); these and the smaller oysters, scallops, jingle shells, and barnacles are all preserved with a dark gray color. Their shells are all calcitic – aragonitic shells are rarely found here. It is important to note possible preservational bias lest erroneous conclusions be made regarding ancient animal communities (study of the process of fossilization – what happens to the remains of an organism after death until its fossil is retrieved – is called “taphonomy”).

Collecting Restrictions

Vertebrate (bone, teeth) fossils cannot be collected on federal lands without a permit. No collecting of rocks or fossils is allowed (except by permit) within Anza Borrego State Park. Fossil Canyon, the Coyote Mountains, and the Yuha Desert are BLM lands; the Coyote Mountains are inside the Coyote Mountains

Fossil Site Area of Critical Environmental Concern or the wilderness area and collecting there may be restricted. Collecting is not necessarily prohibited in an ACEC or a wilderness area. Inquire at the El Centro office of the BLM. Collecting limited quantities (5 gal per person) of invertebrate fossils from the Yuha Desert ACEC is currently allowed.

Andrew Hoekstra is a member of Delvers Gem & Mineral Society and the Southern California Paleontological Society. This article is reproduced by permission. It originally appeared in the newsletter of the Delvers Gem & Mineral Society, Delvings Vol. 69, No. 12, December 2016. If your club would like to reproduce this article, please contact the author for permission at ajhoekstra@yahoo.com.

Learn more about fossils left by the “Imperial Sea”

<http://www.sdnhm.org/archive/research/paleontology/FossilTreasuresABDCh2.pdf>

<http://www.sdnhm.org/archive/research/paleontology/FossilTreasuresABDCh3.pdf>

<http://nsm.fullerton.edu/dsc/images/DSCdocs/2014Notadrolefttodrink.pdf>, pages 130-143.

https://www.blm.gov/style/medialib/blm/ca/pdf/pdfs/elcentro_pdfs.Par.0f9ac3ce.File.dat/yuha_blm.pdf

https://www.blm.gov/style/medialib/blm/ca/pdf/elcentro/maps.Par.46703.File.dat/blmlands_yuha.pdf

<http://www.desertusa.com/desert-california/photos/yuha-map.jpg>

BLM Field Tour & California Desert District Advisory Council (DAC) meetings in 2017

SAVE THE DATES

February 24-25, 2017

Needles, CA (tentative, venue TBA)

June 16-17, 2017

November 3-4, 2017

DAC meetings provide updates on significant land use planning efforts that affect Rockhounds. 2017 is going to be an important year of public lands milestones.

The public meetings provide opportunity to go on record and have your voice heard. Put these dates on your calendar and plan on showing up!

For information contact:

Stephen Razo
BLM California Desert District
External Affairs
951-697-5217 or srazo@blm.gov

Public Lands Update

New rules proposed for fossil collecting on federal lands

by Andrew Hoekstra

ajhoekstra@yahoo.com*

Comment period deadline: February 6, 2017

A NEW REGULATION is proposed to manage fossil collecting on federal lands administered by agencies of the **Department of the Interior (DOI)**, including the **Bureau of Land Management (BLM)**, **Bureau of Reclamation (BR)**, **National Park Service (NPS)**, and **U.S. Fish and Wildlife Service (FWS)**.⁽¹⁾ To evaluate the impact of these rules, one should read the complete regulation in the Federal Register.⁽²⁾

What laws apply to Paleontological Resources on federal lands?

What agencies have oversight?

The proposed regulation implements the **Paleontological Resources Preservation Act of 2009 (PRPA)**,⁽³⁾ which was passed by Congress as Public Law 111-11, Title VI, Subtitle D of the **Omnibus Public Land Management Act of 2009**. The purpose of the proposed regulation is to clarify terms, definitions, ambiguous, or contested language addressed in public comments submitted previously. The new proposed regulation should be read with understanding of the **PRPA of 2009**, and also with reference to the **USDA's** Final Rule on Paleontological Resources Preservation for the National Forests, which was published in 2015.⁽⁴⁾



The “Elephant Knees” above the Mud Hills, Fish Creek, Carrizo Badlands, Anza Borrego State Park. Behind (around to the south) and atop the ridge are beds of oyster fossils. Photo: A. Hoekstra.

To review: the intent of **PRPA** is to protect vertebrate fossils and other rare fossils. Another explicit purpose of the **PRPA** is to protect hobby collecting: “To ensure that amateur collecting of rocks, minerals, and invertebrate and plant fossils on Federal lands is not affected by this Act.”

Research collecting by professionals or commercial collecting requires a permit. “Casual collecting” of limited quantities by the public, where allowed, does not require a permit. Casual collecting is restricted to “common” invertebrate or plant fossils. Vertebrate fossils (bones,

- 1.) Short document url: <https://www.federalregister.gov/d/2016-29244>.
- 2.) <https://www.gpo.gov/fdsys/pkg/FR-2016-12-07/pdf/2016-29244.pdf>
or short url: <https://goo.gl/YvaPQ7>.
- 3.) <http://www.fs.fed.us/geology/PaleoResourcePres.pdf>.
- 4.) <http://www.fs.fed.us/geology/FS%20Paleontological%20Resources%20Preservation%202015-08483.pdf>
or short url: <https://goo.gl/Y9kaHg>.

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Fossil corals from the Coyote Hills, Latrania Formation, Imperial County. Collection of the Invertebrate Paleontology Department, Natural History Museum of Los Angeles County. Photo: A. Hoekstra.

teeth) cannot be collected from federal land without a permit. Casually collected fossils may not be sold or traded. Casual collecting is allowed on certain **BLM** and **U.S Forest Service (FS)** lands, but not on **NPS** or **FWS** lands. The **Forest Service** is under oversight of the **Department of Agriculture (USDA)**, which has implemented its own rules.(5)

Typically, rules for collecting common invertebrate and plant fossils have been similar to the rules for collecting rocks and minerals; although, fossils may have additional restrictions due to their scientific value. Rockhounds should carefully examine the proposed standards for “negligible disturbance” since that issue also pertains to rock collecting and similar guidelines may be proposed for rocks and minerals. Petrified wood is a paleontological resource, but collection falls under 43 CFR part 3622, the **Petrified Wood Free Use Act**.(6)

BLM lands cover large areas of the western states and contain many fossil sites. The 2009 law states that the **BLM** is to allow casual collecting except

where it is specifically disallowed; however, it is being banned in *Monuments, Conservation Areas, Outstanding Natural Areas, Cooperative Management and Protection Areas unless specifically opened through the bureau planning process*. Not mentioned in the proposed regulations are **Areas of Critical Environmental Concern (ACECs)** or **Wilderness Areas**. My understanding is that collecting fossils and rocks is allowed in **ACECs** unless stated otherwise in their plan, and surface collecting is allowed in **BLM-administered Wilderness Areas** unless prohibited by the specific area management plan.

What should concern Rockhounds in the proposed rule?

Rockhounds will be interested primarily in the sections on “casual collecting”: pages 88195-88196 (Subpart I) and also pages 88182-88183, where the intent and meaning of the rules is discussed. Topics of specific concern to address in a comment letter on the proposed new regulation include the following:

- *The BLM is requesting public comment regarding the range of designations listed in 49.805(a)(2) as prohibiting or restricting casual collection, including whether and why additional designations should be included or currently proposed designations excluded from the list.*

The intent of the **PRPA of 2009** is to allow casual collecting on **BLM (DOI)** and **Forest Service (USDA)** lands, but more and more **BLM** lands are placed within protective designations such as **National Monument (NM)**. The proposed rule does state that portions of a **NM** or other special designation may be “opened through the bureau planning process.” The **BLM** should consider accommodating traditional collecting activities during the plan drafting process.

The **BLM** should follow the intent of the **PRPA** and allow collecting in all those areas or sites where it does not conflict with other values.

5.) <http://www.fs.fed.us/geology/FS%20Paleontological%20Resources%20Preservation%202015-08483.pdf>
or short url: <https://goo.gl/Y9kaHg>.

6.) <https://www.gpo.gov/fdsys/pkg/CFR-2004-title43-vol2/pdf/CFR-2004-title43-vol2-part3620.pdf>
or short url: <https://goo.gl/rZL3Hz>.

The **BLM** should not automatically or reflexively forbid collecting across a broad range of land use designations, but only in individual areas if an Environmental Assessment (EA) determines that casual collecting is likely to cause a specific harm or conflict with other values.

- 49.810(a)(1) – “Common” is not well-defined. When comparing one thing against another, it may be easy to agree which is more common, but agreement is less certain when used in an absolute sense to say something is of commonplace or ordinary occurrence.

And what does “established as having ordinary occurrence and wide-spread distribution” mean? Established by whom? Where do we find the authoritative reference for this information?

Page 88182 of the document states: *It may not always be possible for a collector to identify in the field whether a fossil is common. When in doubt, collectors should err on the side of caution and collect only the resources that they know are common. The bureaus may hold a trained amateur, avocational paleontologist or professional to a higher standard of knowledge than the general public about whether or not a fossil is common.*

The vague definition, with penalties and wide discretion given officers, can be expected to have a chilling effect on law abiding casual collectors. The boundary separating caution from carelessness is itself a highly subjective judgment when following the admonition to “err on the side of caution.”

- 49.810(a)(1) – Replace “negligible disturbance” with “low impact disturbance.” This would accord with **BLM’s** standard and aligns with **BLM’s** study (in progress) on Disturbance Caps (est. May 2017, Barstow, CA field office). **BLM** characterizes amateur rockhounding as a “low impact disturbance” activity contrasted against “high impact disturbance” caused by commercial mining activity. The high and low impact disturbance can be differentiated visually from aerial surveying at different elevations. We recommend applying to invertebrate fossil collecting the same “low impact disturbance” standard used for rockhounding.

- 49.810(a)(2) – Many hobby collectors will be satisfied with far less than 25 pounds of fossils. But when fossils are collected with heavy matrix attached and removing it in the field is impractical, the 25-pound weight limit is not reasonable.
- 49.810(a)(2) – Petrified wood is covered by 43 CFR part 3622, which allows for 25 pounds per day plus one piece of any weight but to not exceed a total of 250 pounds per year. It should be explicit that 43 CFR part 3622 takes precedence over these new regulations (see p. 88175). How will the differing daily and annual total weight rules be combined or reconciled, if both petrified wood and other fossils are collected by a single individual?
- 49.810(a)(3)(i) – The one square yard limitation is impractical as a one-size-fits all standard. It conflicts with actual experience of locating material in the field. Even when taking less than one pound of fossils, they will usually be retrieved from an area greater than one square yard. Fossil distribution or concentration varies considerably and locating fossils often requires exploratory digging in more than one spot. There may be only a single fossil within an area of one square yard. Because collectors drive and/or hike long distances to find fossils, the rules should not require them to return empty-handed when more fossils are present, albeit outside a one square yard perimeter.

It should be made clear whether or not the proposed one square yard limitation is applicable only when digging. Surface collection should not be defined as a disturbance. Collectors should be allowed to use their common sense to survey a fossiliferous area based on the spatial distribution of fossils at the site.
- 49.810(a)(3)(ii) – Because fossils are not distributed evenly throughout the landscape, and they are sometimes concentrated in limited areas, multiple collectors may need to share a small area. It is impractical for each collector to be separated by 10 feet from the areas being examined by other collectors.

- 49.810(d) – Additional “limitations” need to be communicated to the public and applied consistently from one **BLM** field office to another. They should not vary depending on which officer is present, and they should be written and accessible for public reference, with the explanation of their justification.

The **PRPA of 2009** restricts casual collecting to **BLM** and **National Forest** lands. There are federal lands administered by other agencies where casual collecting may be an acceptable use. If you comment on this, remember that the **DOI** must follow the **PRPA of 2009**, and any modification of that law will take congressional action. Collecting rocks and fossils seems compatible with the goals of certain fish and wildlife refuges. Hobby collecting of rocks or fossils seems compatible with other recreation activities in **National Recreation Areas (NRAs)** administered by the **National Park Service** (under **DOI**). Proposals to extend **NRAs** may face public opposition due to the ban on educational hobby activities near our urban areas where the need is greatest, just as **National Monuments** have faced opposition due to public fears that traditional activities will be restricted.

It is important to remember that fossils cannot be “protected in place,” because erosion destroys fossils exposed at the surface. To protect and preserve the value of fossils, they need to be found and usually collected (“Fossil Search and Rescue!”).

The value of fossils is scientific, educational, and recreational. Recreational collectors almost always make use of fossils for their educational and/or scientific purposes and amateurs make significant contributions to science. In general, the community of professional invertebrate paleontologists supports amateurs and hobbyists. Professionals do not have sufficient time to survey all fossil exposures and so rely on assistance from amateurs. The unique excellence of fossils in education is widely recognized, as is the necessary role collecting plays in using fossils for education, especially with youth.

Andrew Hoekstra is a member of Delvers Gem & Mineral Society and the Southern California Paleontological Society.

Proposed fossil regulation to impact collecting on federal lands, including Rockhounding

**Comment letters urgently needed
-- by February 6, 2017 --**

The proposed new rules under the PRPA of 2009 have far-reaching implications for collecting on federal lands, whether the material is paleontological, geological (i.e. rock), or mineral.

Individuals are encouraged to comment – the more letters the better! To be effective, target your comments point-by-point to the language of the proposed regulation.

Strength in numbers

San Diego Mineral & Gem Society, along with other **CFMS**-member clubs and **AFMS** regional federations are adding their signatures to a detailed comment letter being prepared by the **Southern California Paleontological Society (SCPS)**.

Credentialed professionals, whether affiliated with other non-profit groups or working in academia, are also encouraged to lend their support to the comment letter on this regulation. You don't have to be a rockhound or a paleontologist to support traditional activities being accommodated on public lands in the future.

More signatures are needed. Ask your club to sign onto the SCPS letter.

Contact:

socalpaleo@yahoo.com

View the current draft of the SCPS letter:
www.sdmg.org/blmdocs/PRPA_comment_draft.pdf

**Stay current
with News.bytes**

The BLM California newsletter

Editor's Note: The BLM's website, including the online newsletter, News.bytes, is undergoing long term maintenance. Email BLM and tell them getting their resources back online should be a high priority: <https://blmca.sites.usa.gov/contact-us/>

Collecting invertebrate fossils on public lands

by Mike Nelson

Public Lands Advisory Committee Chair

Rocky Mountain Federation of Mineralogical Societies

csrockguy@yahoo.com*

ON MARCH 30, 2009, the **Paleontological Resources Preservation Act (PRPA)** became law on lands managed by various agencies of the federal government. The law had been through numerous drafts before approval by the U.S. Congress and subsequent signing by President Obama. Although in 1999 the Senate Interior Appropriations Subcommittee asked federal agencies to prepare a report on fossil resource management, most rockhounds and many professional paleontologists believed that any new regulations would be written to protect vertebrate fossils (in my opinion). However, unbeknownst to most amateur fossil collectors, the **United States Forest Service (USFS)** published (May 23, 2013) draft regulations concerning the collection of invertebrate fossils and plant remains on land managed by the Agency. The comment period was 60 days and the Agency received few legitimate (non-form letters) concerns. Candidly, the proposal caught most rockhounds “off guard” and it was tough for rock and mineral clubs to organize informative responses. In my opinion, rockhounds lost many, many collecting privileges associated with invertebrate fossils as the proposed rules are now codified as 80 FR 21588. However, in defense of the **USFS**, the Agency was simply interpreting tenets of the **PRPA**, and that is the magic word, at least for me – interpretation.

In December 2016, proposed regulations for lands managed by the **Department of Interior’s Bureau of Land Management (BLM); National Park Service [NPS]; Fish and Wildlife Service (FWS); and Bureau of Reclamation (BR)** were published in the

Federal Register and became available for comments (received no later than February 6, 2017).

The proposed rule [of Interior] would address the management, collection, and curation of paleontological resources from federal lands using scientific principles and expertise, including collection in accordance with permits; curation in an approved repository; and maintenance of confidentiality of specific locality data.

Most of the proposed regulations (formally known as “A Proposed Rule” by the **Land Management Bureau** and the **Fish and Wildlife Service**, posted on 12/7/2016),⁽¹⁾ but specifically subparts A through H, applies to all four bureaus – **BLM, FWS, BR, NPS**. Parts A through H are also very similar, perhaps mostly identical, to current **USFS** regulations (80 FR 21588). However, Part I of the proposed rules notes some differences between **Interior (BLM and BR)** and the **USFS** regulations regarding actual field collecting of common fossil plants and invertebrates. I should also note that **PRPA** does not allow casual collecting in areas administered by **NPS** or **FWS**.

“The Rule”

So, what are some of the proposed items in Interior’s new rules and regulations – hereafter known as the Rule? I will only hit on a few sections as the proposed Rule, as published in the Federal Register, is tens of pages long.

Mining claims

The Rule does not impose additional requirements regarding fossil collecting activities on permitted lands associated with general mining or mineral laws. It

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- 1.) “The Proposed Rule” permalink: <https://www.federalregister.gov/documents/2016/12/07/2016-29244/paleontological-resources-preservation> or short document url: <https://www.federalregister.gov/d/2016-29244>; see Land Management Bureau at: <https://www.federalregister.gov/agencies/land-management-bureau>; Fish and Wildlife Service at: <https://www.federalregister.gov/agencies/fish-and-wildlife-service>.

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appears that if you have a permitted mining claim the fossil plants and invertebrates are fair game for any collecting (§49.15 ...states that the proposed rule does not impose additional requirements on activities permitted under the general mining or mineral laws). Does this mean that if you are mining sedimentary rocks for minerals (such as barite or uranium) that any and all invertebrates may be collected? I don't know; however, that seems to be a reasonable assumption to me. But remember, my interpretation of various regulations and codifications found in the Federal Register may be subject to suspect. I do know, however, that a mining claim will not be approved by an Agency simply to allow a person/company to collect fossils. Any approved mining claim must include some sort of a commodity and fossils are not such.

The mining claim section of the Rule is an interesting one. Around this part of the country one permitted mining claim would create more surface disturbance, and could destroy more fossils, than all the Colorado rockhounds added together. **BLM** and **USFS** manage multi-purpose lands; however, some activities are much higher on the pecking order than rockhounding.

Archaeological resources

Fossils found in an archaeological context are archaeological resources, and are not considered paleontological resources. It is always best to not disturb archaeological resources.

"Other resources"

An authorized federal officer at **BLM** or **USFS** (the person in charge) may decide that specific rocks/minerals, such as coal, chalk beds, diatomites, etc. are not subject to **PRPA** rules as paleontological resources. However, there are a myriad of other federal regulations that may protect them.

Petrified Wood

The Department of Interior has specific Agency regulations concerning the collection of petrified wood on their managed lands:

Petrified wood is managed as a paleontological resource when on or from lands administered by NPS, Reclamation, and FWS. On lands administered by BLM, petrified wood (defined by the Petrified Wood Act of 1962, Pub. L. 87-713, 76 Stat. 652, Sept. 28, 1962 as agatized, opalized, petrified, or silicified wood, or any material formed by the replacement of wood by silica or other matter, and identified as a mineral material under the Materials Act of 1947) is subject to commercial sale at [43 CFR part 3600](#) and free use regulations at [43 CFR part 3622](#). Therefore, on BLM lands, petrified wood may be managed as a paleontological resource, but the savings provisions in PRPA (16 U.S.C. 470aaa-10) prevent the imposition of additional restrictions on the sale or free use of petrified wood. When it is not subject to sale or free use, petrified wood on BLM-administered lands may be managed as a paleontological resource and/or under the authority of the FLPMA.(2)

My old and used mind fails to understand this latter statement! Why would not all petrified wood collected on **BLM**-managed land be free use?

Indian Lands

PRPA rules do not apply to "Indian lands." However, lands managed by Native Americans always have collecting rules so avoid trespassing.

What's "casual" and what's "common"?

A federal authorized officer may restrict access or close a collecting area at any time. Therefore, fossil collecting on federal lands will now essentially involve a visit or call to an agency office.

Microfossils, such as *foraminifera* and *radiolarians*, are paleontological resources and are subject to collecting rules – except if you are drilling a permitted energy well. The drilling bit may then grind up as many microfossils as the driller pleases. Yes, that last sentence was cynical.

Most individual rockhound collecting of invertebrate and plant fossils (excluding petrified wood) falls under the definition of "casual collecting"; therefore, such individuals may collect on **BLM** lands that are not restricted or closed – lands such as **BLM**-administered national monuments would be closed. The Rule notes

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- 2.) In the Code of Federal Regulation, Part 3600 – Mineral Materials Disposal, see 43 CFR part 3600 at: <https://www.gpo.gov/fdsys/pkg/CFR-2015-title43-vol2/xml/CFR-2015-title43-vol2-part3600.xml> or short url: <https://goo.gl/GSqHqF>; see CFR part 3622 at short url: <https://goo.gl/301UP9>; FLPMA is the Federal Land Policy and Management Act of 1976.

casual collectors may collect *common invertebrate and common plant paleontological resources...casually. Common invertebrate and common plant paleontological resources are invertebrate or plant fossils that have been established by the bureaus, based on available scientific information and current professional standards, as having ordinary occurrence and widespread distribution.* But, and there are many “buts” in the Rule, *not all invertebrate or plant paleontological resources are common. When in doubt, collectors should err on the side of caution and collect only the resources that they know are common.* In other words, pay a visit to an Agency to find out what fossils an officer has decided are “common.”

Defining “Casual collecting”

So, what is a casual collector as defined by the Rule? *Casual collecting means the collecting without a permit of a reasonable amount of common invertebrate or plant paleontological resources for non-commercial personal use, either by surface collection or the use of non-powered hand tools, resulting in only negligible disturbance to the Earth’s surface or paleontological or other resources.*

Although this seems a restrictive definition, it is much better than the **USFS** definition: *casual collecting is generally happenstance without intentional planning or preparation..., the view of casual collecting as an activity that generally occurs by chance without planning or preparation.* The “good thing” about the Rule and the **USFS** regulations is that they clarify the allowance of collecting certain fossils from their managed lands.

But here are additional “buts” of the Rule. The casual collector may only collect 25 pounds per day, not to exceed 100 pounds per year – and this weight includes matrix. This part of the Rule was modified after the codified collecting rules long established for petrified wood; however, there is a big difference between specimens of petrified wood and invertebrate fossils. Petrified wood is usually collected without matrix, while many invertebrate fossils are collected with matrix.

Rockhounds do not want to take a chance of breaking the specimen by chipping away the matrix in the field. Collectors also may not pool a total weight with their buddy in order to collect larger specimens. What does this mean for the collection of larger fossils weighing over 25 pounds? I don’t know. Perhaps it indicates a permit is required? However, a permit requires that a collector give up his/her specimen to a museum or repository!

Collectors also may not disturb over 1 square yard of the landscape, and your digging buddy must be at least ten feet away from your land disturbance. I am uncertain if a collector may have several disturbances per day? At any rate, like all good rockhounds, collectors must fill in their disturbance holes.

This restrictive regulation on land disturbance continues to be a problem for me. If the **BLM** really wants to stop major land disturbance, then I suggest examining extensive disturbance by domestic livestock, off-trail ATV and OHV riders, and even off-trail mountain bikers and hikers (among others). I support these multi-use land activities, in moderation, but simply want to point out that land disturbance by rockhounds is minimal compared to these other large-scale activities.

“Casual collecting” at odds with research

Casually collected fossils may only be used in a personal collection and may not be sold, bartered, used for financial gain, or research! I presume this section also means that club members may not use the collected common plants and animals in their club silent auctions. What about gifting a common plant or invertebrate during a club gift exchange? Does bartering mean that fossil interest groups may not trade collected fossil specimens? I don’t have those answers.

But to me the interesting aspect of this tenet is that the casual collector may not use his/her collected fossils for research! The federal agencies want the collector to get a permit if any of the fossils are used in a research project. I presume the point behind this requirement is to make certain that fossils in the research project are documented as to provenance and placed in an accredited repository. However, I would like to suggest that any casually collected fossils could be turned over voluntarily to a repository before results of the research are reported. A case in point – our rock club-sponsored Pebble Pups and Junior Scientists collect fossils and actually write up reports (sometimes published) and present results at meetings where abstracts are refereed. How can an agency expect a group of Pebble Pups to submit a permit application (see below)?

Another set of questions, then, involves the definition of research. If a collector completes a

study on a casually collected fossils and later presents information on such organisms at a rock/mineral club meeting – is this research? What if the collector “publishes” results of their study in a club or federation newsletter, or on a Blog – is this research? Questions to be answered. I do not want some of these restrictive clauses in the Rule to stifle the interest of our children and young adults.

As with the **USFS** regulations, the Rule requires that only hand tools may be used in collecting fossils. These excavation tools may not be motorized and must be light and small enough to be hand-carried by one person. Does this mean that my geological hammer may not be carried in my backpack, or must it be hand-carried? Does it mean that I cannot bring along a two-wheel cart to pack a 25-pound specimen back to the vehicle (my knees will not allow carrying 25 pounds plus equipment)? Luckily, **Interior** listened to criticism directed at **USFS** over their regulation about size of collecting tools – *but not large tools such as full-sized shovels or pick axes*. I don’t have any trouble carrying a full-size shovel in my hand!

Unfortunately, **Interior** chose not to rid the regulations of the permitting process for small groups of rockhounds. I argued against this rule implemented by the **USFS** without success. As I read the rules, and perhaps they are beyond my comprehension, it is my understanding that groups of rockhounds heading out to collect some invertebrate fossils must have a permit. I can understand permitting a group of professionals going out to quarry a marine limestone looking for specific ammonites. I cannot understand requiring a permit in order for a club’s fossil interest group, or a group of Pebble Pups, heading out on a beautiful fall afternoon to do some prospecting for fossils!

If a group of Pebble Pups, some as young as six years old, go fossil hunting at a locality where both common and uncommon invertebrate fossils may be found, then a permit is required (as I try to understand the Rule). For example, I can envision local localities, actually a number of old quarries, where there is a mixture of common and uncommon lower Paleozoic fossils represented. These quarries have been prospected for years and rockhounds have almost always submitted their interesting specimens to museums and repositories. However, the permitting process is a very onerous experience for “ordinary”

rockhounds. So, what happens? Collection without a permit continues, with loss of interesting specimens heading to a museum due to a fear of prosecution, or collecting stops and children and adult rockhounds simply drop out.

Assume that a permitted fossil prospecting activity could be pulled off, please note that all prospectors must deposit their fossil finds in a designated repository. Can you imagine taking kids on a fossil hunt and then taking away their finds? In addition, the rules and regulations concerning report writing are onerous (for most rockhounds) and would require additional time.

As a former classroom instructor, I could not imagine applying for a permit every time I took my students fossil hunting. Certainly, a permit was required whenever a student researcher was out collecting fossils and describing stratigraphy – these collected fossils were deposited in a repository. In fact, during my early days of writing environmental impact statements (fossils) for projects crossing federal lands I devised my own permits (with approval from the agencies) from items like logging permits. I am not against permits; however, I simply want to allow for some slack with non-professional collectors.

In addition, mandating that all permittees must deposit their fossils in an approved repository creates other concerns since the requirements for establishing a repository are pretty stiff. Most colleges and universities with a scientific staff have something, a museum or curated collection, that could qualify as a repository. But what about the poor old group of rockhounds – would nearby repositories curate their specimens without monetary assistance (*Permittee is responsible for the costs, monetary and otherwise, of the permitted activity, including fieldwork, data analysis, report preparation, curation of the collection and its associated records consistent with subpart C of this part*)? I don’t know. Once fossils are collected under a permit they remain the property of the Agency *in perpetuity*. Even if a federal authorized officer removes the collected fossils from the research collection the specimens still remain in repository collection “somewhere.”

My comments pertain to only a small part of the Rule but are, in my opinion, most directly related to fossil collecting by rockhounds and other amateurs. I want members of our rock and mineral clubs, including Pebble Pups and Junior Scientists, to have an

opportunity to collect fossils without fear of “breaking the law.” I want these members to have an opportunity to study and photograph and learn about specimens without fear their work is research and requires a permit. I want members, especially younger members, to have an opportunity to present information at professional meetings about their fossils finds without fear their study requires a permit. But, I would also expect the mentors of the collector to require fossil specimens be offered to a museum and/or repository along with appropriate provenance information. I believe there must be some middle ground in this entire permitting and land disturbance issue. If not, we may begin to lose generations of future STEM graduates that our nation badly needs.

With that said, please note that I have several friends and acquaintances working in the federal agencies. In fact, I take pride in the fact that some Agency paleontologists were my students and we have remained friends for decades---they do excellent work. In visiting with these paleontologists, I have found they are, in their opinion, constrained by federal law found in the **PRPA**. Perhaps they are; however, I still believe in compromise and middle ground and “working things out.” Is this possible with the rules in the **PRPA**? I don’t know. Could interpretation of **PRPA** regulations be less “strict.” I don’t know.

What I do know is that these new laws (**USFS**) and the proposed Rule (**Interior**) are almost impossible to enforce – I am not advocating breaking the law but simply stating my strong opinion that collecting of invertebrate fossils on federal lands will go underground. Unlike vertebrate fossils, where poachers are interested in selling their unlawfully collected specimens, rockhounds collecting invertebrate fossils are interested in building up a personal collection, trading specimens with club members, and perhaps most importantly helping young children and their schools build collections. Also unlike the somewhat easily identified vertebrate fossils (yep, that is a dinosaur skull, so leave it alone), invertebrate fossils are much more difficult to identify. I am guessing that

most rockhound amateurs will have great difficulty identifying uncommon fossils (need a permit) from common fossils (casual collecting).

What You can do

So, what advice can I offer? Take the time to read, or attempt to read, [the Proposed Rule](#) at the Federal Register (short url: goo.gl/idd1nz). After this little chore, rockhounds should submit personal comments, or even pooled comments by several members of the club; however, it is best to not use form letters. Also, remember as you comment:

- Provide first and last name, city, state, & country. All other fields of information are optional. Keep in mind that much of this information is publicly viewable.
- Comments may be typed in the box provided or they may be uploaded as attachments (Word docs or PDFs only).
- Comments may be brief or in-depth/well-researched. Comments with facts to support them are much more useful (e.g., examples of overlooked scenarios). Keep comments civil and straightforward. Comments using offensive terms, threats, or other inappropriate language will be disregarded.
- **Comments on the proposed rule must be received by February 6, 2017.**

And finally, stop in Agency offices (especially **BLM** and **USFS**) and visit with the geologists—they are a nice group of people. The paleontologists in both the **USFS** and the **BLM** are stationed few and far between. But again, if you are in their area stop in and converse with them.

Perhaps I am just a crusty old guy remembering “the good old days” of collecting. But perhaps I am just an old guy seriously worried about the impact of the Rule (and USGS regulations) on school children, Pebble Pups, rockhounds, and interested amateurs. I want to find a common ground with the **USFS** and **Interior** in the permitting processes, the land disturbance issues and the collecting limits. Will it happen? Another question that I cannot answer.

Mike Nelson is a member of the Colorado Springs Mineralogical Society and PLAC Chair of the Rocky Mountain Federation of Mineralogical Societies. This article was first published on his blog and is reproduced by permission. M. Nelson. 26 December 2016. [Collectioning Invertebrate Fossils on Public \(BLM\) Land](http://csmsgeologypost.blogspot.com/). CSMS Geology Post. Available online at: <https://csmsgeologypost.blogspot.com/>.

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Deadline for public comments on “The Rule”

Monday, February 6, 2017

**Have your say about casual collecting of
fossils • rocks • minerals**

A Proposed Rule for Paleontological Resources Preservation

The “Elephant Knees” above the Mud Hills, Fish Creek, Carrizo Badlands, Anza Borrego State Park.
Art based on a photo by Andrew Hoekstra.

JOIN A GRASSROOTS EFFORT TO PRESERVE HOBBY COLLECTING ON PUBLIC LANDS

Ask your Club to sign onto the comment letter
prepared by Southern California Paleontological Society (SCPS)

What we are asking you to do (3 easy steps):

1. Download the current draft of the comment letter by Southern California Paleontological Society (SCPS) from the SDMG website at:
http://www.sdmg.org/blmdocs/PRPA_comment_draft.pdf
2. Take the SCPS letter to your board for approval ASAP.
3. Upon approval, email Karol McQueary (socalpaleo@yahoo.com) your club contact info to add to the letter:
 - Club/org/school name
 - Officer name and title (usually club president)
 - Number of members in your club
 - Club mailing address

Turner in Thailand

December 2, 2015

THIS ARTICLE IS THE SIXTH INSTALLMENT of Denny's travels and training at Wat Sri Suphan, in Chiang Mai, Thailand.

SO YESTERDAY I SORT OF CAME DOWN with a bit of a stomach bug and didn't do much writing. I kinda wonder if it is something I picked up over my weekend sortie out into the countryside.

The basic adventure was a three day elephant camp up-country, north of Chiang Mai. There are many camps from which to choose. I did some research into the camps. I wanted one that a) offered a three-day adventure, and b) treated the elephants ethically and with dignity. There are some fly-by night one day camps, where they keep the elephants in chains, work them every day, put seats on their backs, make them dance on two legs, and paint pictures among other non-natural behaviors. In contrast, Baan Chang camp only works the elephants every other day and you ride them bareback. They also get a full physical exam

every morning before starting work. Each elephant has a "mahout" a man who is the elephant's one-on-one keeper. At night they keep the elephants in a big corral and do chain them lightly to keep them from wandering off the camp and into the neighbors' crop fields. The mahouts here DO carry a "bull hook" for everybody's safety (just in case), but I never saw one being used in any way other than as a guide, sort of like a riding crop (Never with the steel hook end.)

Baan Chang has collected 48 elephants over the 11 years of its existence. They come from logging camps, work camps, and from other elephant camps where they may have been abused. Some of them have scars on various parts of their bodies from being hitched up to log-pulling harnesses or saddles. Led by the venerable king, Thailand has done a

good job of realizing it needs to protect its remaining teak and mahogany forests and converting the elephants from logging engines to less arduous pursuits. Up on the Cambodian and Laos border areas, in the mountains, one still hears of elephants being used as living tractors and bull dozers, but this is against the law now. The tourist money from elephant camps has largely replaced the money that companies and mahouts got from logging, and it appears to be a win-win situation for everybody, including the environment.





Baan Chang has never had a baby born here, but they currently have three they think may be pregnant.

So for two days I learned how drive an elephant: Get down, get up, go, stop, turn left, and turn right. We fed the elephants treats (bananas and sugar cane), medicine balls of sticky rice laced with rock salt, vitamins, antibiotics, and sweet and sour tamarinds) and watched them consume mountains of elephant grass and other local plants. An elephant is ALWAYS hungry, it seems and in the wild they graze almost all day long, consuming some 500 lbs of fodder each day for an adult. They drink prodigious quantities of water, and the fodder and the water makes for a LOT of elephant poo. Surprisingly, there were very few flies or odors associated with the poo, as the bulk of it is basically just partially digested grass.

Our routine was to feed the elephants treats, practice our commands and how to get up and down from an elephant, and then have lunch. Afterwards, we would ride around one or the other of two maybe 1-kilometer pathways. Then we'd take them

down to the pond and wash them up, followed by relaxation time and then dinner, and then bed in quit comfortable private rooms (with private baths). When with our elephant, we were always accompanied by the elephant's mahout, who walked when we rode. Couples could ride two-on-an-elephant, but I rode alone.

The best part of all this was washing the elephants at the end of the day. They clearly enjoy this and they can get playful (with the help of commands from the mahouts). You get a bucket and a scrub brush and you wash your elephant (and maybe your mahout, too). I will just say this, never get into a water fight with an elephant: you will lose, as they have super-soakers built right in, and know how to use them. (When you heard "Bahn-bahn" from a mahout, you knew somebody was about to get drenched.)

The worst part of all this was perhaps actually riding the elephants. You ride bareback, and there is nothing to hang onto except your elephant's ears. You sit on your elephant's neck and wrap your legs

around behind his ears, and bob around as (s)he decides to move her head around. And, as elephants are ALWAYS HUNGRY, they tend to stop every so often to rip off some vegetation and when it lets go, the head of the elephant jerks right or left or up or down. Otherwise, the head seems always to be lowered, looking for the next morsel. Consequently, I felt like I was continually about to pitch forward over the elephant's nose. You can put your hands down flat on the head in front of you, but you always seem to be leaning forward. The mahouts, of course have no such problem, as they are small, wiry guys and have perfected balance and they lay on the elephant or sit on it, and rarely use their hands in any way. To keep from pitching forward you need to clasp your knees tightly and at the end of the day, my thigh and groin muscles were done in. They have two gaits: walking and lumbering. Walking (slowly) is the better of the two.

The other not-so-favorable thing at the camp was the roosters. They start about 3:00 am and seem adamant to inform the world it is STILL dark and it is NOT time to get up, but it's important that you know this. They may quiet down after 20 minutes, but then they would get started again about 4:00 am and continue until mid-morning, each determined to outdo his fellows in who could crow the loudest of the couple dozen that were about. I kept hoping for chicken dinner each night.

The third day of camp was not with the elephants at all. They start after breakfast with a farewell snack of sugar cane and bananas for your elephant, and take you out for some trekking up to a waterfall. Along the way I saw my first mahogany tree. Big and with a crown of gorgeous orchids.

Then we went to the very interesting elephant poopoo paper factory. Yup, they make a colored paper from elephant poo. Again, the raw poo does not have much of any kind of odor and consists mostly of wet grasses. They take a truck load of elephant poo and wash it in a series of 55 gallon drums, then they boil



it for a couple of hours to kill any bacteria, then they wash it again. The result is just globs of grassy fibers. They then dye it any of a dozen colors and form it into balls about the size of a grapefruit. We watched all of this being done. The next step we got to actually do ourselves. You pick out a ball of fibers and take it to a big washing sink. There you have a wooden frame with fine mesh screening stretched across it. You submerge your screen in water and drop your poo ball into it. Next you tease apart the fibers with our fingers and carefully spread them evenly all over the frame. The frame is lifted out of the sink and set out to dry in the sun. A couple hours later you have a sheet of colored paper that sort resembles thin felt, with some fibers of various consistency in it. The paper can be cut into sheets for writing, little books, book marks, wallets, etc. What we saw was a small-scale, demo operation, but they have a larger scale commercial-scale operation on the site. This was an interesting and environmentally sustainable way to make a product, with real uses. Leave it to the Thais.

Following the poopoo paper factory, we took a drive to a village of Hill People (the Ache?) where you can buy trinkets and curios while the little old ladies wear their traditional garb. I watched as both men and women used large, wicked-sharp knives to split bamboo canes into strips for baskets and other weavings. They could cut these strips to about 1 millimeter thick. There is a photo of one of the little old ladies and her traditional garb. Immediately as I approached her stall, she declared, “You take my picture, yes?” So, sure, I wanted a photo. As soon as I had done so, she grabbed my hand and pulled me closer to her booth. “Now you buy. You take photo, now you buy!” Okay, so I did. Shrewd business lady.

After the village I was taken to the river for a river rafting ride for about an hour. This was fun, but nothing exceptional, as I’ve done a lot of river rafting over the years. It being the dry season the river averaged about 2-3 feet deep and when you went over the rocks you got your keester sharply slapped. The biggest rapid was maybe a class 2. But it was fun and the water spray felt good due to the heat.

It was fun to be out of the city and into the rural countryside, which is quite beautiful and (except for



the rooters) quiet, compared to the hustle and bustle of Chiang Mai.

Tomorrow evening my extra-special lady friend, Vera, arrives in Chiang Mai. She will join me for the next two months of my stay. It’s quite possible these blogs may decrease in frequency as a result. Or maybe not, as I’ve been saving up some of the touristy things for when she is here. We’ll see.

SDMG Library

SDMG Bldg.

Andy Anderson

Hours: 4 to 6 pm, Wednesdays
Reference use only, no lending.

Access the catalog online at:
<https://cloud.collectorz.com/sdmgmerklib/books>

Who may use the Library?

Membership is not required to view the catalog, but only **SDMG** members may come in and use the reference library.

We Need Volunteer Assistant Librarians.

Members willing to volunteer in the Library will enable us to extend the hours of access.

Contact Andy at aanderson@sdmg.org,
if you can help out.

SDMG BOARD MEETING HIGHLIGHTS

November 21, 2016

In attendance: President Shirley Leeson and Board members Andy Anderson, Donna Beers, Rocio Bergum, Bob Hancock, Lois Lukasky, Wayne Moorhead, Jim Parrish, Doug Peeler, Ellen Riceman, Anne Schafer, Dave Smith, Dee Smith, Jennifer Stapp and Paul Williams. A quorum was present.

Excused: Garry Cannon, John Kruzel, Sally Parrish and Jill Williamson. **Absent:** Tim Bickford. **Guest:** Letty Evans.

President: Shirley Leeson reported:

- Wayne & Dona Leicht were robbed at the Costa Mesa show; \$250K value of gold specimens was taken, but the labels were left behind. This was presumed to be an inside job.
- Rock & Gem Magazine is now the official magazine of the AFMS. They are looking for articles on cabs, inlay, intarsia, sphere making, flat lapping, jewelry making, beads, etc. Photos of each step in the process would need to be included with article. Interested parties may contact: editor@rockngem.com

Membership: Total membership as of this date is 610, including 28 honorary and life members, as well as 38 Junior members.

Juniors: Lois Lukasky reported that Juniors are mostly younger members, working on cabs. Two older boys will start silver fabrication soon. Class makeup varies week to week.

School Director: Wayne Moorhead reported that the arbor of the HP 10" trim saw has been repaired, the flex shaft machine has been repaired, and 220 expanding drum wheels were put on one sanding unit. Wayne snaked out the clogged sink drain, and requests that all instructors please call him or email him with reports of breakage or problems in the shop. Christmas break will be Monday, Dec. 19, through Sunday, Jan. 1. Classes resume Jan. 2.

School Liaison: Bob Hancock reported that more brass dops need to be ordered for class.

Library: Andy Anderson is continuing to catalog the Gemological Society books.

Donations: Anne Schafer and Wayne Moorhead picked up a donated 10" trim saw and poly arbor on a homebuilt stand.

CFMS: Shirley Leeson reported that Lisbet Thoresen did a power point presentation on the new National Monuments at the CFMS Fall Meeting in Visalia. CFMS dues & insurance payment is due soon.

Show: Bob Hancock reported that the Show wrap-up meeting had just concluded. The 2016 show was a good one, with a record net profit of \$5,118.67.

December Nights: Sign-up sheets to go out soon. Prado sales items were prepped on Friday and Saturday, Nov. 18-19.

Christmas Potluck: Event to be held on Monday, Dec. 19, at Casa del Prado, Room 101. Decorating to begin at 4 p.m. Potluck dinner set for 6 p.m.

Museum Curator: Jim Parrish reported that, in preparation for December Nights, exhibit cases were cleaned and new LED lights installed in all cases on Sunday, Nov. 20. The quote for new UV lights has been updated: 3 Superbright units for \$3,500.00. Motion carried to approve \$4,000.00 for purchase, shipping and installation of equipment for new UV lights. Paul Williams to do installation; Jim Parrish to reline windows to decrease viewing aperture.

Banquet: Donna Beers and Dave Smith to do proposal re: allowing vendors w/card tables to sell/demonstrate before dinner; proposal to be forwarded to Wayne Moorhead for distribution to Board members prior to Board meeting in January.

New Business: Motion carried approving Shirley Leeson to send a letter on behalf of SDMG to the Bureau of Land Management (BLM) in support of Lisbet Thoresen joining the BLMS's Desert Advisory Committee (DAC).

(Any member may attend Board meetings. The next one is Jan. 16, 2017, at 7 pm in the SDMG Building.)

ON THE GO ... TO A SHOW



JANUARY

21–22 EXETER, CA – 2017 Gemboree Exeter Rock & Gem Show

Sponsor: Tule Gem & Mineral Society, Visalia

Venue: Exeter Veterans' Memorial Building
324 N. Kaweah Avenue, Exeter, CA 93221

Hours: Sat 10:00am – 5:00pm; Sun 10:00am – 4:00pm

Admission and Parking: Free

Contact: Laura Manser 559-303-0632,
or driggs5@gmail.com

Website: www.tulegem.com

27–28 REDLANDS, CA – 52nd Annual Pacific Micromount Conference

Presented by: Mineralogical Society of
Southern California

Venue: San Bernardino County Museum
2024 Orange Tree Lane, Redlands, CA 92374

Registration: \$20 before conference; \$25 at
the door.

Please provide the names and home towns
of all members of your party. In addition to
Conference registration, reservations required
for Saturday buffet dinner.

Registration/Reservations:

Robert Housley
210 S. Catalina Ave. #3, Pasadena CA 91106
Phone 626-449-6454

Website (form): [www.mineralsocal.org/
micro/2017-PMC.pdf](http://www.mineralsocal.org/micro/2017-PMC.pdf)

Friday, Jan 27:

3:00–5:30pm On-site Registration, greeting
friends and microscope time, sales tables open.
Departing from tradition a pot luck dinner will
not follow. Please bring snacks to share.

5:30–7:00pm Dinner at local restaurants.

7:00–8:00pm Lecture by Bob Walstrom,
“New mineral discoveries from the Victorio
Mountains skarn, Luna County NM.”

Saturday, Jan 28:

8:00–9:00am Doors Open, On-site
Registration, microscope set-up, filling
“GIVE-AWAY” and sales tables, meet & greet

10:00am Welcome, Introductions and Special
Announcements.

10:15am Lecture by Paul Adams, “Fumarole-
related minerals from the Salton Sea, Imperial
County CA.”

noon Sandwich lunch served at museum.

1:30pm Verbal auction followed by silent
auction of member donated materials.

3:15pm Lecture by Tony Kampf, “The path
from a field discovery to a new mineral.”

6:00pm Buffet dinner served at Museum
(\$5.00 per person).

Sunday, January 31:

Field Trip (destination TBD)

FEBRUARY

17–26 INDIO, CA – San Gorgonio Mineral & Gem Society Annual Show

Venue: Riverside County Fair & National Date
Festival

82-503 Hwy 111, Indio, CA 92201
Gem & Mineral Building

Hours: Daily 10am - 10pm

Admission: Adults \$9, Seniors \$8, Students
\$7, Children under 5 Free

Contact: Bert Grisham, 951-849-1674
or bert67@verizon.net

Website: www.datefest.org

Login to the SDMG
member website
to view the master calendar
for 2016-17
www.sdmg.org/sdmg-members/

What to do in QUARTZSITE 2017

Ye Old Timer Auction

Thursday, January 19th • 7pm MST

Senior Citizen Center

ALAA Meeting

Friday, January 20, 2017 • 7pm MST

Quartzsite Community Center

295 Chandler Street, QUARTZSITE, AZ, 85346
(Hwy 95 North, right on Chandler to end of road)

Lisbet Thoresen, guest speaker

“Preserving Rockhound habitat on public lands”

ALAA 5th Annual Cleanup

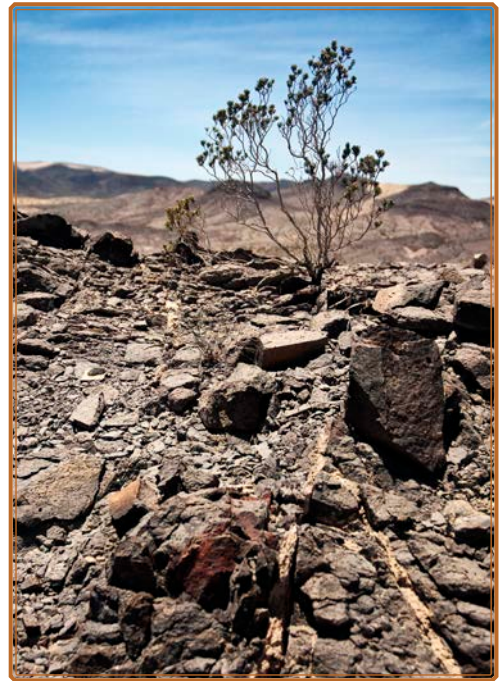
Sunday, January 22 • 8 – 11am MST

I-10 at exit 25, Gold Nugget Road
east of Quartzsite

Bring gloves, please wear hard shoes.

This only takes a hour or two out of your day,
but pays off big time with the BLM

Check with **Shirley Leeson** to confirm place and time
before she leaves for Quartzsite on January 18th



View from the Top Notch Claim, North Cady Mts,
in the Mojave Trails National Monument (May
2016). Photo: L. Thoresen.

2017 in Quartzsite (AZ 85346) - Selected Shows

Jan 1 – Feb 28

**Desert Gardens Gems, Rocks
& Minerals Show**

1050 Kuhen Street

8am – 5pm daily

Free Parking and Admission

www.desertgardensrvpark.net

Jan 2–15 • Prospector’s Panorama

Tyson Wells Show Grounds

35 W. Kuehn Street

9am – 5pm daily

Free Admission

www.prospectorspanorama.com

Jan 6–15 • Tyson Wells Rock & Gem Show

Jan 20–29 • Tyson Wells Annual Sell-A-Rama

Feb 3–12 • Tyson Wells Arts & Crafts Show

Tyson Wells Show Grounds

121 W. Kuehn Street

9am – 5pm daily

Free Admission

www.tysonwells.com

Jan 14

**Annual Hi Jolly Daze Parade - Town Park
New Christy Minstrels – QIA 2pm and 7 pm**

Jan 18–22 • Q.I.A. POWWOW

235 E. Ironwood Street

(north of I-10 between Exit 19 and Hwy 95)

7am to 5pm daily

Free Parking and Admission

www.qiaarizona.org

(check website for 2 daily field trips)

Jan 21–29

34th Annual Sports, Vacation and RV Show

Show Grounds • 700 S. Central

9am – 5pm daily

Free Admission

www.quartzsitervshow.com

thru April

Grease Wood Swap Meet

Show Grounds

More activities at:

www.desertusa.com/cities/az/quartzsite.html

2017 in TUCSON

Selected Gem & Mineral Shows

Alphabetical Listing of all Tucson Shows

January through February

www.tucsongemshows.net/coming.html

and at:

**Gem, Mineral & Fossil Showcase:
Join The World's Largest Treasure Hunt**

Contact: 800-638-8350

Website: www.visittucson.org

For detailed listings of all the dealers, venues, and show dates, search the schedule at the show website.

TUCSON - selected shows

1/26– **Tucson 22nd Street Mineral & Fossil Show**

2/12 **(Eons Expos)**

Where: Corner of I-10 & 22nd Street, Tucson, AZ

Hours: 9:00am – 6:00pm daily

Admission and Parking: Free.

Website: www.22ndstreetshow.com

Wholesale and retail, 220 dealers, plus food vendors, handicapped accessible.

1/27– **Pueblo & Mineral Show**

2/8 **Where:** Riverpark Inn, 350 S. Freeway
(Congress St., South Frontage Rd.)
Tucson, AZ 85745

Hours: 10:00am – 6:30pm daily

Parking: Onsite and valet.

Contact: info@pueblogemshow.com
or 310-586-6816.

Website: www.pueblogemshow.com

Centrally located in downtown Tucson one block from the Convention Center in “The Golden Triangle.” It is known as the most diverse gem, jewelry and mineral show in Tucson, with US and international exhibitors of designer and fine jewelry, cut and rough gemstones, pearls, beads, silver, turquoise and amber, as well as rough and fine mineral specimens.

1/28– **Arizona Mineral & Fossil Show**

2/11 **Hours:** 10:00am – 6:00pm daily, except Sat,
Feb. 11, 10:00am – 5:00pm

Admission and Parking: Public welcome, free.

Contact: mzexpos@gmail.com

Website: www.mzexpos.com

Over 400 Dealers, Fossil Hall, Meteorite Dealers, Minerals, Gems and Jewelry. Artists Gallery and Art in Stone display.

– Three locations –

(1): Hotel Tucson City Center

(formerly InnSuites Hotel)

475 N. Granada Ave. Tucson, AZ 85701

(St. Mary's Rd and Granada Ave.)

Ballrooms open Jan. 26 - Feb. 8

(2): Mineral & Fossil Marketplace

333 N. Oracle Rd. Tucson, AZ 85705

(3): Ramada Limited

665 N. Freeway, Tucson, AZ 85745

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gems & minerals

January 28 – February 11, 2017
Martin Zinn Expositions & LLD Productions
Arizona Mineral & Fossil Show

Tucson, AZ

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(Formerly The Inn Suites)

475 N. Granada

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Tucson AZ 85701

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1/27– **Rapa River Gem & Mineral Show**

2/12 **Where:** 1179 - 1211 S. Freeway Ave.
(S. Freeway Ave. between Congress St. & Starr
Pass Blvd.) Tucons AZ 85713

Hours: 9:00am – 6:00pm daily

Admission and Parking: Shuttle service;
handicap accessible.

Contact: Lynn Arriaga at 520-256-2079 or
Tyo Leonard at 480-593-3439;
or rapagem@yahoo.com

Website: www.rapariver.com

If you can't find it here you won't find it
anywhere. Rapa River dealers offer a wide
variety of many unique and unusual products
from all parts of various countries represented
by 34 vendors.

1/27– **Kino Gem & Fossil Show**

2/12 **Where:** Tucson Electric Park, Kino Sports
Complex, 2500 E. Ajo Way, Tucson, AZ
85702 (Ajo Way and Kino Parkway)

Hours: 10:00am – 6:00pm daily, except Feb
12 10:00am – 4:00pm.

Admission and Parking: Acres of free
parking, free shuttle service; handicap accessible.

Contact: info@as-shows.com

Website: www.as-shows.com

Over 200 vendors of gems, minerals, fossils,
beads, findings, jewelry, and one-of-a-kind
specimens, as well as lapidary equipment,
supplies and tools.

FEBRUARY

3–6 **13th Annual Westward Look Mineral Show**

Where: 245 E. Ina Rd., Tucson, AZ 85704

Hours: 10:00am – 6:00pm, except on the final
day, 10:00am – 5:00pm

Admission and Parking: Free.

Contact: info@finemineralshow.com

Website: finemineralshow.com

Forty world-class dealers gather every year
at the famous Westward Look Resort to
showcase some of the most exceptional mineral
specimens found anywhere in the world.

9–12 **63rd Annual Tucson Gem & Mineral Show**

“Mineral Treasures of the Midwest”

Sponsor: Tucson Gem & Mineral Society

Venue: Tucson Convention Center,
260 South Church Avenue, Tucson, AZ 85701

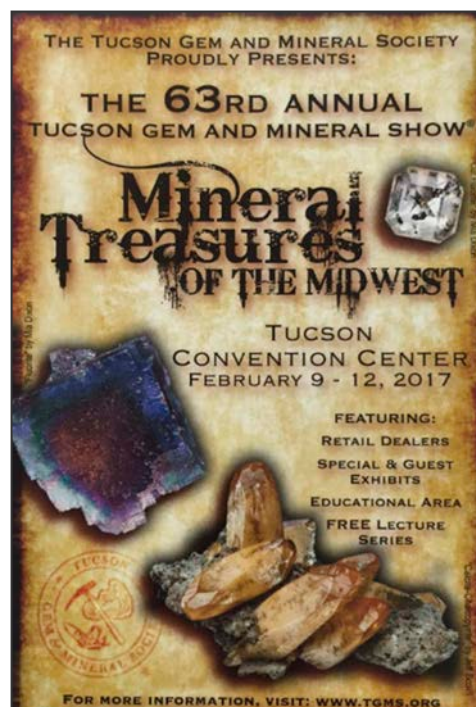
Hours: Thu thru Sat 10:00am – 6:00pm, Sun
10:00am – 5:00pm.

Admission and Parking: Adults \$13.00,
Children 14 and under Free with paying Adult
(2-day ticket available for \$22.00)

Info/coupon: See website for coupon code.

Website: www.tgms.org

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Second adult, same address: \$10.00

Junior (under 18): \$10.00

Membership application forms
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and at the Village Silversmiths Shop
in the SDMG Building,

or by contacting the SDMG Membership Secretary
membership@sdmg.org

or by writing to her at:

San Diego Mineral & Gem Society
attn: Angela Cannon

P.O. Box 710783
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or (775) 772-7724 for more info

Website:

www.highdesertgemsandminerals.com/

WEBSITES

SDMG:

www.sdmg.org

CFMS:

www.cfmsinc.org

AFMS:

www.amfed.org

PUBLIC LANDS:

www.amlands.org

BLM:

www.ca.blm.gov

BOB'S ROCK SHOP:

www.rockhounds.com

MUSEUMS:

www.sdnhm.org

www.nhm.org

www.amnh.org

www.mnh.si.edu

www.gia.edu



CLASS SCHEDULE – 2017

REGISTRATION IS REQUIRED BEFORE ALL CLASSES.

You must contact the instructor before attending any class to find out when the class starts and ends, if special materials are required and whether you qualify to attend. Fee is \$5.00 per class; it is usually easier for instructors if payment is made for a full month; cash or checks only, please. ***Classes are open to members only*** and students must read and follow the **School Rules** available in the classroom and at:

<http://www.sdmg.org/class-schedule/school-rules.pdf>

CABOCHONS	Tue	6 – 9pm	Tim Bickford	school@sdmg.org
	Wed	9 – 11:30am	Jim Claypool	school@sdmg.org
	Wed	12:30 – 3:00pm	Jim Claypool	school@sdmg.org
	Wed	7 – 9pm	Andy Anderson	aanderson@sdmg.org
	Thu	7 – 9pm	Jon Evans	school@sdmg.org
FACETING	Tue	noon – 3pm	Elbert McCune	school@sdmg.org
	Tue	7 – 9pm	Jerod Schneider	school@sdmg.org
	Wed	9am – noon	Bob Hancock	school@sdmg.org
	Wed	noon – 3pm	Donna Beers	school@sdmg.org
	Wed	7 – 9pm	Elbert McCune	school@sdmg.org
	Thu	7 – 9pm	Bill Brisebois	school@sdmg.org
BEG. SILVER FAB.	Tue	6 – 9pm	Stephanie Griffin	school@sdmg.org
	Thu	9am – noon	Denny Turner	school@sdmg.org
	Thu	1 – 4pm	Denny Turner	school@sdmg.org
BEG. METALS FAB.	Sat	4 – 7pm	Andy Anderson	aanderson@sdmg.org
SILVER FABRICATION	Tue	9 – 11am	Lois Lukasky	school@sdmg.org
	Tue	noon – 3pm	Lois Lukasky	school@sdmg.org
	Wed	7 – 9pm	Al Fuente	school@sdmg.org
	Thu	7 – 9pm	Ellen Riceman	school@sdmg.org
	Fri	9:30am – noon	Dee Smith	school@sdmg.org
	Fri	12:30 – 3:00pm	Dee Smith	school@sdmg.org
ADV. SILVER FAB.	Wed	9am – 3pm	Denny Turner	school@sdmg.org
ADVANCED METALS	Wed	9am – 3pm	Jackie Leverone	school@sdmg.org
CASTING	Mon	1:30 – 7:00pm	Rocio Bergum	rocio@sdmg.org
	Tue	9am – 2pm	Dave Smith	school@sdmg.org
	Fri	5 – 7pm	Rich Yarbrough	school@sdmg.org
STONE SETTING	Mon	by appointment	Miguel Asmar	miguelasmar@sdmg.org
ROCK CARVING	Mon	9am – 1pm	Jan Kunsas	school@sdmg.org
SPHERE MAKING	Sat	1 – 3:30pm	Paul Williams	school@sdmg.org
JUNIORS	Sat	10am – 1pm	Lois Lukasky	school@sdmg.org
DESCRIPTIVE MINERALOGY	Wed	6:30 – 9pm	Doug Peeler	school@sdmg.org

WEST COAST – SPRING GEM & MINERAL SHOW



*Grape Agate
Sulawesi, Indonesia
Photo by Jeff Scovil©*

May 19 - 20 -21, 2017
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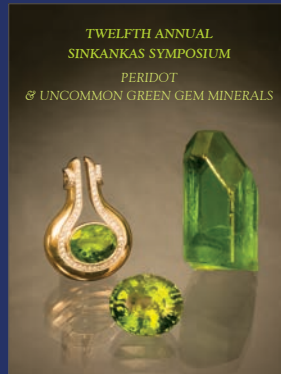
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Fax: 619-232-2213



THE ANNUAL SINKANKAS SYMPOSIUM – SAPPHIRE Saturday April 8, 2017, Carlsbad, CA

Look for event details in mid-January at:
www.sinkankassymposium.net

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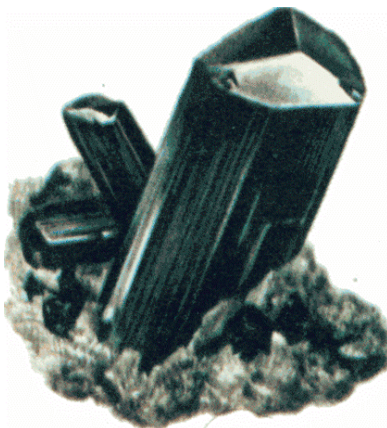
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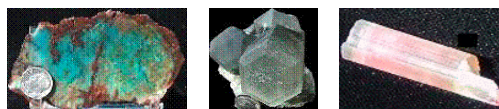
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1770 Village Place, Balboa Park

San Diego, CA 92101-1651

www.sdmg.org

WELCOME!

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is located
at the north end of
Spanish Village
in Balboa Park

SDMG Museum hours:
11:00am to 4:00pm



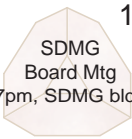
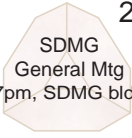
Get information
on classes, events,
field trips, reports,
reviews, slideshows
and more at:

www.sdmg.org

ADDRESS SERVICE REQUESTED



THE PEGMATITE – JANUARY 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 New Year's Day	2  Classes resume	3	4	5	6	7
8	9	10	11	12	13  SDMG Min Div Mtg 7pm, SDMG bldg	14
15	16  SDMG Board Mtg 7pm, SDMG bldg	17	18	19	20 ALAA Mtg, 7pm Quartzsite Community Center	21
22 ALAA 5th Annual Cleanup I-10 at exit 25, Gold Nugget Road	23  SDMG General Mtg 7pm, SDMG bldg	24	25	26	27	28
29	30	31	1	2	3	4