

Monthly Newsletter of the *Kern County Mineral Society (KCMS)***President's Message**  
**James May - KCMS**  
**President 2023**

As we move into June, we are quickly closing in on one of the more important events the Kern County Mineral Society has to offer and that's the June Potluck and Auction. This is a fantastic opportunity to prepare that special dish, enjoy a great meal with fellow rockhounds, and bid on some fantastic items that will be up for auction. All proceeds go back into the KCMS, so it's for a very good cause. Last year's event was very lucrative to the KCMS, so I suspect this will be another memorable event. The auction would not be possible if it were not for Jack Stewart allowing us use of the East Bakersfield Church of Christ. Please remember the General meeting will be held at 3500 Bernard Street and if you have items to auction, please plan on attending at 6 pm.

There will be no business meeting in June. In fact, we plan on having our July scheduled meeting consisting of a workshop in preparation for the Kern County Fair. One of the highlights of the Fair is when members work together to populate display cases. For new members, if you have visited the Fair in the past, you might recall seeing all those beautiful display cases that were situated in the building. Many of the cases were populated by members and we would like to share some ideas that members have used in the past and encourage new members to make their own display cases. If we provide the guidelines for the display cases, we know we will get more members involved in making their own cases.

Speaking of workshops, our next Rock and Lapidary Workshop will be held on Saturday, June 24<sup>th</sup> from 9 AM till Noon at the Fleishauers.

In concert with the Rock and Lapidary Workshop, we would like to start sewing grab bags for the Kern County Fair. Grab bags are usually great sellers at the Fair and we have plenty of material, we just need some eager members to help sew the bags together and attach the draw strings. We plan on targeting 200 grab bags. We will have a second workshop during the summer months to help fill the grab bags with the tumbled rock.

Speaking of tumbling, if we have any members who would like to tumble rocks, we have a set of rotary and vibratory tumblers that you may use. From all the beautiful rock that we collect on our field trips, you can help turn the rough material into beautiful shiny tumbled gemstones. Please let me know if you would like to help tumble rocks for the KCMS.

Finally, as you are aware, we are concerned about land restrictions proposed for the Mojave Trails National Monument. During the May General Meeting we passed around a signature page with our rebuttal. Thank you so much if you were able to sign the petition letter voicing your concerns over the restrictions. The letter was mailed to the BLM Needles Office. I also encourage you to send your own letters voicing your concern before the June 20<sup>th</sup> deadline. Just a few sentences on why keeping those locations open is important to you, your family, and the hobby. Without a strong voice of resistance, the BLM might conclude that we don't care enough to protect the hobby -- James

**Next General Meeting  
(Potluck and Rock Auction)**

**Thursday, June 15<sup>th</sup> at 6:00 PM**

**\*\*East Bakersfield Church of Christ\*\*  
3500 Bernard Street, Bakersfield, CA**



**NEXT FIELDTRIP**

**Saturday, July 15<sup>th</sup>, 2023 to San Simeon Creek Bed**



Next Rock and Lapidary Workshop  
Saturday, June 24<sup>th</sup> at 9:00 AM  
The Fleishauer's House



Along Preparation of Grab Bags



The Adventures of SB

Devils Postpile National Monument

A Geologic Wonder



Established in 1911 by presidential proclamation, Devils Postpile National Monument protects and preserves the Devils Postpile formation, the 1010-foot-high Rainbow Falls and pristine mountain scenery.

Located off Highway 395, drive 10 miles west on S.R. 203 to Minaret Vista and then another 8 miles on a paved, steep mountain road. Most visitors must park at the Mammoth Mountain Ski Area and use the mandatory shuttle.

About 200 million years ago, Pangaea began to split and North America began moving to the West while Europe and Asia moved to the East. While all the movement of Pangaea and North America was taking place, sediments and gravel were steadily eroding from western North America (near present-day Utah and Nevada) and washing out into the shallow sea that covered present-day California.

As North America drifted west the adjacent oceanic crust was thrust downward and beneath the moving continent. The north-south subduction zone was born and for millions of years the oceanic crust continued to slam into the west moving North America continent. Most of the crust slid beneath North America but occasionally a slice of this sedimentary crust would be thrust on the continent's edge. Intermittently, North America would get more land added to its west margin as volcanic islands were scraped onto the coast, a process called accretion. These pieces of accreted land are called exotic terranes and the addition of each terrane to North America took millions of years. One such terrane, the Smartvill complex, contained the gold veins that would bring wealth to the state a 160 million years later. The western edge of North America expanded further to the west and the land we know as California was born piece by piece like waves from the sea.

About 140 million years ago the Sierra Nevada was born. During this period of uplift the accreted terranes and sedimentary layers were twisted folded and squeezed together and rocks changed from one form to another a process called metamorphosis.

As the mountains rose and great pressure metamorphosed California's rocks, the subducted crust melted below due to pressure and contact with the Earth's molten mantle layer. The crust slowly melted from hard rock into magma. Some of the magma rose upwards into the continental crust forming large underground magma chambers. When this magma cooled underground over millions of years granite formed. Millions of years later this granite would be thrust upwards as the mountains we see today. Not all the magma cooled underground, some breached the surface creating volcanoes and fissures, spewing lava of varying types onto land. At this time the Sierra Nevada would look like the present-day Cascade Mountains of Oregon and Washington. Lasting evidence of this volcanic period is common in the area surrounding Devils Postpile. The dark green rocks of Minarets and Ritter Range were created by a caldera that formed during this time.

Beginning 65 million years ago the Sierra Nevada began a long period of erosion. The climate was warm and wet at this time, accelerating both chemical and physical erosion processes. Warm shallow seas lapped at the base of the mountains, rivers carried volcanic and metamorphic rocks and sediments into this shallow sea which is where the Central Valley of California is today.

About 2 million years ago, the Sierra Nevada began rising quite rapidly. The range began tilting westward, uplifting peaks along the eastern edge of elevations comparable to those seen today. The climate became cooler and wetter during these times and as the Sierra Nevada rose into colder elevations, snow fell instead of rain. During the intermittent ice ages, so much snow would accumulate that large glacier formed. Beginning high up in the Ritter Range, glaciers flowed down the Reds Meadow Valley throughout centuries, shaping the valley to its present form. The most recent period has been one of many dramatic and often opposing forces. Volcanoes sent fiery lava east to the sierra's crest, curtains of ice formed along the crest, earthquakes thrusting mountains higher and glaciers grinding mountains into domes. It's within this context that the Devils Postpile formation came to be.

Approximately 80,000 to 100,000 years ago a lava vent spewed hot basaltic lava into the Reds Meadow Valley what is now Upper Soda Springs a few miles north of the Monument. Basalt lava is rich in iron and magnesium and is much hotter than other types of lava. The lava flowed down the valley until it was blocked by a natural dam. The lava began filling the valley behind the dam creating a lava lake 400 feet deep. This depth is uncommon among lava flows and plays a crucial role in the formation of the long columns we see today at Devils Postpile.

As the lava flow ceased, the molten rock began to cool into solid rock. The shallow part of the lava flow would solidify first, with deep parts of lava lake requiring more time to release the massive amounts of stored thermal energy. As the lake of molten soup cooled into solid rock it began to contract. Contraction stresses developed because the cool solid form of basalt has a lesser volume than the hot liquid form. Cracks or joints began to form. Jointing releases internal stress created by the cooling and contraction. This is what formed the columns we see at Devils Postpile. Jointing would have begun at the top, bottom and all around the edges of the lava flow where the lava made direct contact with a cooler surface. The cracks would have extended inwards over time as the more insulated locations within the lava lake finally released enough thermal energy to change from liquid to a solid state.

The Devils Postpile we see today used to be much taller. Erosive forces have been at work during the last 80,000 to 100,000 years carving, shaping and demolishing remnants of the lava flow. Freeze-thaw cycles break apart columns, earthquakes knock columns down to the slope below, the river eats away at pieces that fall into the water. The biggest impact on the Devils Postpile was glaciers. If not for the glaciers excavating the formation the beautiful straight hexagonal columns hidden within the depths of the lava flow would not be seen today. Several glacial periods have occurred since the Postpile was formed, each dug deeper into the dense heavy rock known as basaltic trachyandesite. The last glacial period ended about 15,000 years ago.

It's been years since I've been to Devils Postpile, I am still amazed by this formation, and it is one of my favorite locations. If you are ever close to Mammoth Lakes, you should take the trip you will stand in awe of what the many forces of nature can create.



**UPCOMING ROCK, MINERAL, AND GEM SHOWS****UPCOMING ROCK AND MINERAL SHOWS – SUMMER 2023****June 17, 2023 – Bellflower, CA**

Delvers Gem &amp; Mineral Society

DELVERS PARKING LOT SALE, 14515 Blaine Ave., Bellflower, CA 90706

Hours: 10 AM – 4 PM

Website: <https://delversgemclub.wordpress.com/>**JUNE 23-25, 2023 – LODI, CA****CFMS SHOW AND CONVENTION****LODI GRAPE FESTIVAL GROUNDS, 413 E. LOCKEFORD ST., LODI, CA 95240**

Hours: Friday and Saturday 10 AM – 5 PM, Sunday 10 AM – 4 PM

Educational Exhibits, Speakers

Adults \$6, Kids 12 &amp; under FREE

**July 8-9, 2023 – Culver City, CA**

Culver City Gem and Mineral Society

Culver City Veteran's Memorial Auditorium, 4117 Overland Ave., Culver City, CA 90203

60th Annual Fiesta of Gems – 2023 Theme: Druzy

Hours: Saturday 10 AM – 6 PM, Sunday 10 AM – 5 PM

Free Admission – Free Parking – Free Hourly Drawings

35 Vendors Featuring Minerals, Gems, Jewelry, Fossils, Lapidary &amp; Jewelry making supplies, Books, Etc.

Website: <http://culvercityrocks.org/fiesta/>**August 4, 5 & 6, 2023 – Nipomo, CA**

Orcutt Mineral Society

Nipomo High School, 525 N. Thompson Ave., Nipomo, CA 93444

Hours: Aug 4 &amp; 5 – 10 AM – 5 PM, Aug 6 – 10 AM – 4 PM

The 55th Annual Rockhound Tailgating Rock &amp; Gem Festival

Free Admission and Free Parking

Contact: [nipomocowgirl55@yahoo.com](mailto:nipomocowgirl55@yahoo.com)Website: <http://www.omsinc.org>

# KCMS CLASSIFIEDS

## KCMS is proud to announce the addition of a Classified Ads Section to the Pseudomorph Newsletter!!

Calling on all members who have any items that they want to sell or those looking to buy.

**Rocks, Minerals, Rock Saws, but that's not all!! We will also accept Lawn Equipment, Electronics, Homemade Crafts, etc.**

**The Pseudomorph Classifieds will not be limited to only rock & mineral related items, but to any items members are looking to sale.**

When making a classified ad for the newsletter be sure to include:

- Description of Item
- Asking Price
- Contact Information
- Picture(s)

Pictures are not necessary but will be added if provided. Please send photographs in JPEG (.jpg) format if possible.

Classified Ads for the Pseudomorph are due to the editor no later than the first Thursday of each month, via Email or by U.S. Mail.

*James May, Editor*  
Email [geojim9@hotmail.com](mailto:geojim9@hotmail.com)

If you have any ads, you want added to the next Pseudomorph, please email me the details and I will post.

## Don't Forget the BREAKFAST CLUB

The first Wednesday of each month, year-round, KCMS Members and occasional guests meet at 8:30 AM at Lorene's Coffee shop at 23<sup>rd</sup> and Eye streets in downtown Bakersfield. Everybody is welcome to attend!

*-- Dalia Hernandez*





# KCMS Monthly Meeting

Please join the KCMS at 6:00 p.m. on Thursday, June 15th at the East Bakersfield Church of Christ located at 3500 Bernard Street in Northeast Bakersfield.

We hope you can attend, and visitors are always welcome.



## Kern County Mineral Society

is a Charter Member of the  
**California Federation of Mineralogical Societies**

and is affiliated with the  
**American Federation of Mineralogical Societies**



The Kern County Mineral Society, Inc. was organized in 1935 to promote the study of mineralogy and allied earth sciences, to collect and study minerals and rocks, to study and practice the techniques of jewelry making, to promote good fellowship and good citizenship and to promote education in the earth sciences. Membership dues are \$20 for singles, \$25 for couples.

KCMS WEBSITE: <http://www.kerncountymineralsociety.org/>

## Pseudomorph Subscriptions

*The Pseudomorph* is published 10 times a year (September through June) by Kern County Mineral Society, P.O. Box 12305, Bakersfield, CA, 93389-2305. Subscription included with Membership. Non-members \$5.50 per year, Jan. thru Dec., not prorated.

**KCMS will email a free .pdf subscription to any high school, college, or university student who wishes to receive it.** Just email a request to [geojim9@hotmail.com](mailto:geojim9@hotmail.com)

Articles for *The Pseudomorph* are due to the Editor no later than the first Thursday of each month, via Email, via Facebook, or by US Mail. Please send photographs in JPEG (.jpg) format if possible, and text as Notepad, Word, or other simple text for me to paste and edit.

James May, Editor  
Email [geojim9@hotmail.com](mailto:geojim9@hotmail.com)

Facebook: Kern County Mineral Society

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## KCMS Officers 2023

### President

James May  
[geojim9@hotmail.com](mailto:geojim9@hotmail.com)

### Vice President

Connie Fleishauer

### Secretary

Anita Andersen

### Treasurer

SB

### *Pseudomorph* Editor

James May  
[geojim9@hotmail.com](mailto:geojim9@hotmail.com)

### Federation Director

Bernie Bentsen

### Field Scout

Bernie Bentsen

## Committee Chairs 2023

### Kitchen

Sue Kimbriel

### Scholarship

David Schaad

### Door Hostess

Kay Hevle

### Facebook Editor

Anita Andersen

### Curator

Steve Fleishauer



## FUN, GAMES, & FIELD EXCURSIONS



### JUNE'S MONTH'S MYSTERY SLAB

Here is this month's mystery slab. Please submit your answer to [kerncountymineralsociety@gmail.com](mailto:kerncountymineralsociety@gmail.com) and [geojim9@hotmail.com](mailto:geojim9@hotmail.com). Each month's winner will be placed in a drawing at the end of the year for a special prize. Last month's winner was Anita Andersen who correctly identified the mystery slab as chrysoprase. Awesome work Anita.

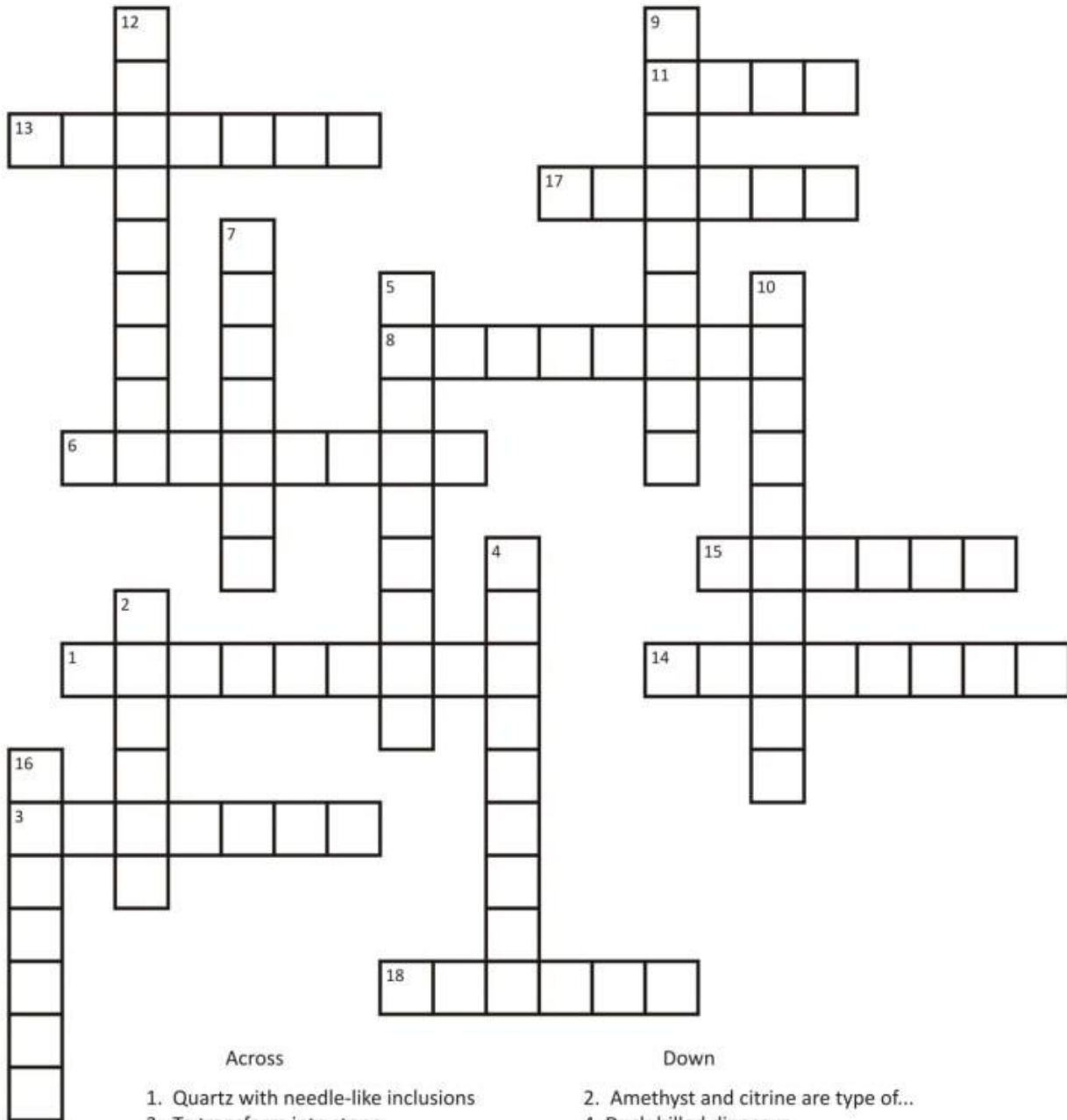


*Mystery Slab Hint:* A metallic lustered oxide mineral. A shiny exterior surface with black undertones. The shimmering effect is caused by aggregate pockets of shiny flakes of the mystery mineral along with mica. Unlike the other common oxide mineral, this one is not considered metallic, and has a characteristic blood red streak.

**To make sure you are credited with the correct answer, please email the Kern County Mineral Society and James (see email addresses above). We would like to keep track of those who get the correct identity of the mystery slab each month.**



**GEOLOGY CROSSWORD PUZZLE**



Across

- 1. Quartz with needle-like inclusions
- 3. To transform into stone
- 6. Age of the fishes
- 8. Madagascar extinct marine mollusc
- 11. Red corundum
- 13. Iceland spar is one type
- 14. Green River Formation common fish fossil
- 15. Remains of a prehistoric organism
- 17. Yellow mineral
- 18. Metal with cubic crystals

Down

- 2. Amethyst and citrine are type of...
- 4. Duck-billed dinosaur
- 5. Azurite's buddy
- 7. Extinct mammal
- 9. Three-lobed exoskeleton owner
- 10. Purple mica
- 12. "Heaven"ly mineral
- 16. Close pack of crystals

[www.virtualmuseumofgeology.com](http://www.virtualmuseumofgeology.com)



Next Page: Beautiful tumbled stones that come out of the tumblers.

