

**Monthly Newsletter of the *Kern County Mineral Society (KCMS)*****President's Message  
James May - KCMS  
President 2022**

As we proceed into the hottest part of the summer in Bakersfield, we can all look to the cooler days of the fall and the upcoming Kern County Fair. We have a lot of planning and preparation to do for the annual extravaganza. Before we get to the fair, let's review some of our accomplishments.

The Rock Auction and Potluck was a great success. The Club made a profit of \$1,179 which will help us out tremendously in maintaining our momentum. We sold 90 items at an average price of \$10.51 per item. Everyone who attended was lucky enough to bring home a few nice items. The Rock Auction has always been one of our top events and real helps sustain the Club and will be helpful with our workshops.

The Rock and Lapidary Shop has really gotten off to a tremendous start. We started back in April and the membership has benefited from being able to use the equipment. David Schaad conducted a workshop on wire wrapping and it was a great to see members making lapidary masterpieces. Also, if you noticed the equipment has been maintained and improved by the efforts of Steve Collett and Steve Fleishauer. They have redesigned a few of the machines to operate more efficiently. Our next workshop is scheduled for July 30<sup>th</sup> from 9 AM till Noon. In conjunction with the workshop, we will be filling grab bags for the Kern County Fair.

Our next General Membership meeting is to be held on Thursday, July 21<sup>st</sup> at 7:00 at the East Bakersfield Church of Christ. Thank you, Jack!

We will have a presentation on various types of jasper and agates. Our August General Membership meeting will concentrate on preparation for the Fair. We will have a presentation on the Display Cases. I would like to encourage each of you to think of ideas on potentially displaying your own rocks, minerals, and gemstones.

I am also pleased to announce our next field trip which is this Saturday to Jalama Beach outside of Lompoc in Santa Barbara County. It is a combined field trip with the San Joaquin Valley Lapidary Society. We plan on having a potluck followed by collecting on the beach. This has been a popular collecting location for various types of jasper, agate, and hopefully whale bone.

Anita and Michael have done a tremendous job working on our KCMS Facebook page and KCMS website. If you have not had a chance to look over the website, please do, as there is a lot of good information, stories, and pictures posted.

I know many of us are concerned about the rising fuel prices and this may have an impact on our field trips. We generally don't go on field trips in the heat of the summer and September has our efforts concentrated on the Fair. The hope is that fuel prices will come down a little going into October and we can pick back up with field trips. --- James



## Upcoming General Membership Meeting

- Thursday, July 21<sup>st</sup> at East Bakersfield Christian Church at 7:00 PM  
Address: 3500 Bernard Street



## The next KCMS Rock and Lapidary Workshop

- Saturday, July 30<sup>th</sup>  
Steve and Connie's House @ 9:00 A.M. till Noon



**Next Field Trip**

**Saturday, July 18<sup>th</sup>**

**Jalama Beach**

**Potluck and Rock Collecting Adventure**

**Meet Bernie at 7:30 AM at Harbor Freight**



## Rock and Lapidary Workshop Pictures from June 25th







## The Adventures of Cinnabar Sam and the Quicksilver Mine



Sam lay awake one coyote-howling evening in Sand Canyon reading an excerpt from an old copy of *California Gem Trails* from 1957. The excerpt mentioned a quicksilver mine that operated outside of the City of Tehachapi prior to the mid-1950's. His dozen or so boxer dogs in the kennels out back were agitated at the coyotes upsetting the silence of the impending darkness. The excerpt read as follows:

*While the mine has been idle for some time and will probably remain so for some time in the future, the indications are that more fair grade cinnabar is available. The elevation is less than 4,000 feet and the vegetation is sparse enough not to hinder walking. The road is not too bad. U.S. 466 is paved, and the turnoff near the railroad loop is gravel, but not much. It is only about forty minutes from Bakersfield and not much more than that from Mojave. There are several buildings on the property; stay away from them. Some vandals have been at work already. Old glory holes, prospects, and dumps are worth a few minutes time. The cinnabar is low grade, but a neophyte will find things for their growing collection. This is part of the Sierra Nevada batholith. Near the mine is a rhyolite dike intruding into the granites of the batholith material. Traces of cinnabar can be found along the small dikes near the large one upon which the mine is resting. There are: granite, granodiorite, diorite, rhyolite, and one unidentified rock in this vicinity that will add to your rock collection if you are interested. Some sediments are present as well as metamorphic and igneous rocks. If you do not have any cinnabar in your collection, here is your opportunity to have some.*

The following morning Sam awoke and began research about this unique location. The excerpt was over sixty years ago so many facts about the mine certainly must have changed. The first question was about the old road - U.S. 466? United States 466 was the main route running from Morro Bay east to Barstow and beyond from 1935 to 1971. Construction of California State Highway 58 was begun in 1964 and ultimately made U.S. 466 an obsolete route. The greatest claim to fame associated with U.S. 466 was over one very infamous accident on September 30<sup>th</sup>, 1955, when James Dean collided his newly acquired Porsche 550 Spyder called "Little Bastard" into the east bound traveling pickup truck of Donald Turnipseed. James Dean died in route to Paso Robles on U.S. 466.

Sam thought, where is the location of the old quicksilver mine if I am unable to use U.S. 466 as a reference guide?

The *railroad loop* is in reference to the Tehachapi Loop and is certainly a famous landmark. The *railroad loop* is a long spiral helix that passes through the Tehachapi Mountains allowing trains to make the grade easier up to and over the Tehachapi Pass. The track rises at a steady two-percent grade that gains seventy-seven feet in a 1,210-foot diameter circle. Any train of at least 3,800 feet in length with a Manifest Shipment of freight cars, passes over itself on the railroad loop that is at least 3,800 feet long passes over itself on the railroad loop which is unique amongst “foamers,” being extreme train enthusiasts.



What is quicksilver? In making liquid mercury, the first requirement is the need to treat a rock rich in the mercury-bearing mineral cinnabar. Cinnabar is technically mercury sulfide (HgS) and is a common ore of mercury. Cinnabar is bright scarlet to brick-red in color and referred to as *vermilion*. It is in the trigonal crystal system and has a hardness of 2.0 to 2.5 on the Mohs Scale of Hardness (you can scratch with fingernail). It leaves a scarlet-colored streak and has a high specific gravity (8.176) both being diagnostic properties of the mineral. Cinnabar generally is found associated with intrusive dikes and hydrothermal vents. When working with collecting or processing cinnabar, take note that it is “toxic” due to high amounts of the element mercury. To a collector, a face mask and gloves are needed and of course washing hands thoroughly when you return home.

Data on the old quicksilver mine shows cinnabar occurring as mineralization having a unique character there. The common rocks of the deposit are granites intruded by rhyolite dikes, the borders of which are sheared and altered to clay. Cinnabar is found in these brecciated and altered zones, where it forms thin crusts on the walls of fractures or fills small veins in breccia.



Sam discovered another clue to determine the location of the quicksilver mine through a series of old photographs taken from the *Tehachapi Loop Newspaper* giving him a glimpse of the workings of the old quicksilver mine in the canyon below Tehachapi. The mine shaft is hidden from view, but the wood frame building used to process the quicksilver is evident and rails that may have been used to move the cinnabar if desired.





Sam scoured his bookshelf for some history on the mine and found an excellent resource that most folks from Tehachapi had certainly read or heard of - *"The Long Road to Tehachapi"* written by Judy Barras on the Centennial birthday of Tehachapi in 1976.

*Quicksilver had been produced in California for several decades, first discovered at the famous Almaden Mine near San Jose. Native Indians there had long used the red earth for body paint, but it was first mined by Mission Fathers who named the deposits after the old Almaden Mine in Spain.*





*In the quicksilver process, rock was ground into two-mash, and with crude oil heating a fire, passed through the burner. By this process the mercury was burned out of the heated rock, and as it condensed was “caught” above flames and held in seventy-five-pound steel flasks. Valued at \$300 each when sold to consumers in Japan, the flasks made their initial journey by wagon and team to the rail siding at Keene, thence by train and ship to that distant land.*

*Within only a few months of its opening, in December 1916 the mine reportedly produced 150 pounds of quicksilver every twenty-four hours. In an era before the invention of the hydraulic drill, the muscle of men freed the rich ore from the tenuous hold of Mother Earth. Two men worked together: one held the piercing drill, while the other swung the heavy hammer, slamming it to the mark, breaking the rock.*

*The property is now owned (ow was owned at the time) by John Broome of Santa Barbara, and the buildings which are visible from the freeway were a development of a more recent lessee, “Bud” Parker told me that although the ore was there, it was easier to transport if from elsewhere and mill it, which was what he did.*

*Cinnabar, mercury, quicksilver. By whatever name, a source of riches, good stories, and many memories to those who knew the short, narrow canyon so well.*

An old Division of Mines and Geology produced a report from the 1950s on the quicksilver mine stated:

*The Walabu mine, about seven miles northwest of Tehachapi, has been the only commercial source of mercury in Kern County. It has yielded about 1,300 flasks of mercury (Baker and Swinney, 1947), probably valued at about \$150,000. The principal periods of production were 1916-20, 1929-31, and 1936-40.*

*Cinnabar (HgS) is the principal mercury-bearing mineral at all the localities in Kern County. It is associated with Tertiary rhyolite dikes in Mesozoic granitic rocks.*

*Development of the Walabu mine was begun in 1916 following the discovery of cinnabar by J.E. Hicks. By the end of 1916, J.E. Hicks and W. N. Cuddleback had recovered 30 flasks of quicksilver from ore treated in a 12-pipe Johnson-McKay retort installed on the property.*

*Mesozoic granite rock is the most common rock in the vicinity of the mine. It is intruded by rhyolite dikes of probable middle to late Tertiary age. The largest dike is about 900 feet long, a maximum of 250 feet wide, trends northeast, and dips steeply northwest. Other dikes within 500 feet of the largest dikes trend northwest and are 10 to 30 feet in average width. The borders of the dikes are sheared and altered to clay. The cinnabar is only in the brecciated and altered zones in rhyolite.*

The land around the old quicksilver mine is off limits to collection and trespassers will be prosecuted by the Kern County Sheriff. Sam wondered who ultimately owned the land. The mystery was solved based on a property acquisition by The Nature Conservancy in early 2022. The land which was owned by developers and cattle ranch was now transferred over to a large globally expansive nonprofit environmental organization. The *Tehachapi Loop Newspaper* reported this acquisition as follows:

*In early 2022, much of the land surrounding the Tehachapi Loop and north of Highway 58 from the Highway 202 to Keene was purchased by The Nature Conservancy (TNC). This 70,000-acre plot of land is their largest and was a donation by the Randall Family. At over 70,000 acres, the Randall Preserve is TNC's largest preserve in California and it positions our organization to realize some of our most ambitious goals in connecting ecosystems across the state.*

*The Tehachapi wildlife corridor is also higher in elevation than surrounding areas, which makes it more climate resilient. The area's savanna and forests range in elevation from 800 to nearly 8,000 feet, sheltering many species with cooler temperatures. Science shows that species that prefer cool weather like blue oak are already moving up through the Tehachapi area. This unique region will be critical as the climate of California changes.*



Sam did his research and felt he had come to a good understanding of the location but the adventurous side in him had taken over. The adventure began as any other adventure does, and although he might risk trespassing on the private land owned by TNC, the idea became an obsession.

The weather was warm, the sun bright, with a gentle Sierra Nevada breeze from the north. Unlike other rockhounding adventures where you can get relatively close to a location with your vehicle, this was going to take a certain amount of hiking. Taking two of his most loyal boxers with him, Sam trended in the direction of the mine for some time anticipating a worst-case scenario but the need to get to the quicksilver mine dominated. It took some hiking to find a location where he could access the site without trespassing. Sam came from the west near the train tracks that run through the town, and he hiked on an old dirt road. It was a bit of a hike, but he had the benefit of time and plenty of water and he had two of his best-behaved boxers along with him for safety.



Sam did wonder how he would find his way across the highway and turns out that there was a concrete covert that was used as a passageway for small animals to safely pass from one side of the highway to the other. There were animal tracks on the soft soil in the passageway and swallow nests dominated the roof. It appeared that this passageway got used frequently by these animals, together with cigarette butts and beer cans and bottles left behind by human species. The next obstacle was a barbed wire fence that was clearly visible from the highway and required a quick maneuvering over and duck for cover. A brisk one-mile hike on a seldom used dirt road led Sam to the old mining road that led directly north to the location. It appeared as if nobody had been on the mine road in some time. Dominating the site was a large wooden structure, weather-beaten from intense sun and steady wind, rain, and snow. It looked like a remnant of an old ghost town. This would have been the building where the quicksilver processing would have occurred. His pair of boxers explored, but Sam stayed clear of building as he did not want to find himself trapped in an old mine shaft along with his acrophobia. Sam was on the lookout for the extensive rhyolite dike cutting through granite and remnants and scars of "old glory holes." Not too difficult considering he knew what to look for. Sam also had a Brunton compass to assist in measuring the strike and dip of the cross-cutting features.

As described appropriately in his research, the edges of the dike had weathered to clay and in some sections of brecciated material Sam saw a tint of *vermillion*. Sam brought along a face mask which he wore when he picked a few pieces from along the edges. Sam did not want to breathe the rock dust that perhaps so many of the miners took in when they were mining the cinnabar. Sam was projected back in time and wondered if they had adverse health effects that way have shortened the lives of the miners. I am sure this is the case as the mine operated well before the days of OSHA. Nothing to write home regarding the cinnabar samples collected but it was the adventure of the journey that brought Sam here.

The sun was beginning to set behind the canyon and a good time to head back the way he came in. Sam would have loved to have made a camp for the night as there was a certain amount of peace to the locality. A week-old liter of boxers had him worried and he knew he must return to his home in Sand Canyon. In a way, it is sad that more people can't visit this place and must resort to such extreme measures to get here. Sam could hear the scurry of small animals and nocturnal critters coming to life. The moon was creeping up from the east and provided him the necessary light to keep me safely on the road. Sam would like to return to this location and perhaps map the dike complex in the canyon, but he doesn't think it will happen any time soon. Sam was able to collect his two neophyte samples of cinnabar mentioned in the old rockhound manual and will store the samples for prosperity. On Sam's hike out, he was shocked to get within 20 feet of a male deer who was eager to watch him as he was to get a good photo image of him as his pair of boxers were exploring up the road.



Sam laid awake again the night following his adventure. He would sleep much better this evening after his long hike to the quicksilver mine. His pair of boxers remained very quiet in the kennel out back considering the miles of exploring and running they accomplished. The others in the kennel took their example and slept quietly.

*Was it worth it?* The adventure and getting to the location certainly were. The sense of accomplishment achieved, and the few neophyte cinnabar samples increased the collection of minerals and rocks that Sam had started years ago. He certainly wouldn't suggest anyone trespass on private property, just the thought of being arrested by the Kern County Sheriff's Department is deterrence enough. In addition, Sam wasn't as nimble climbing over barbed wire fences as he once was. He also was surprised by the lack of good cinnabar specimens. You would think after sixty years of nonoperation of the quicksilver mine, weathering of the *vermillion* rock would have provided a few better samples that could be crafted into cabochons, slabs, or spheres. A few neophyte samples would have to be enough along with a future this section and of course the adventure itself and the consequent stories. Sam fell into a deep sleep and dreamt of the adventures of the Tehachapi quicksilver mine,



Another interesting tidbit about quicksilver mines. Mercury should be stored and transported in iron flasks. This is the way it's been done for centuries. It doesn't amalgamate or wet iron. The "standard flask" is about ten inches tall and contains 76 pounds (34.5kg). Above is an example from the 19th Century - hundreds of thousands of these were used during the California gold rush and (especially) in the silver mills in Virginia City, since they consumed about a pound of mercury for every pound of recovered silver.

The pictures on the following page are those of the rhyolite dike that Sam was lucky enough to encounter and some of the *vermillion* edges that attracted the early settlers of this canyon some hundred plus years ago.









Above: A couple of neophyte cinnabar samples collected by Sam.

Below: A cinnabar cabochon taken from the internet showing what can be made from the material.



In Sam's research, he ran across a passage about The **Vermillion Bird of the South** from Chinese folklore. A mythical creature like no other.

*Only its wings are vermillion or cinnabar. As the vermillion winged bird looks down onto Earth from its station in the stars, it sees the flight must be taken toward Earth and the people upon it must learn to fly in their thoughts and attitudes, to teach and learn, forgive and love. With this flight of minds, the souls can suspend hate into the sky, leaving it there as a reminder to strive for peace upon Earth, leaving the toxicities of hearts and minds there also. Leading us all to healing hearts and tranquility.*



**The End**



## UPCOMING ROCK, MINERAL, AND GEM SHOWS



### UPCOMING ROCK AND MINERAL SHOWS –SUMMER 2022

**August 5-7, 2022, Nipomo, CA**

Orcutt Mineral Society

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

54th Annual Rainbow of Gems Show & Sale – “OMS Rocks the Central Coast”

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

Contact: nipomocowgirl55@yahoo.com

Website: <http://omsinc.org>

**August 6-7, 2022, Roseville, CA**

Roseville Rock Rollers Gem and Mineral Society

@the Grounds, Roebbelen Event Center, 700 Event Center Dr., Roseville, CA 95678

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

Contact email: [gloriarosevillerockrollers@gmail.com](mailto:gloriarosevillerockrollers@gmail.com)

Website: <https://www.rockrollers.com/index.html>

**August 20-21, 2022 – Arcadia, CA**

Pasadena Lapidary Society

“Inspiration Unearthed”, 62nd Annual Tournament of Gems

Arcadia Masonic Center, 50 W. Duarte Rd., Arcadia

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

Contact: Ellen Ferrell 1-727-512-0381

Email: [ellenbf2007@aol.com](mailto:ellenbf2007@aol.com)

**August 20-21, 2022 – Tehachapi, CA**

Tehachapi Valley Gem and Mineral Show

500 East “F” Street, Tehachapi, CA

Hours: 9 AM – 5 PM

Rocks, Minerals, Fossils, Beads, Gifts, Collectables, Gemstones and Jewelry

Dealer inquiries accepted. For information contact Ron Myrick, E-Mail: [travis462@outlook.com](mailto:travis462@outlook.com)

Website: <http://tvgems.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





# KCMS Monthly Meeting

Please join the KCMS at 6:00 p.m. on Thursday, July 21<sup>st</sup> at the East Bakersfield Christian Church 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

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**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  
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Facebook: Kern County Mineral Society

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## KCMS Officers 2022

### President

James May

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### Vice President

Connie Fleishauer

### Secretary

Anita Anderson

### Treasurer

Dennis Huggins

## Board Members 2021

### *Pseudomorph* Editor

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### Curator

Steve Fleishauer

### Federation Director

Bernie Bentsen

### Sergeant at Arms

Dennis Huggins

### Field Scout

Bernie Bentsen

## Committee Chairs 2022

### Kitchen

Sue Kimbriel

### Scholarship

David Schaad

### Door Hostess

Kay Hevle

### Facebook Editor

Anita Anderson



# FUN, GAMES, & FIELD EXCURSIONS



## GUESS THIS MONTH'S MYSTERY CABACHON



Here is this month's mystery slab. Please submit your answer to [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 Connie Fleishauer who correctly identified the slab as Cinnabar. Nice research Connie.

