The Sierra Pelonagram

November 2020

... Member of the California Federation of Mineralogical Society Inc. ...

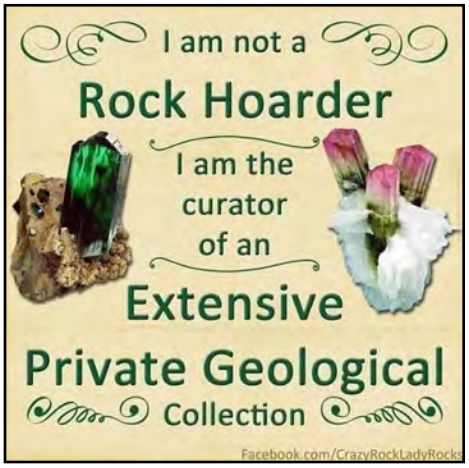
The Sierra Pelona Rock Club is a non-profit organization founded in 1959 with the objective to sponsor activities and promote interest and education in: mineralogy, lapidary, geology, paleontology and related subjects.

Elections

It is that time of year again, Elections! Please think about becoming a board member, it is a great way to stay invested in the SPRC, and we need you! Evelyn Velie will be resigning from the CFMS as our representative at their December meeting. We really need that position filled so we can keep our voices heard. If you are interested in any position and what it entails, Heidi has the procedures, just email her. You should also have a copy that was given to you when you became a member. All positions are for a one-year term (President, Vice-president, Secretary, Treasurer, CFMS representative).

Also, any chairpersons who don't wish to continue their position, please let Heidi know so that can also be put out.

Thanks to you all!



November
Shana Brunes-Ruiz
Frank Humelbaugh
Jack Jenkins

December
Dianne Erskine-Hellrigel
Mark Scott

Officers:

President – Bill Webber
Vice-President – Julie Tinoco
Secretary: Heidi Webber
Treasurer –Shana Brunes-Ruiz
Federation Director (CFMS/AFMS) --Evelyn Velie

Chairpersons:

Claim--Linda Jenkins
Donation Rock Table--Akiko Strathmann
Equipment--Bill Webber
Field Trips – Julie Tinoco
Historian -Open
Hospitality – Ron Rackliffe
Membership – Heidi Webber
Website-- Larry Holt
Pelonagram Publisher, Editor – Heidi Webber
Programs –Tina White
Publicity –Bruce Velie
Sunshine--Brigitte Mazourek

The Sierra Pelona Rock Club, is a member of the California and American Federation of Mineralogical Societies, Inc. (CFMS/AFMS). The general club meetings (Open to the public) are at 7:30 PM, on the 3rd Tuesday of each month at:

The Clubhouse of the Greenbrier
Mobile Estates EAST
21301 Soledad Canyon Rd
Canyon Country, CA 91351

Contact the Club or the Sierra Pelonagram Editor at:
Sierra Pelona Rock Club
P.O. Box 221256
Newhall, Ca. 91322
Or e-mail: hwebber@pacbell.net
Visit the SPRC website www.sierrapelona.com

President's Message

Hi all

So here we sit, still mostly at home, unable to do much as a club, marking time until we can be active again. Hopefully it won't be too many more months, but because we haven't been able to be active for most of this year, the board did decide to cut our dues for the upcoming year. This will cut into our finances a bit, but we will survive and come back stronger than ever.

So hang in there, we will all be meeting in person again before you know it!

Bill Webber
President, SPRC

SPRC Board Meeting
November 3, 2020
Zoom Meeting

The meeting was called to order at 7:10 pm. In attendance were Bill and Heidi Webber, Julie Tinoco, Tina White and Ron Rackliffe. A quorum was met.

Heidi presented the Minutes of the October meeting. Tina motioned to accept the minutes as presented. Julie seconded.

Shana had sent the Treasurer's Report as she still doesn't have reliable internet to be able to attend. There were no questions.

Bill said that elections are coming up for December. Please think about running for a board position, which lasts one year, effective January 1. All board positions are open (President, Vice-president, Secretary, Treasurer, CFMS Representative). As of December, Evelyn Velie will be resigning from her position as CFMS representative as she and Bruce are moving.

Tina said she was going to present the Geology of the Stoddard Wells vicinity for the November General Meeting.

We discussed upcoming dues being due on January 1. We decided that the dues will be reduced to $10 for 2021 because of the restrictions placed on the club due to COVID-19. We still need to collect dues because of on-going expenses but felt we had to give membership a break. Heidi will email membership a more detailed explanation.

Julie made the motion to adjourn/Tina seconded. Meeting adjourned at 8:10 pm,

Respectfully Submitted,

Heidi Webber
Secretary, SPRC

SPRC General Meeting
October 20, 2020
Zoom Meeting

The meeting was called to order at 7:07pm. There were nine members in attendance and one guest, Teri Madsen. Welcome Teri.

Not much has happened because of isolating.

Evelyn Velie said that they are moving to Baxter Village, South Carolina in at the beginning of December. The club needs a representative to the CFMS, our head organization. She will be formally resigning at the December CFMS Zoom Meeting. Thank you so much for your years of service to the board and as our representative to the CFMS.

Julie Tinoco said that she is thinking of a very unofficial day trip to the 4 Corners area, or possibly to Stoddard Wells if anyone wants to meet her there. This is not a club-sponsored trip, there will be no carpooling and social distancing will be in effect. This is intended to be a casual outing for house-weary members only.

The meeting was adjourned at 8 after an interesting program by Evelyn about Biblical Gemstones in Israel and their meanings.

Respectfully Submitted

Heidi Webber,
Secretary, SPRC

Goodbye
Bruce and Evelyn Velie

Bruce and Evelyn joined the club in 2009 and immediately became very active both as members and on various committees and on the board. They are now about to embark on a new adventure in South Carolina to be near family. We wish all the best to them, we know that if there is a wild rock to be found, Evelyn will be the one going after it!

Bruce and Evelyn, have fun in your new life, we will miss you.

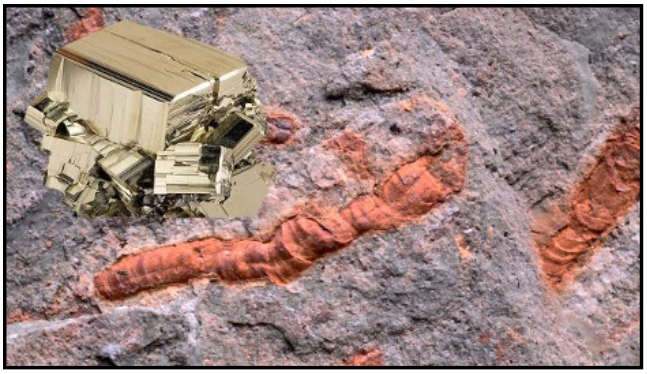


Photo: Tubelike fossils of an animal known as Conotubus hemiannulatus. Credit: Schiffbauer et al.

How 'Worms' End Up in Fool's Gold Fossils

Fool's gold helps explain why many fossils of soft-bodied animals that lived more than 540 million years ago still survive, a new study finds. Understanding the relationship between decay and fossilization will inform future study and help researchers interpret fossils in a new way.

"The vast majority of the fossil record is composed of bones and shells," says James Schiffbauer, assistant professor of geological sciences at the University of Missouri.

"Fossils of soft-bodied animals like worms and jellyfish, however, provide our only views onto the early evolution of animal life. Most hypotheses as to the preservation of these soft tissues focus on passive processes, where normal decay is halted or impeded in some way, such as by sealing off the sediments where the animal is buried," he says.

"Our team is instead detailing a scenario where the actual decay helped 'feed' the process turning the organisms into fossils—in this case, the decay of the organisms played an active role in creating fossils."

Fool's Gold and Wormy Creatures

Schiffbauer studied a type of fossil animal from the Ediacaran Period called Conotubus, which lived more than 540 million years ago. He notes that these fossils are either replicated by, or associated with, pyrite—commonly called fool's gold.

The tiny fossils are tube-shaped and believed to have been composed of substances similar at least in hardness to human fingernails. These fossilized tubes are all that remain of the soft-bodied animals that inhabited them and most likely resembled worms or sea anemone-like animals.

"Most of the animals that had once lived on the Earth—with estimates eclipsing 10 billion species—were never preserved in the fossil record, but in our study we have a spectacular view of a tinier fraction of soft-bodied animals," says Shuhai Xiao, professor of geobiology at Virginia Tech and a coauthor of the study.

"We asked the important questions of how, and under what special conditions, these soft-tissued organisms can escape the fate of complete degradation and be preserved in the rock record."

Schiffbauer and his team performed a sophisticated suite of chemical analyses of these fossils to determine what caused the pyrite to form. They found that the fool's gold on the organisms' outer tube formed when bacteria first began consuming the animal's soft tissues, with the decay actually promoting the formation of pyrite.

"Normally, the earth is good at cleaning up after itself," Schiffbauer says. "In this case, the bacteria that helped break down these organisms also are responsible for preserving them as fossils. As the decay occurred, pyrite began replacing and filling in space within the animal's exoskeleton, preserving them.

"Additionally, we found that this process happened in the space of a few years, perhaps even as low as 12 to 800. Ultimately, these new findings will help scientists to gain a better grasp of why these fossils are preserved, and what features represent the fossilization process versus original biology, so we can better reconstruct the evolutionary tree of life."

The explanation helps to solve the mystery of why about 80 percent of the fossils in the Gaojiashan formation are preserved in three dimensions, with fool's gold around them, while others are preserved in two dimensions in a second process called carbonaceous compression. It seems that, as long as sediments didn't continue to bury the fossils too quickly, the pyrite process could continue. If the fossils buried faster, the compression process took over, creating pancake-flat fossils instead of fossils in three dimensions.

The above story is based on materials provided by University of Missouri.

Fool's Gold

Cubic Crystals of Pyrite Nestled Within a Matrix of Rhodochrosite. From Cassandra Mines, Macedonia Dept, Greece
Credit: Crystalclassics.co.uk

Pyrite is sometimes called Fools Gold because of its similarity in color and shape to Gold. In the old mining days, Pyrite was sometimes mistaken for Gold, as they frequently occur together.

Pyrite occurs in numerous shapes and habits. The smaller crystal aggregates may give off a beautiful glistening effect in light, and the larger crystals may be perfectly formed, including fascinating cubes, penetration twins, and other interesting crystal forms.

Pyrite has the same chemical formula as the rarer mineral Marcasite, but it crystallizes in a different crystal system, thereby classifying it as a separate mineral species.

Pyrite is usually found associated with other sulfides or oxides in quartz veins, sedimentary rock, and metamorphic rock, as well as in coal beds and as a replacement mineral in fossils, but has also been identified in the sclerites of scaly-foot gastropods.

Despite being nicknamed fool's gold, pyrite is sometimes found in association with small quantities of gold.

Pyrite is quite easy to distinguish from gold: pyrite is much lighter, but harder than gold and cannot be scratched with a fingernail or pocket knife.

Pyritization: Organisms may become pyritized when they are in marine sediments saturated with iron sulfides. As organic matter decays it releases sulfide which reacts with dissolved iron in the surrounding waters. Pyrite replaces carbonate shell material due to an undersaturation of carbonate in the surrounding waters.

Pyritized ammonite. From Saratov Russia. Upper Callovian (around 162 million years).
Photo: Leah Luten