

K. Kish
OGMS Editor
P.O. Box 246 Oxnard, Ca.
93032

ROCK BAG



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The Oxnard Gem & Mineral Society is a non-profit organization formed to increase our knowledge in geology, mineralogy and other such related fields in the earth sciences. We classify, cut, grind and polish rocks and minerals for our personal collections and to display at club shows. We learn from each other through club speakers, programs and monthly fieldtrips. We co-operate with other clubs to encourage others to participate in our activity.

The Oxnard Gem & Mineral Society is a member of the State of California Federation of Mineralogical Society and the National Federation of Mineralogical Society.

Meeting held: 1st Wednesday of each month at 7:30 P.M. Potlucks: 6:30 P.M.

Pebble Pups meet each month at 6:00 P.M. prior to the meeting

Place: Performing Arts Center, 800 Hobson Way, Oxnard, CA (Thousand Oaks Room)

Dues: \$15.00 per adult; \$2.00 per junior member (age 12 to 18 years)

OGMS Officers for 2017

President	Donna Knapton
1 st Vice President (Program)	Stephanie Hagiwara
2 nd Vice President (Show)	Diane Cook
3 rd Vice President (Field trips)	Bob Driskell
Recording Secretary	Laura Driskell
Treasurer	Miriam Tetreault
Ways and Means	Larry Knapton

Appointed Officers

Corresponding Secretary	Laura Driskell e-mail:info@oxnardgem.com
Displays/Exhibits	Open
Editor	Karen Kish e-mail:info@oxnardgem.com
Education Director	Donna Knapton e-mail:info:@oxnard.com
Federation Director	John Cook
Historian	open
Hospitality	Janice Albertsen
Librarian	Kathy Scharf
Member at Large	Adrian Ruiz
Membership Secretary	Carolyn Howe
Publicity	Stephanie Hagiwara
Parliamentarian	Laura Driskell
Pebble Pups	Louisa Carey
Refreshments	Candy Marshall
Scholarships	Kay Hara
Sergeant at Arms	Larry Knapton
Webmaster	Stephanie Hagiwara
Shop Steward	Jean pSmith
2017 Show Officers	
Chair	Diane Cook
Publicity	Open
Exhibitors	Open
Vendors	Miriam Tetreault

Classes: Silversmithing & Casting: Nancy Bogart, Jean p-Smith, Kirsten Meeker
 Lapidary, Opal & Wirewrap: Kay Hara, Brett Johnson
 Location: Durley Park, 950 West Hill Street, Oxnard, CA 93030

Editor: All members are encouraged to offer an article of interest or any suggestions as to what their interests are and what they'd like to see in the Rock Bag. Remember it is your bulletin! Articles can be submitted by an e-mail attachment or in writing **by the 3rd Wednesday of the month.** Thanks, Editor

President's Corner

Spring is here and today at least it is a beautiful day outside. Our field trips this month might include some of the beautiful wildflower displays I have been seeing on TV. I have two things of immediate importance to bring up this month.

First of all, we have a member who needs some recognition! Ann Connor did a great service for the club this month. You may not recognize her name right away because she is not usually at the general meetings. Her son, Brett, is one of the Pebble Pups. Ann is the one who made all the arrangements for the "Diamond" trip to the Museum. That was no small thing! It required lots of her personal time, a dozen or so calls to the Museum offices to arrange and rearrange times and dates, names and requirements. Many, many emails later one of the main factors changed at the last minute which was a disappointment along with the fact that the turnout (limited to 15 from the three clubs) only turned out to 6. But may I say those who missed out, lost a really big opportunity! I say this from the "lost out" side. Larry and I both picked up a "bug" at the Ventura show and missed out on our planned participation because of bronchitis, Larry in bed with a 103 temp that day. But I was there when they left at 7:30 Wednesday morning and there when they got back after 6:00 that evening. The rest of us lost out on a great time! And all of it was FREE except for lunch. I heard all the tales of what they saw and cursed the person who passed on these germs! I do hope that someone writes up the trip for the Rockbag! It sounds like one of our best fieldtrips ever! For that we have Ann to thank! Your work on this trip was exceptional. **Thank you Ann, for going above and beyond for the club members.** You are an example of what makes belonging to our organization rewarding to us all!

The second important thing is the new Constitution. I know that sounds boring as all get out but it is important. We (the committee) spent over three years working on this draft. When you look at it you will probably say "How could it take that long?" The Constitution is something that is meant to not change. We spent lots of time discussing job descriptions and trying to bring in the electronic age without limiting things that we can't see coming down the road. We tried to institute procedures for things that have been problems in the past without limiting operations in the future. We will put this in your hands, including a problem that we could not solve, for you to consider any others that you think need to be revised. Please read it over. If you see problems, please take note and let us know. Our original Constitution was written by our elders and been workable till now. We are trying to leave one that will carry through to another generation or two. This may seem like a boring chore, but it is more important and far reaching than you can know.

Donna

Program for the April Meeting:

Join us on April 5th, as Oxnard College Professor Joseph “Manny” Saenz gives us, “An Overview of the Geological Controls of Hydrocarbon Seeps in Santa Maria Basin, Offshore California.” Our local ocean is rich in petroleum and natural gas. We will learn about the offshore Santa Maria Basin that contains two types of hydrocarbon seeps in surficial marine sediments and the water column: active and passive. Active seeps (macroseeps) occur where gas bubbles, pockmarks, gas-vent craters, tar seeps, or bright spots are visible on seismic profiles or side-scan sonar records. This is a fascinating peek at what is bubbling under our local waters.

Stephanie – Program VP

Pebble Pups Program April 5th 2017

The “Birthstone” for this month is Diamond, but we are jumping ahead to October and OPAL!! (For October, I will give a presentation about Diamonds.) I have brought back a special gift from Mexico and thought why not learn all about it. We will look at different types of opal and how it is created in nature, plus, how it gets its color. Come and join in on the fun.

Newcomers always welcome and never go home empty handed.

The meeting will be held in the Thousand Oaks room of the Oxnard Performing Arts Convention Center (800 Hobson Way, Oxnard) the first Wednesday of the month at 6:00pm

Rocks ROCK!
Louisa

The Birthstone for April is Diamond



Source: File:Rough diamond.jpg - <https://en.wikipedia.org>



Source: File:Apollo synthetic diamond.jpg - <https://en.wikipedia.org>

Field Trips

VGMS Paradise Road

, Bob: Ventura club is leading a trip to Paradise Road on the 11th. Go to VGMS website to sign up on www.whoscoming.com.

(VGMS) Cady Mountains

Sat., April 22nd. Tri-club trip lead by Luther Brown & John Cook. Recommended to get to the area on Friday night, as it's a long drive. Agates and jaspers.

(VGMS) Castle Butte/Kramer Junction

Sat., May 13th. Tri-Club trip. Agate, jasper, pink chalcedony, fossil palm wood.

Chuck Borchart here with CGMC. Since I guess Bob Driskell is no longer your clubs field trip leader, I thought I would send this info to you to pass on to your club members. There is a trip planned to Blue Forest Petrified Wood in Wyoming (just out of Kemmmerer). It is being run by Doug True (NFMS & AFMS field trip leader) and is tentatively scheduled for May 24-28, 2017 (dates are actually pretty firm). As soon as he lets me know the dates are set in stone, I will send you more info such as maps, hotel/camping, etc. I went with him last year and this is a great trip if people can make it. He really knows where the good stuff is! (Bob Driskell went with me on that trip, you can talk to him.)

via: Chuck

(Lone Pine Gem & Min. Soc.) Cerro Gordo Mine

June (Date TBD). Multi-club field trip. Copper minerals & jaspers. <http://lpgms.org/field-trips>

(VGMS/OGMS/CGMC) Ventura County Fair –

Entry Days Fair entry days are July 21st – 23rd. Help will be needed with set-up. Display your rocks, minerals & fossils to public. See Diane Cook, VGMS.

**We ask for all members who
have not yet paid their dues
to please do so.
Thanks, Carolyn.**

CONEJO GEM & MINERAL CLUB

43rd Annual Pageant of a Thousand Gems

April 22nd & 23rd 2017

Borchard Park Community Center
190 Reino Rd at Borchard Road, Newbury Park, CA

The Conejo Gem & Mineral Club cordially invites you to be an Exhibitor at our "43rd Annual Pageant of a Thousand Gems" to be held at Borchard Park Community Center. We hope you will be able to join us at our show and encourage you to invite friends and neighbors to attend. Admission and parking is FREE!

There will be club security guards on duty at all times, but the club does not provide insurance coverage or responsibility for the loss or damage to your property or equipment. We will serve dinner at 6:00 p.m. Friday night for all demonstrators, exhibitors and workers. Camping is available and is free.

Set up: Friday, April 21st 4:00 p.m. to 10:00 p.m.
Show: Saturday, April 22nd 10:00 a.m. to 5:00 p.m.
Sunday, April 23rd 10:00 a.m. to 5:00 p.m.

All exhibits must remain on display until the show closes on Sunday at 5:00 p.m. Please fill in the form below and return it to us by March 31, 2017. If you have a special request or need additional information, please call us at 805-494-7734 or 805-358-3035. Thanks!

Deb Sankovich or Diane Grizard
1961 Havenwood Drive 1630 Charmy Ct
Thousand Oaks, CA 91362 Moorpark, CA 93021
805-494-7734 805-358-3035
sankovichdeb@yahoo.com Kevin_and_Diane@msn.com

(Detach on above line and save for your record)

EXHIBITOR _____ PHONE _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

E-MAIL _____ CLUB _____

DO YOU NEED TO BORROW A CASE? YES ___ NO ___ (Limited number available)

WHICH CASE TO BORROW*: "CONEJO" CASE ? ___ OR "NAPA" CASE? _____

BRINGING YOUR OWN: IS YOUR CASE UPRIGHT? ___ FLAT? ___ # OF CASES _____

WIDTH OF CASE: _____ HEIGHT OF CASE: _____ DEPTH OF CASE: _____

TITLES OF EXHIBIT(S) _____

WILL YOU JOIN US FOR DINNER ON FRIDAY NIGHT? YES/NO, HOW MANY? _____

OGMS Library – Book of the Month for April 2017

Title: Kentucky Agate, State Rock and Mineral Treasure of the Commonwealth

Author: Roland L. McIntosh and Warren H. Anderson

Published by: The University Press of Kentucky, 2013

Kentucky Agate is primarily a picture book of an enormous array of the agates found in Kentucky. The photographs are clear and clean against the white background of the book pages making the agates “pop” out at you. There is enough text to provide the reader with a high level background of Kentucky geology, how the agates were formed, and where the agates have been found, but the emphasis is on the photographs.

If you would like to spend a lazy afternoon looking at some amazing pictures of agate and dreaming about going to Kentucky to find your own special treasures, this would be the book for you!

Take a few minutes to look over the OGMS Library at the next regular meeting – Kathy Scharf, OGMS Librarian

TIPS FROM A JEWELER’S BENCH Brad Smith brad@greenheart.com

BEZEL PROBLEMS

When bezel setting a cab that has rather sharp corners, have you ever had problems pushing the metal down at the corners? It's a common problem often causing a wrinkle in your bezel and a grimace on your face. In order for a bezel to capture the stone, the top edge of the bezel must be compressed and become shorter to lay down onto the stone. With a round or oval stone this naturally happens as you push and burnish the bezel. But when setting a stone with corners, the tendency is to push the long sides of the bezel down first. No compression occurs along the sides, and all excess metal is left at the corners. Compressing everything there is difficult. Often the only way to remove the extra metal at the corner is to make a saw cut and fold the two sides in to touch.

If you want a smooth bezel all around the corners, the simple solution is to set the corners of the bezel first. Then push in and burnish the sides. In this way the necessary compression is distributed along the length of all sides and not forced to occur at the corners. With the corners set first, the top edge of the bezel can easily be compressed along the sides.

CHEAPER & BETTER PICKLE

Most jewelers use a granular pickle mixed with water. The active ingredient is sodium bisulfate. This can be purchased from local stores as a common pool chemical used for adjusting the acidity of the water. It's sold under various names, so be sure to check the list of active ingredients for a brand that is 95% or more sodium bisulfate. An added benefit is that the pool chemical is more pure in form than what is sold for jewelry use and does not cause the brown grime often found floating on the top of the pot.

New Class Opportunities

We have some new class opportunities on the horizon!

In Late April we will be holding a two-day casting weekend (Saturday & Sunday) for members only. It will not be a full casting class, but instead will be an opportunity for members to use the club equipment to cast projects that they may want to use for upcoming shows or for projects that they have been wanting to complete.

The class will be available to all Ventura County club members in good standing. You will need to have your dues paid, and have attended at least 2 meetings (not just field trips or Member's Nights) in 2017. If you are interested in attending, please see the details here:

<http://casting-members.eventzilla.net/>

We will also be exploring Men's furnishings in our upcoming Advanced Silver Techniques class. This class will be an opportunity to create some jewelry suitable for gifting to the men in your life. Projects include a bolo tie slide and tips, cuff links and a money clip. Fathers day will be here before you know it! Class starts Monday March 27, and runs 6 weeks.

<http://Mens-furnishings.eventzilla.net/>

The final class session for Beginning silver classes will start April 25 & 26th, and will run through the middle of June. Classes will be posted soon and registration will open for these classes on April 11-12. Check the OGMS website or Facebook for updates.

In further news, Dr. Hara is considering switching his Wire Wrap classes to Friday evenings. We have had lackluster attendance of the Junior Lapidary classes, and switching would free up both Instructor and students to be able to attend field trips. If you have any feedback on this possible change, please let us know at the next general meeting!

Via: Jean PSmith

Meeting Minutes of the OGMS Board Meeting March 8, 2017

Meeting called to order at 7:10 pm, Donna Knapton, presiding. In attendance: Donna Knapton, Larry Knapton, Kathy Scharf, Louisa Carey, Jean pSmith, Stephanie Hagiwara, Miriam Tetreault, Carolyn Howe, Candy Marshall, Brett Johnson, Kay Hara, and Laura Driskell.

Board Meeting Minutes from February were printed in the Rock Bag. Motion by Larry Knapton, to approve Board Minutes as printed; motion seconded, passed.

Officer Reports:

1. Programs, 1st VP, Stephanie: April, Manny Saenz, Oxnard College Geology Professor, on oil seeps.
2. Show, 2nd VP, Diane: Positions are filled for the Show in November. PACC rental is same as last year. Three dealers have signed contracts and paid already. Demonstrator/Dealers will add to the income, as will camping rental.
3. Field Trips, 3rd VP, Bob: Not present. Ventura club is leading a trip to Paradise Road on the 11th. Go to VGMS website to sign up on www.whoscoming.com.
4. Treasurer, Miriam Tetreault: Discussion of bills and deposits. Four bills to be paid. Motion to approve the treasurer's report and pay bills, by Brett Johnson. Motion seconded, approved.
5. Corresponding Secretary: Letter from the Secretary of State for Treasurer to correct a form error. Diane will research it in her records.
6. Membership, Carolyn Howe: We are at about 70 members renewed, including Pebble Pups. She presented new membership applications, which were approved last month, but needed to be signed by Donna.
7. Federation: John reports June CFMS/AFMS show is coming up. The cases at VGMS were reviewed and "judged" upon setup, and Conejo may also have that done at their show. Brett and Diane did not get a large group at the judging class, so they may hold another before the summer show.
8. Education, Donna Knapton: Tri-Club Education Committee third Tuesday of the month, 7 p.m. at Knaptons. A member of the Conejo Club would like to be on the committee if the meetings are held during the day.
9. Library, Kathy Scharf: Needed some supplies, which she purchased. Will review books list to see if she wants to order anything. She questioned what the fine should be if someone doesn't return a book. The Board discussed what the Rules and Regulations state for fines. There are five (5) books checked out currently. Four items were donated to the library in February. Old Rock Bag newsletters need to be scanned for inclusion on the website. Old magazines and scrapbooks need to be scanned if possible. Binders of clippings can go to the shop for instructors to look at. VHS tapes should be looked at and see if any are viable. Brett Johnson donated two field guides to the Barstow area, by Justin Zzyzx.
10. Ways & Means: Earned \$63 for March, total \$243 for the year. No purchases in Tucson, so the profit will be better. Donations of good specimens and material is always accepted.
11. Refreshments: Candy has taken over locker key and will be given the petty cash/kitty for the refreshments. There are volunteers for next month.
12. Pebble Pups: Louisa needs a few orange vests for pups. She may go to the Diamond Exhibit on Monday the 13th as she cannot attend on the 15th.
13. Classes/Shop Steward: Classes are still under way, enrollment is high. Kay is considering moving wire wrap from Saturday mornings to Friday evenings. Jean will be opening enrollment for Silver Casting class. The Member event, will be held 4/29-4/30. Returning student class, on 5/6-5/7. If anyone needs wax to use, come to the shop and collect some. Apply for the Haake Scholarship to get financial assistance for this class. The shop is missing a piece of equipment. Jean will continue to look for it. Lapidary needs one more Nova wheel for a Genie. Both Titans need 100 grit wheels. Waiting for quote to come back, and may be able to pick up at Diamond Pacific in Barstow. The Haake Scholarship is available to the parents of Pebble Pups so they can participate in the junior lapidary class, give applications to Louisa at meetings.
14. Scholarships: Schools are getting ready to award scholarships, and the committee will review applications. Discussion regarding Oxnard College recipients, and making the application more specific so that it goes to the geology/Earth Science students. Stephanie suggests that the club talk to the speaker for April, Oxnard College Geology professor, to get his recommendation for a student.

Old Business: 1. The By-Laws will be emailed out to the Board tonight for final review and comments. After Board review, a copy will be sent to the General Membership. Donna suggested that there be "pro and con" statements, concerning Board of Director voting rights, written by committee members, and included in the Rock Bag, so that members understand what they will be asked to vote on at the next General business meeting. She will write the "pro" statement, and asked for Bob Driskell, the committee chair, to write the "con" statement.

New Business: None.

Announcements: Next board meeting: April 12, 2017.
Motion for Adjournment 8:57 pm. Motion seconded, approved.

Respectfully submitted, Laura Driskell, Recording Secretary, March 8, 2017

Minutes of the OGMS General Meeting, March 1, 2017

Meeting called to order at 7:30 pm, Donna Knapton, presiding.

Sergeant-At-Arms, Bob Driskell, led Pledge of Allegiance.

Hospitality: We had 3 adult guests, and Pebble Pups meeting was cancelled.

1st VP, Programs: Stephanie introduced Steve Mulqueen, on the Bruno and Opal Benson (VGMS) collection of slides, digitized by VGMS members.

Some of the slides have been around since the 40's, when the Ventura Club started. According to Steve, the "Golden Age" of rockhounding started after World War II, and continued through the 1970's.

Travel and exploration expanded during the mid 1940's, when automobiles and fuel were plentiful and inexpensive. The deserts and highways were wide open for travel. Military surplus Jeeps and equipment were easy to find, and cheap. The slides were of Bruno and Opal leading field trips in Southern California, and included many of the founding members of OGMS.

Refreshments by Jennifer Haley, Bonnie Thaanum, and Carolyn Howe. Thank you!

March Refreshments: Candy Marshall and Carolyn Howe.

Recording Secretary: February Meeting Minutes were printed in the Rock Bag. Miriam Tetreault moved to approve the February minutes as printed. Motion seconded, passed.

Corresponding Sec: Mail is on the back table for perusal.

2nd VP, Show: VGMS Show is on the first full weekend of March; the Conejo Show in April. The 2017 CFMS/AFMS Show is in Ventura, in June. Exhibitor forms are available.

3rd VP, Field trips: Bob had no trips planned, but the Ventura club has trips listed on his calendar.

Treasurer: We are solvent.

Membership: Dues are due for the year. The rosters will be out at the April meeting.

Library: Kathy has the library is out. We have new donations of DVDs (Mineral Explorers on PBS) and books that may be checked out.

Classes: Jean reported that Silver classes are going well; Wire wrap continues. New silver class coming up will be on men's furnishings (cuff links, bola ties, money clips, etc.) There will be a silver casting class coming up soon. Anyone who doesn't have enough wax to work with can pick some up during a current class. A member class for a day will be offered.

Education: Donna Knapton, Tri-Club Education Committee meets on the 3rd Tuesday of the month.

Ways & Means: Door prizes for the guests. Badge Drawing winner is Jennifer Haley. Adrian Ruiz won the Bonus drawing.

Scholarships: Still looking for a recipient. The Haake Scholarship has been applied to one student. It is still available, as a one-time scholarship to members only.

Old Business:

1. Constitution and By-Laws will be emailed out to the general members for review. Please read over and prepare for a discussion and vote at the April meeting.
2. Field Trip for Pebble Pups and parents to go to the L.A. Natural History Museum is organized. There is a limit of 15 persons and a deposit of \$10 each will be taken to reserve spots. (The deposit will be returned upon attendance.) The tour is on the 15th of March. Deadline is March 13th to make your reservation. Put your auto license information on the memo line of your check if you are going to drive and would like free parking.
3. Vests are being made and some are available now.

New Business: Conejo Gem & Mineral Show will be on April 22-23. Set up is on Friday the 21st after 5 p.m.

Next General Meeting, March 5, 2017, at 7:30 p.m. Pebble Pups meet at 6 p.m.

Board Meeting next Wednesday, 7:00 p.m.

Donna Knapton Adjourned the meeting at 9:18 pm.

Respectfully submitted, Laura Driskell, Recording Secretary, March 1, 2017.

Application for Lou & Marie Haake Scholarship

Mr./Mrs./Ms. _____

E-Mail address: _____ Phone: _____

Mailing address: _____

Are you a member in good standing with O.G.M.S. at this time? Yes () No () When does the session you are applying for start? _____

How much is the Tuition for the class you are applying for? _____

Have you had any other training in the field you are applying for, such as classes? _____

Have you done service to O.G.M.S.? Example: Held office, Worked on Committees, Volunteered on work days (Show, getting Durley ready, rock boxes, etc.)

What would you like us to know when considering your application? _____

Lou & Marie Haake Scholarship Guidelines

- Applicant must be a current OGMS member in good standing.
- Submit a written application form to the nominating committee in a timely manner. Deadlines will be put forth for each scholarship to be awarded and end at midnight of the due date.
- Shall not have any formal training in the class they are applying for (self-taught is the exception). Entry level classes **only** are qualified.
- Scholarship candidates are aware there are chemicals, metals, large machinery, lack of ramps etc. Due to limited finances of O.G.M.S. we cannot accommodate special needs. Applicant is required to sign our Liability Waiver. Applicant must become familiar with all the class safety rules and the general shop rules.
- We will only consider application for one scholarship per term, per person.
- At the discretion of the nominating committee, the scholarship may be awarded to multiple applicants in one scholarship term.
- The instructor of the pertinent class will have the final say in the entry and continued attendance of any individual into their class.
- Disruptive behavior can be cause for dismissal at the determination of the instructor.
- The scholarship winner will forfeit the remainder of the class if two consecutive classes are missed, without extenuating circumstances.
- Service to the club will be a consideration in the applicant's favor, which would include: holding an office or committee obligation or regular attendance at club "work" activities such as the show and/or show preparation.
- If the successful applicant cannot attend the class session applied for they forfeit the scholarship and must reapply for any later session. The scholarship may not be transferred to another term or person by the applicant.

HOW TO TELL THE DIFFERENCE BETWEEN GOLD AND PYRITE

BY KAT KOCH

Gold panning has been on my bucket list for a few years now. In the last 2 weeks I have won a set of 3 pans and a packet of soil that is guaranteed to have gold in it. I am definitely getting the feeling I am to satisfy this item on my bucket list as soon as the weather improves.

Now my big question is: I am on the river's edge and I am wet, cold and excited as I have sparkles in the bottom of my pan. Is it gold or pyrite flakes?

Here is what friends have told me and what I have read on the internet. Without zooming in, it can be tough to tell the difference, especially when the sun is shining and the water makes every thing glisten. Gold and pyrite are vastly different minerals, but because of their similar colors they easily confused. Beginning prospectors look in the bottom of their gold pan and see a lot of shiny yellow color and think they have hit the mother lode! Learning how to identify both gold and pyrite is one of the first skills that any gold prospector needs to learn. The structure, color, hardness and specific gravities are all indicators that will help to differential between the two.

1. **GRAVITY** When panning out material, gold will settle and concentrate in the bottom of the pan, but pyrite will move freely in the pan. You will often see them at the surface mixed in with the lighter sands and gravels. Proper gold panning will easily separate the two, as the small specks of pyrite will wash out of the pan while the denser gold particles will be retained.
2. **COLOR** The color is also a good indicator between the two. While gold obviously has a golden color, pyrite generally has a brassy and shiny coloration. It has shiny surfaces that catch the reflection of the sun. If you move your gold pan in a circular motion in the sunlight, gold will maintain a consistent color, while pyrite will flash in the sunlight. Use a rare earth magnet (a normal magnet will not do the job) to remove the black sand.
3. **HARDNESS** If you take and separate the particles out, their different hardness will be readily apparent. Take the tip of a pocket knife, or a sharp point and poke a flake. Pyrite is much harder, so if you poke it with a sharp tip it will shatter into several pieces. Gold on the other hand is a very soft and malleable metal. It can be poked or smashed flat without breaking apart.
4. **STRUCTURE** The structure of each mineral is quite different, although this can be difficult to see if you are only dealing with small flakes at the bottom of your gold pan. If the pieces are large enough, you will notice that most pyrite is generally structured in cubic and octahedron formations. Most gold nuggets and flakes that are found in rivers and creeks are polished and worn fairly smooth. Good luck gold panning!

Via: **Golden Spike G & M Society**