HILL and GULLY PAYDIRT

Palmdale Gem and Mineral Club, Inc

P. O. Box 900279 Palmdale, CA 93590

Volume 24 Issue 5 pgmc@palmdalegemandmineral.org May 2018

The President's Message

Jennifer Martin

"April showers, bring May flowers" or so the saying goes. We didn't get many showers in April, but a little rain is better than none. It was a beautiful day on April 14th for our second workshop of the year. Our guest enjoyed herself while matching up minerals and products in Don McClung's educational box. We chatted for a long while and she shared her interest in jewelry making. That will be the focus of the next workshop. Please note we are entertaining the idea of changing our meeting day and time. You can find the specifics in this newsletter in this newsletter. Have a wonderful May. Hope to see you all at the next meeting on the 21st!

Possible General Meeting day of week and time change.

It has been brought to our attention that if we have our monthly meeting at Cultural Center during regular business hours, we can do so at no charge.

Therefore two options are: The fourth Wednesday from either at 5:00 or 6:00pm or the fourth Friday at 4:00pm. We would like feedback from all members as to your preference. Please let us know in person, by phone, email, or text 661-623-2975. A decision will be made at the May general meeting.

Editor's Note: We have to be finished with the meetings before 6:00 PM or charges will apply...

News and Information About Geology http://geology.com/rocks/

Birthdays

Allison Poulter

Margaret Letsinger 15th
Deena Chacanaca 16th

Your Birthstone is **Emerald** for Happiness and your flower is Lily of the Valley for Purity.

Anniversaries

None were Reported

Enjoy your day to the fullest and continue throughout the year with happiness and good health.
Have a great day and many more!

SUNSHINE

Susy Martin

Nothing to report.
All is well!
All is Sunshine and Lollipops!

Federation Report

Don George

The 79th CFMS Convention will be held in conjunction with the Feather River Lapidary & Mineral Society Show on September 15 & 16, at the Silver Dollar Fairgrounds, 2357 Fair Street, Chico, CA. The CFMS Business Meetings and Awards Banquet will be held on Saturday, 9/15.

Camp Paradise - WEEK ONE: August 26 - September 1, 2018
CLASS UPDATE: Note that the PMC Clay and Fused Glass Classes will be held as follows: PMC Clay - Week 1; Fused Glass - Week 2

Camp Paradise - WEEK TWO: September 2 - 8, 2018
CLASS UPDATE: Note that the PMC Clay and Fused Glass Classes will be held as follows: PMC Clay - Week 1; Fused Glass - Week 2

Application can be downloaded at www.amfed.org

May CFMS Newsletter

Sept. 15 & 16 79th CFMS Convention with the Feather River Lapidary & Mineral Society Show,
Silver Dollar Fairgrounds - 2357 Fair Street, Chico, CA.
More about CFMS Convention & FRLMS Show

ZZYZX Dust Camera-Near Real Time

Palmdale Gem and Mineral Club Belongs to and Supports these Rockhound Organizations

Deadline for articles for **June** Hill & Gully Pay Dirt is **June 1, 2018**

MEETINGS

Social Meetings

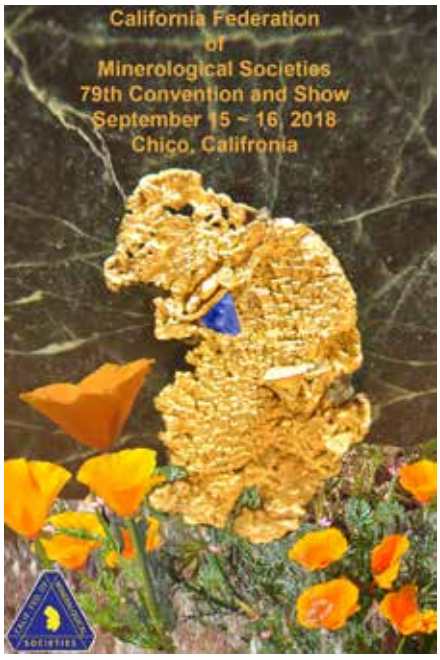
The 4th Monday of the month unless otherwise noted

May 21, 2018
Meeting Starts at 7:00 PM
Palmdale Cultural Center

June 18, 2018
Meeting Starts at 7:00 PM
Palmdale Cultural Center

July 23, 2018
Meeting Starts at 7:00 PM
Palmdale Cultural Center

August
Dark (AV Fair)



REFRESHMENTS

Claire Martin

Don McClung

PALMDALE GEM & MINERAL CLUB
GENERAL MEETING MINUTES

LARRY CHIMBOLE CULTURAL CENTER
38500 SIERRA HIGHWAY
PALMDALE, CALIFORNIA
Monday, April 23, 2017

Meeting called to order at 7:10pm.

Flag Salute led by Madeline Martin

Minutes of the non-meeting were published in the April newsletter. Motion to accept all unapproved minutes as of the April newsletter made by Allison Poulter; second by Don George. Motion passed.

Correspondence was all passed out appropriately.

Federation Report: Don said his report will appear in the newsletter.

Birthdays: Andy Poulter, who was not in attendance.

Hospitality: 7 members, 2 pebble pups. No drawings were held due to low attendance.

Sunshine: ALL ARE WELL AS FAR AS WE KNOW.

Displays: Susy showed her silver smithing project from Zzyzx, Cheri showed the bracelet she made.

Program: Susy talked about how she made the project she displayed.
Refreshments

Meeting adjourned at 7:45pm

Fourteenth AG Day for PGMC

Palmdale High School
May 4, 2018

Palmdale Gem and Mineral Club celebrates its 14th year of support to the Palmdale High School's AG Day program. This year over 120 1st Graders attended the event where they are introduced to the PHS Agricultural Program where they learn about personal health, farm animals like goats and rabbits, Bee Keeping and basic geology and Rockhounding. This year PGMC had a hands on display of Igneous, Sedimentary and Metamorphic Rocks. Samples included Obsidian, Scoria, Pumice, Conglomerate, Cave Onyx, Petrified Wood, Coquina, Talc, Actinolite, Drusy Quartz and the California State Rock Serpentine. The First Graders were also given their first Rock Collection with a sample of Apache Tear Obsidian, Petrified Wood and a piece of tumbled agate.

This year PGMC Members included Don McClung, Chris Martin, John and Susy Martin who inspired the young students with their knowledge of Rocks and Minerals.

April workshop

8 Members and one guest came by and strategized on the AV Fair competition and booth items we are going to have available for purchase. Simple wire-wrapped pendents were created from fire agates poilished on the Genie. These pendents will be getting cord or chains to finish them off. We also discussed enhancing our amethyst pieces we will have for sale. Members worked cabochons that could be entered into the fair as single items or part of a personal full case. Our guest was interested in a jewelry making workshop that will be scheduled soon.

TID-BITS

THINGS YOU CAN DO FOR THE CLUB THIS YEAR

1. Call someone you haven't seen at meetings lately
2. Volunteer to present a program. (**Share your Knowledge**)
3. **Send your editor some news. (Still Waiting for some news!)**
4. Come to each meeting and **bring a guest**, and/or a member who cannot drive.
5. Come to the meeting ready to help others learn and **allow others to listen**
6. ***Consider accepting a Committee Chairmanship - Contact Jennifer Martin***

Palmdale Gem and Mineral Club Website www.palmdalegemandmineral.org

Suggestions For Tumbling

By W. G. LUNDSTRUM
12500 Berea Road, Cleveland 11, Ohio
Reprinted from Lapidary Journal February 1954

In this article the author promotes some interesting ideas with regard to tumbling that are revolutionary indeed. Surely several investigators are going to try them and we would like to publish the results of their experiments. The author is an old friend, whose business is selling mining machinery to mines all over the world and there is scarcely a corner of it he has not visited. He has written several articles for the Journal.

It might be well to preface this discussion with two remarks that will qualify the balance of the paper. First, the writer has yet to tumble his first gem stone. Second, he has tumbled several hundred thousand tons of rocks in a professional capacity. In explanation, this tumbling was in the process of ore reduction but the process differs only in the fact that it was continuous rather than a batch process and the end product was in the smaller mesh sizes suitable for further recovery processes. It might be added that every ore testing laboratory makes use of the batch system in preparing ores for further testing and these mills can be bought from the supply houses. However, they will be rather expensive for the average amateur.

In a discussion of equipment there are two items of primary importance, the design of the mill and the speed at which it is run. In operation there are two general types of mill (excluding the rod or tube mills which are not applicable) — the cylindrical mill and the conical mill. The first, as the name implies, is a cylinder and long experience has dictated that its length should not be more than twice the diameter. The conical mill is usually constructed with a short steep cone at one end, a relatively short cylindrical center section and a fairly long conical end section. The theory of the conical mill is that a natural segregation takes place in the mill with the smaller rocks and grinding media gravitating to the smaller diameter of the cone, thus producing a less violent action on small sizes. Mills are always round, never odd shapes, such as hexagons etc.

Laboratory batch mills usually have smooth interiors while the larger continuous production mills almost always have lifters of some type. These lifters are raised projections running the length of the mill and help to elevate the pulp load when the mill rotates. It is my opinion that lifters are not needed in gem tumbling.
The critical speed of a mill is easily calculated, critical speed being that at which the charge will centrifuge or cling to the mill through its entire revolution. This formula is C equals 54.19 divided by the square root of r, where "C" is the critical speed and "r' is the diameter of the mill in feet. in practice, mills are run at anything from about 60% to 90% of this speed, the average probably being around 75-85%. The speed will somewhat depend on the action desired in the charge.

At speeds approaching the critical the action of the charge will be what is called "cataracting." This indicates that the leading edge of the charge on the rising side of the mill is carried to the point where it is thrown or dropped to the following edge of the charge. This is the speed the writer would consider optimum for the, early stages of baroque production.

At lower speeds the action changes from cataracting to 'cascading" where the charge is actually tumbled so that a slipping action is induced within the charge itself. This is the speed for polishing.

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The writer notes that in previous discussions of tumbling very little mention is made of any grinding media other than the usual grits and some pieces of broken grinding wheels, The grinding wheel pieces are a step in the right direction but my guess is that the grit has very little effect in the early stages. Actual reduction of surface is desired and this can only be obtained efficiently by impact — friction is for polishing. As impact will depend on velocity and mass it can be deduced that the very light grits will have neither and so will do little effective work.

Ore reduction mills make use of round steel or cast iron balls for reduction and it would seem that a similar media would be cheaper and much faster for baroque work. Old ball bearings would be idea!, The maximum size will probably be a matter of experiment but my guess would be half to three quarters of an inch depending on the hardness of the material being tumbled. Incidentally how can anyone expect good results tumbling materials of greatly varying hardness in the same batch? I think I would start with a ball charge equal to about one-third of the mill capacity and an equal amount of rock with water to cover, or a little more.
In making up a ball charge it should be noted that a full charge of about half inch balls will not grind well. The charge should be perhaps half of the maximum size with the balance made up of graduated smaller sizes. Wh using a ball charge I think I wo eliminate grit entirely in the early stages. It would certainly have some effect but I do not think its usefulness would be equal to its detrimental effect on the ball charge. It would seem reasonable- to think that the entire tumbling operation, down as far as the final polish, could he carried out without the use of any grit at all.

Having carried out the initial tumbling, at speeds approaching the critical, I would now drop the speed to cascading. In this operation a fine grit is probably indicated. Personally I would experiment with a charge of lead shot at this point on the theory that the shot would charge themselves with grit and furnish the mass and impact necessary. it's only a guess but it sounds like a good one, (A lot of things look good on paper!)

Pulp densities in the mill will certainly have some effect on the grinding action but I would carry them on the thin side, Ore reduction mills usually work with a fairly thick pulp but this is done for a purpose that does not enter into a baroque tumbling operation. A thin pulp will induce a more active charge and speed up the grinding.

Various additives to the charge will probably be helpful. A dispersive media to keep the sludge suspended is indicated. A detergent may be useful, al though the grinding and polishing actions being purely mechanical the place of the detergent is doubtful. At any rate it will not harm anything.

In summary the writer suggests:. in initial grinding at speeds approaching critical with a graduated ball charge and with or without grit; polishing at lower cascading speeds with a ball charge and with a fine grit; such additives as the individual operator desires and keep the pulp density on the thin side.

Unfortunately I live in a city apartment and spend a great deal of my time on the road and so I have had no opportunity to put my beautiful theories into practice. I offer them for what they are worth and I do hope someone will try them and let me know how they work out. I can assure you that at least the theory is based on what I was taught at a leading mining school and on several years experience "tumbling" rocks for a living.

We have a new website and
Email Address
www.palmdalegemandmineral.org pgmc@palmdalegemandmineral.org


HOLY COW, WE'RE 80 NOW!
ANTELOPE VALLEY
FAIR
& ALFALFA FESTIVAL
AUG. 17 - 26, 2018
Presented by IBEW LOCAL 11 & NECA LOS ANGELES
FOLLOW US:
AVFAIR.COM

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Palmdale, California 93590

H.E.L.P. ELIMINATE LITTER PLEASE

Up Coming Shows

June 8 - 10: LA HABRA, CA
North Orange County Gem & Mineral Society
La Habra Community Center
101 W. La Habra Blvd.
Hours: Fri 5 - 8; Sat & Sun 10 - 5
Contact: Armando Perdoza, (909) 455-6800
Email: forestandsun@yahoo.com
Website: www.nocgms.com

June 23 - 24: CULVER CITY, CA
Culver City Rock & Mineral Club
Veterans Memorial Auditorium
4117 Overland Blvd
Hours: Sat 10 - 6; Sun 10 - 5
Contact: Janice Metz, (310) 850-4398
Email: janicemtz@yahoo.com
Website: www.culvercityrocks.org

CFMS CLUB
SHOWS LISTING

Established 1957

August 3 - 5: NIPOMO, CA
Orcutt Mineral Society
Nipomo High School
525 Thompson Avenue
Hours: Fri-Sat 10 - 5, Sun 10 -4
Email: sylviandon@cs.com
Website: www.omsinc.org

October 13 - 14: TRONA, CA
Searles Lake Gem & Mineral Society
Gem Show Building
13337 Main Street
Hours: Sat 7:30 - 5; Sun 7:30 - 4
Email: slgms@iwvisp.com
www1.iwvisp.com/tronagemclub