

“CUTTING REMARKS”

The Official Publication of the Old Pueblo Lapidary Club
520-323-9154

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Please join us **April 13th** at
9 am for the monthly
meeting. There is an
optional social hour that
begins at 8 am followed by
an educational program that
begins at 9 am, followed by
the meeting. Visitors are
always welcome!



Articles or news to be included in the *Cutting Remarks* should be emailed to your Editor, Mike DeMeritt (silverlininggemstones@gmail.com), or feel free to call him at 520-203-8430. Submission deadline is the 20th of each month. Thanks!

THE PREZ SEZ by John Poole



Spring has sprung - things are warming up, and the flowers and weeds are coming to life! A few of our winter visitors/members are headed North. The shop labs are still busy; some days, if you don't arrive at opening time, you may not find a spot to allow your creative juices to flow! Still, new members are popping in and signing up. It's great to see people enjoying OUR club!

The new metal storage shed is up after two full days of bolting, screwing, and even some —! Thanks to the able volunteers Woodrow Beck, Dennis Murphy, Pete Peterson, and myself.

At the TGMS Show during the big Gem Show we had over 20 school teachers from the area and around the country sign up for OPLC's educational box of rocks and minerals. Shiela Powell, our Junior Education Chairperson, is well on her way to filling

those requests. She is still in need of an assistant or two. This is a great opportunity for those wanting to volunteer to help from time to time.

The Pima County Fair is coming up, and Murray Hiller will give us a full update at the April 13th meeting. Think about allowing OPLC to display some of the great things you have created at the club. This helps people visualize what they could accomplish at our facility if they were members. I have done it for several years and the security was always fine. (Editor's Note: There is no *selling* of materials allowed at the Pima County Fairgrounds within our booth constraints.)

- John

WELCOME NEW MEMBERS



**Rachael Ball
Marc Benoit
Gladys Craig
Arnoldo Francis
Chuck Gallego
Shirley Gallego
Sarah Goggin
Julius Gordon
Greg Grimm
Mike Hall
Corrine Hennessey**

**John Hennessey
Linus Keating
Anita Moore
Bruce Moore
Charles Moore
Patsy Moore
Kai Rowe
Kathleen Rowe
Margaret Schreifels
Joyce Zamelis**

PRIOR MONTH'S MEETING MINUTES... Twink Monrad, Secretary



We had a lighter than usual attendance at the meeting due to 20 of our members attending the Silverbell Mine field trip in conjunction with TGMS.

Jean Barkley announced that our program for the day would be Show and Tell and have various members talk about the 2013 Tucson Gem and Mineral Show. There were reports of nice drusy cabochons at Days Inn, and great slabs and good deals on saw blades at Kino/TEP park. Some enjoyed the booths selling flat laps and other lapidary equipment. One member stated that he thought the TGMS/OPLC booths were the best. Another member said good rough was hard to find. It was again noted that Diamond Pacific is celebrating 40 years in business and they donated a Genie to our Club which is now installed in our lapidary room. A thank you letter and plaque was presented to the company in person by John Poole at the Gem Show. On our Show and Tell table were samples of opal, azurite, meteorites, obsidian faceted into jewelry, bead jewelry and different slabs.

BUSINESS MEETING BROUGHT TO ORDER:

Our next meeting on April 13th Jean will show a 50 minute DVD called Agates Up Close which features gorgeous close up photos of agates with combing audio describing the intricate structure of the mineral. The DVD was obtained from the Rocky Mountain Federation of Mineralogical Societies.

FACETING SEMINAR AND HOB NOB

REPORT: It was held Feb. 8th and 9th:

Lorraine Demerly thanked Murray Hiller for being available during the faceting seminar and the Hob Nob as he opened and closed the building/grounds and stayed during the events. The seminar and Hob Nob were very successful. There were 70 present for the seminar, and 82 at the Hob Nob. After expenses there was a \$200 profit for the Club. Diana Hara, Chairperson of the event, read a list of the numerous club

volunteers which made it happen. John Poole thanked all for helping and for participating in the faceting contests.

New members present: Anita and Bruce Moore and Margaret Schreifels. Bruce said they found out about OPLC at the Gem Show booth.

There were no February minutes as the Club did not meet.

The treasurer's report was submitted and filed for audit.

Education: Sheila Powell will be made aware of teachers who signed up to receive rock samples for schools.

Kitchen: Pat McMullen said the next kitchen event will be the November Silent Auction.

Library/Historian: Twink Monrad reported the library is being used.

Security: Ron Davidson reported all is well.

Silent Auction: Dan Harmsen says plans going perfectly

Refreshments: Norma Lackow thanked Diane Braswell and Karen Phill. Refreshments for May and after that are needed, please call Norma to sign up at 742-7561.

Volunteers are always needed to do things such as yard work and general clean up, members should help as they can.

NEW BUSINESS:

John Poole reported that the Board has voted that all Business Meetings will be held the second Saturday of **each** month beginning in 2014. There is too much Club business to take care of, even in February. This means that there will a meeting in February during the gem show and the meeting in March will be held on the second Saturday of the month, not the first Saturday.

Meeting Minutes cont'd top of next page.....

.....Meeting Minutes cont'd from prior page

The Board also voted to purchase and construct a 10' x 12' metal shed in the parking lot in which can be stored things that are cluttering up the hallway and other areas of the Club. The goal is completion by April 1st as that is the date of the large trash pickup. Volunteers needed for this project.

Two lead monitors were announced: Mike DeMeritt will be lead in the lapidary room and John Poole in the silverroom. The leads will set up schedules for maintenance and keep tabs on the other monitors.

PIMA COUNTY FAIR OPLC BOOTH:

Murray Hiller is once again chairing this. He has

signup sheets for daily volunteers in the kitchen. Murray asked for a volunteer to help coordinate the displays which will be in the cabinets at the Fair. Workers get free entry and parking at the Fair when they are scheduled.

MEMBER CARDS/BADGES: All members should pick up their cards/badges so the Club does not have to store them.

Mike DeMeritt (newsletter and lab monitor) will be on vacation March 15-28. Dennis Murphy offered to sub for him in the lapidary room.

Raffle was held, and Diana Braswell won the door prize.

The meeting was adjourned.

Twink Monrad, Secretary

APRIL SHOP TIPS

This month I'm going to do another "talk around the shop"-type shop tips. Basically, I will relate some good ideas and tips concerning problems members are currently having with various materials and techniques.

Ethiopian Opal. Opal from the Wegel Tena area north of Addis Ababa, Ethiopia (commonly known as *Welo Opal* or *Ethiopian Opal*) is showing great promise as a new gemstone since its discovery in 2009. The only bad news is that it "behaves" in quite a different fashion from most typical opals, and this has caused some consternation with lapidarists. Most of the material is "hydrophane", which means it has a high affinity for water. Try licking your finger and touching a Welo opal - most material will actually stick to your finger! This means Welo opal is fairly porous, so beware of skin oils and colored diamond pastes around this stone (as well as colored polishes like "Zam")! Luckily, the quality of the fire typically makes up for these shortcomings, and Welo opal is far less expensive than other opals (at least for now!) Some Welo will crack when first exposed to water, so soak your stones for a week or two before cutting to weed out problems. Welo opal

is the only opal that seems to lose color when wet; for this reason, it is best to orient the stone dry under a single 100-watt bulb. Mark the orientation, because after you start cutting, the opal is likely to lose color until it is dry again! Be sure to dry occasionally between steps to check for orientation and new fractures. Most opals are quite heat-sensitive, but Welo takes it to extremes - dopping stones with wax can be problematic, to say the least. A good trick is to dop with aliphatic resin glue (Elmer's-type; I use Elmer's wood glue...). The glue is water-soluble, so coat the glue join with clear fingernail polish afterwards to ward the water away. Another alternative is dop-waxing your wooden dop, letting it cool slightly, and depressing your stone in the wax. Then remove the stone, and re-dop with the aforementioned Elmer's glue/fingernail polish combination suggested above. Another problem is that much of the material available is heavily crazed. Good news here is that the market seems to be fairly accepting of stabilized Welo opal - for the most part, stabilized cabs seem to sell at 1/3 - 1/2 the value of their natural counterparts (with materials such as turquoise, the market is far more fickle!) I have personally experimented with many different forms of stabilization, and have found that the best seems

to be good old Opticon! Much of the crazing won't disappear, but the opal will stay solid in cutting. I recommend resin-bonded diamond wheels for polishing. If you use pads, use only diamond spray - as mentioned before, colored polishes may change the base color of the opal! I've certainly made them sound finicky, but in truth, these opals are well worth the time and energy to cut, and produce beautiful stones.

Fracture-sealing. Most cutters here at our club are familiar with fracture-sealing agates and jaspers with so-called "superglues", but some don't know about the better grades of superglue available, and some neophytes aren't familiar at all! Do you have what would be a superb cab, save that big, ugly fracture right across the center? No worries - seal that fracture with some good-grade cyanoacrylate, and often your problems are solved! The best grades are available at hobby stores and are used in the construction of large-scale flying model aircraft. In particular, Pacer Technologies "Zap" line of cyanoacrylate superglues are excellent for our purposes. The glues come in a variety of viscosities, from instant-set (sets in a few seconds) through thicker and more viscous versions requiring as many as a few minutes to fully set. These thicker versions are very good for "gap-filling" - especially useful in larger fractures. There are also accelerators available that instantly set the glue after being sprayed over the glue. I recommend trying the thinnest version possible; after treatment, if the fracture isn't filled well enough, try stepping up one viscosity level. I personally shop Hobby Barn at Kolb and 22nd, but any hobby shop that deals in flying model airplanes will work. These glues are also excellent for dopping - many professional cab-cutters use the anodized-aluminum "sticks" that work very well with cyanoacrylates. I use them nearly exclusively for faceting, and have never had any problems. If things get tricky, dop your stone with wax first, but pull apart before the stone sticks (thus making a mold of the dop wax), and finish with a cyanoacrylate bond. Heat

softens the bond enough to easily transfer, and with problem stones, there is a de-bonder available. Be warned - cyanoacrylates bond exceptionally quickly and with amazing adhesion! Fingers glued together are best released by slowly flexing and peeling apart - and you will lose a layer of skin or two! (After using cyanoacrylates for any length of time, this will happen to you! This especially applies to the faster-bonding versions, which are incredibly "watery" - the precise reason they penetrate so well into fractures in our gem materials!) Despite their inherent problems, the results of using cyanoacrylates for fracture-sealing make the difficulties well worthwhile!

Flat-Lapping with curved-wheel machines. Yes, we started with something of an oxymoron here! Truthfully, the only way to achieve a perfectly flat, polished surface is with a flat lap or faceting machine (or a flat lap on the end of a cabochon machine...) However, a reasonably polished flat surface is obtainable on a typical cabochon machine. Unfortunately, it won't come easily, and the more scratched the surface you are starting with, the more work it will take to get there. The best way I have found is to *very gently* rest the "cab" on the wheel, and sweep the stone in a circular motion. It is OK to allow the stone to pass the edge of the wheel (the right and left margins) as you make your circles (the lack of pressure exerted on the cab won't allow much, if any, gouging of the surface...) Maintain this *exceptionally light pressure* throughout all steps. Each step will take far longer than usual due to the lack of pressure (and on hard jaspers and agates will test your patience...) Be certain to remove *all* scratches before proceeding to the next grit step. After lots of patient grinding and polishing, you should be rewarded with a quite-decent (and fairly flat!) piece of material. Congratulations - you have advanced enough in the lapidary arts to use a machine for a purpose other than that which it was designed for!

-Written by Mike DeMeritt, April 2013

APRIL GEMSTONE: DIAMOND

April's birthstone is nothing short of nature's most spectacular gemstone - the ever-loved and revered *diamond*. Diamond is among the so-called "native elements" - it is composed entirely of pure Carbon, and is thus a polymorph of graphite. Graphite is the stable form under low pressure-temperature conditions, diamond under high pressure-temperature conditions. This pair of polymorphs represents the largest contrast in mineralogy with respect to crystal structures and physical properties. In diamond, every C atom is tetrahedrally bonded to four other atoms with a covalent bond. In consequence, all of the atoms have their outermost electron shells completed, and this provides the structural explanation for the extreme hardness of diamond. Crystals are common, and often occur with curved faces. Twinned crystals on {111} (any of the four tetrahedral planes) can occur. It has perfect cleavage on these same planes - despite the extreme hardness, it is easily cleaved along any of the {111} planes. Diamond is brittle. It has a Moh's hardness of 10.0 (the hardest on the scale), and a density of typically 3.50. Diamonds are colorless to yellowish, also brownish or grayish, and more rarely pink, red, green, or blue; and can be black owing to inclusions (typically graphite). It has adamantine luster, and is transparent to translucent. Very high refractive index and remarkably strong dispersion are the optical properties that cause the famous "fire" (sparkle), often enhanced by various faceted cuts in gem diamonds. *Bort* is industrial-grade diamond used for abrasives and sawblades (such as we cutters appreciate!); *carbonado* is a cryptocrystalline (very fine-grained) variety of diamond. Bort and carbonado are usually black or grey (though bort may be of other colors), and neither is used for gemstones.



Exceptional natural-colored diamond group

Diamond occurs as scattered crystals in kimberlites, which are ultrabasic rocks having their origin in the upper parts of the Earth's mantle. At this depth, the pressures and temperatures are suitable for the crystallization of diamonds. It is also found in secondary deposits in sediments formed by the erosion of primary diamond-bearing rocks. In these deposits diamonds have survived the processes of weathering and transport owing to their great hardness and chemical resistance. The diamonds are usually concentrated in certain beds because of their relatively high density. Most natural diamonds come from such occurrences.



Unsorted rough diamond crystals

Diamonds are found all across the globe, and important deposits occur in Australia; Canada; Brazil; India (including the famous water-clear Golconda stones); Russia; and even in the USA - Crater of Diamonds National Park in Arkansas gives up many diamonds every year to those willing to go dig for them! African deposits are too numerous to list, but include Sierra Leone (known for the infamous "blood diamonds"), the diamond beach sands of Namibia, and perhaps the most famous find of all - South Africa's Kimberley Hole, the diamond mine which Cecil Rhodes took control of, and started the

diamond-monopolizing and marketing behemoth known today as DeBeer's. It may surprise you to discover that diamonds aren't typically as rare as most of the gem materials we facet today, but are worth far more, thanks mostly to DeBeer's ruthless production, stockpiling, and marketing of these fairly common stones.

- *Written/Compiled by Mike DeMeritt, April 2013*

President John Poole and Murray Hiller would like to remind the membership to bring to the April meeting any cut stones, finished jewelry, lapidary projects, or anything you would like displayed at our booth at the upcoming County Fair! Thanks, everybody!

Look for points in common which are not points of similarity - it is thus that the poet can say a swallow stabs the sky, and turns the sparrow into a dagger.

George Braque

OPLC SHIRTS

Don't forget that there are OPLC T-shirts for sale in both long and short-sleeved versions! Long-sleeved shirts are \$15, and short-sleeved shirts are \$12. What a bargain! And all proceeds benefit the club. Be sure to show your appreciation and pick one (or two!) up!

Thanks, everybody!



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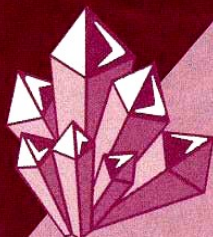
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MONEY SAVING DISCOUNTS

- **DAH Rock Shop** - 10% on most items. See ad in this issue. 520-323-0781
3401 Dodge Blvd, Tucson
- **Colorwright** - 520-623-3874 Web address: <http://www.color-wright.com/>, **MAILING ADDRESS:** 1520 S Desert Crest Dr., Tucson, AZ 85713. Amount of discount depends on item(s) being purchased.
- **Jay's of Tucson** - 30% discount excluding orange tag items, sterling silver sheet and wire. 520-323-1123 (corner of Speedway & Swan)
4627 E Speedway, Tucson
- **Jed's Rock Shop** - 20% on all items. 520-882-6044 - **6275 N Sandario Rd, Tucson**
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- **Kent's Tools** - 10% 520-624-8098 - **133 E Grant Road, Tucson**
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- **Arizona Lapidary** - 10% discount for OPLC members. See ad in this issue. 520-399-6641
4699 E Pima St, Tucson

DON'T FORGET

Please don't forget to continue to bring in **YOUR** (or anyone else's for that matter) aluminum cans to the Club for recycling. Your contribution would be greatly appreciated to help add \$'s to the Club's treasury. **Thanks!**

Rate Schedule for Advertisements - - - Ad Sizes & Prices

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Dave Arens 749-2413

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Bob O'Donnell 886-0384 (Chairperson)

Shiela Powell 578-1976

Al Romey 325-7263

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Twink Monrad 297-9454

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Gretchen Arnaiz 747-1511

Sheila Powell 578-1976

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Twink Monrad 297-9454

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Wayne Klement 954-6298

SECURITY

Ron Davidson 749-3157

SILENT AUCTION

Dan Harmsen 721-8452

WEEKLY WORKSHOP SCHEDULE Phone 323-9154

Mondays

1PM - 4PM **Faceting Guild** (Exp. Facetors Only)
Monitor - Paul Head 296-0331

1PM - 4PM **Silversmith Lab**
Monitor - Lou Akerman 290-6968

6PM - 9PM **Beginning Faceting**
Monitor - Earl Zoeller 886-3518

Tuesdays

9AM - Noon **Cabbing***
Monitor - Mike DeMeritt 203-8430

9AM - Noon **Silversmithing Lab**
Monitor - John Poole 777-5588

10AM - 1PM **Rock Sawing**
Monitor - Jim Baker 886-2126

1PM - 4PM **Faceting***
Monitor - Mike DeMeritt 203-8430

6PM - 9PM **Silversmithing**
Monitor - Billy Bob Riley 225-9060

Wednesdays

6PM - 9PM **Beginning Casting**
Monitor - Chuck Lundstrom 577-6446

6PM - 9PM **Cabbing**
Monitor - Keith Haubert 784-8283

6PM - 9PM **Silversmithing Lab**
Monitor - Bill Cascio 638-8144

6PM - 9PM **Faceting***
Monitor—Billy Bob Riley 225-9060

Thursdays

10AM - 1PM **Rock Sawing**
(BY APPOINTMENT ONLY)
Monitor - Jim Baker 886-2126

Fridays

9AM - 12PM **Cabbing**
Monitor - Danny Harmsen 721-8452
**(LAST LAB MAY 10th FOR DAN HARMSSEN,
THEN MIKE DEMERITT WILL MONITOR)**

Saturdays

8AM - 12PM **Rock Sawing**
Monitor - Jim Griffin
10AM - 3PM **Silversmithing**
Monitor - Terry Cox 296-4949
10AM - 3PM **Cabbing**
Monitor - Billy Bob Riley 225-9060

*** INSTRUCTION PROVIDED AS AVAILABLE,
MAY REQUIRE DOUBLE-PUNCHED
HOURS**



Barbara Alrick - Rock & Gem Magazines, Petrified Wood, Wyoming rock book

To donate to OPLC, just see or contact Dan Harmsen. at 721-8452.

Old Pueblo Lapidary Club
 (Cutting Remarks - Apr 2013)
 3118 N. Dale
 Tucson, AZ 85712
 (520) 323-9154

OPLC Membership Application - Please Print

Name1 _____ Name 2 _____ Date _____

Local Address _____

City _____ State ____ Zip Code _____ Phone number (____) _____

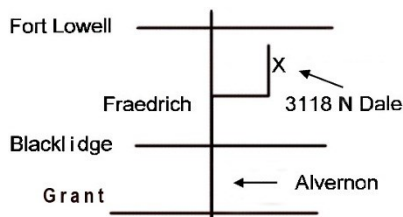
Email address _____ Summer Dates: From _____ To _____

Summer Address _____

City _____ State _____ Zip Code _____

Type of membership:	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Annual Renewals
Single Member	\$25.00	\$20.00	\$15.00	\$10.00	\$20.00
Couple (same address)	\$35.00	\$27.00	\$22.00	\$15.00	\$25.00
Junior	\$12.50	\$10.00	\$7.50	\$5.00	\$10.00

Mail to: Membership Chairperson, Old Pueblo Lapidary Club, 3118 N. Dale, Tucson, AZ 85712



The Business Meetings are held on the 2nd Saturday of each month. A pre-meeting social hour (except for the December meeting) is at 8:00 a.m., followed by an educational program, and ends with the monthly meeting. Visitors are most welcome.