

Pleasant Oaks Gem & Mineral Club of Dallas, TX

Chips and Chatter

April 2015
Vol. 49, Issue 3



1st Place, 2014 SCFMS Mini-Bulletin
1st Place, 2014 AFMS Mini-Bulletin

Member of
SCFMS



Affiliated with
AFMS



Feature Articles

April's Birthstone, Diamon.....	4
Earth's Most Common Mineral	5

Monthly Columns

Minutes	2
President's Message.....	2

Notices

Meeting	1, 6
METROPLEX Clubs	6
Show Calendar	3

Federation Information

AFMS Endowment Fund Raffle	2
Safety Matters – Bad Hair Days	5
SCFMS / AFMS Show Information.....	3

Copyright Information

This issue of the Chips and Chatter is copyright © by Don Shurtz. Unless otherwise noted, permission granted for non-commercial reproduction of articles provided they remain essentially intact and credit is given to the author and original source. Where noted, the author retains the copyright and must be contacted for permission to reproduce the article. All articles may also be used as reference provided citation is given.

Purpose

The Pleasant Oaks Gem and Mineral Club of Dallas is organized for charitable and educational purposes to promote interest in the various earth sciences, particularly those hobbies dealing with the art of cutting and polishing gemstones, the science of gems, minerals and metal crafts, as well as their related fields.

Monthly Meeting

Our next meeting will be Thursday, April 2nd at 7:30 PM at the Garland Women's Activities Building. We will have a special guest speaker, Dr. Daniel W. Moulton, Ph.D., author of "Texas Nature and Environmental Centers Guide"

VISITORS ARE ALWAYS WELCOME

Club Officers for 2015

President: Ling Shurtz
1st VP, Programs: Open
2nd VP, Field Trips: Open
Secretary: Lee Elms
Treasurer: Del Grady
Editor: Don Shurtz
E-mail: don.shurtz@gmail.com,
l.shurtz@gmail.com

VISIT OUR AWARD WINNING WEB SITE TO
VIEW THE CHIPS AND CHATTER IN COLOR.

www.pogmc.org

President's Message

Ling Shurtz, Pleasant Oaks Gem and Mineral Club of Dallas

For our April meeting we will have a special guest speaker, Dr. Daniel W. Moulton, Ph.D., author of "Texas Nature and Environmental Centers Guide". Plan to be there and bring a couple of friends. The International Gem and Jewelry Show (IGEM or INTERGEM) will be 24 – 26 April. We will again have a club booth in exchange for helping with set up. Set up will be Wednesday, 22 April at Market Hall. Hopefully in May we can talk Del into doing Chip Inlay – a "Hands On" activity originally scheduled for our March meeting.

Minutes of the March 5th 2015 Meeting

There are no minutes for March as our March Meeting was canceled due to icy roads.

AFMS Endowment Fund Raffle

Don Shurtz, Pleasant Oaks Gem and Mineral Club of Dallas

The AFMS Endowment Fund raffle drawing is generally held at the AFMS Awards Banquet – part of the AFMS Convention. This year the AMFS Convention will be in Austin from October 23 – 25. A lot of raffle tickets are sold at the Convention, so a lot of winners will be from the SCFMS. However, even if you do not plan to go to the Convention, you can still purchase tickets for the raffle. Our SCFMS coordinator is Catherine Rouchon. Tickets are \$5.00 each or 5 tickets for \$20.00. You can contact Catherine at rouchonc@starband.net. Write her at 5845 Winchester Lane, Clinton, LA 70722, or phone her at 225-683-9264.

I would encourage you to go on-line and look through the recent AFMS newsletters to see the items being raffled this year. (<http://www.amfed.org/news/default.htm>). Here is a summary and a sample of pictured items of some of the 2015 raffle prizes:

1. A native copper piece and stock certificate donated by Pam Hecht (WMF)
2. A Howelite and Onyx Agate and Necklace and matching earrings donated by Sharon Rogow (CFMS)
3. A large agatized Coral Head (Withlacoochee Coral) donated by the Suncoast G&MS (SFMS)
4. A fossilized fish (*Phareodus Encaustus*) donated by J.C. and Donna Moore (MWF)
5. A Tampa Bay Coral (Geode) donated by Barbara Sky (MWF)
6. A framed Fossil Fish (*Diplomystus*) and Willow Leaf fossil donated by Richard Jaeger (RMFMS)
7. An agate bolo donated by Cynthia Payne (EFMLS)
8. A Calcite with Celestine specimen from Sonora, Mexico donated by Steve and Carolyn Weinberger (EFMLS)
9. A pair of Jade Fruits with Jade Leaves donated by Cynthia Payne (EFMLS)
10. A Sterling Silver Necklace with Variscite Pendant donated by Cynthia Payne (EFMLS)
11. An Owl etched on Verdite from Namibia donated by Cynthia Payne (EFMLS)
12. A Stellerite Specimen for Kazakhstan donated by Steve and Carolyn Weinberger (EFMLS)
13. A Gold Brachiated Red Jasper Pendent set in Silver donated by Betty Cain (RMFMS)
14. A trio of Ocean Jasper Eggs donated by Jean and Matt Charsky (EFMLS)



Expect more prizes to be donated, so the odds of winning something nice is good right now and will improve!

Show Calendar - Upcoming Show Dates

Apr 10 – 12, Northwest Federation, Ogden, UT

Apr 11-12, Abilene, TX, Central Texas G&MS, Abilene Civic Cntr., kmcdaniel23@suddenlink.net, rockclub.txol.net

Apr 11-12, Siloam Springs, AR, NW Arkansas G&MS, Community Bldg, www.nwarockhounds.org

Apr 16 -19, Alpine, TX, Chihuahua G&MS, Alpine Civic Center, jbrueske@sbcglobal.net

Apr 24 – 26, Dallas, TX, International Gem & Jewelry Show, Inc., Dallas Market Hall,
<http://www.intergem.com/shows/>

Apr 25 – 26, Waco, TX, Waco G&MC, Extraco Events Cntr, babydocmac@aol.com

May 2 – 3, Lubbock, TX, Lubbock G&MS, Lubbock Civic Cntr., walt@lubbockremandmineral.org,
www.lubbockgemandmineral.org

May 2-3, Waco, TX, Waco G&MC, Extraco Events Cntr, babydocmac@aol.com,

May 9, Arlington, TX, Annual Swap Meet, 1408 Gibbons Rd., www.agemclub.com

May 23 – 24, Ft. Worth, TX, Ft. Worth G&MS, Will Rogers Memorial Cntr.

May 23 – 24, Midwest Federation, Wheaton, IL

Jun 12 – 15, California Federation, Lodi, CA

Jun 13-14, Grapevine, TX, Arlington G&MC, Grapevine Conv. Cntr, www.agemclub.org

Jun 19-21, Carlsbad, NM, Carlsbad G&MS, Living Desert Zoo and State Park, information@carlsbadgms.org

Jul 16 – 18, Rocky Mountain Federation, Cody, WY

Aug 08 – 09, Baton Rouge, LA, Baton Rouge G&MS, Fraternal Order of Police

Aug 14-15, Tahlequah, OK, Tahlequah R&MS, Rockhoundsally@aol.com, tramsok.webs.com

Aug 15 – 16, Bossier City, LA, ARK-LA-TEX G&MS, Bossier City Civic Cntr., www.larockclub.com

Aug 22-23, Mountain Home, AR, Ozark Earth Science GM&FC, www.ozarkearthscience.org/news.htm

Aug 22 – 23, Jasper, TX, Pine Country G&MS, Events Cntr

Sep 26 – 27, Dallas, TX, Dallas G&MS, Restiol Expo Cntr

Oct 10 – 11, Temple, TX, Tri-City G&MS, Mayborn Civic Cntr.

23-25 Oct 2015 – Austin G&MS show, SCFMS Convention, and AFMS Convention

Nov 21-22, Mesquite, TX, Dallas G&MS, Mesquite Rodeo Cntr Exhibit Hall, www.dallasgemandmineral.org

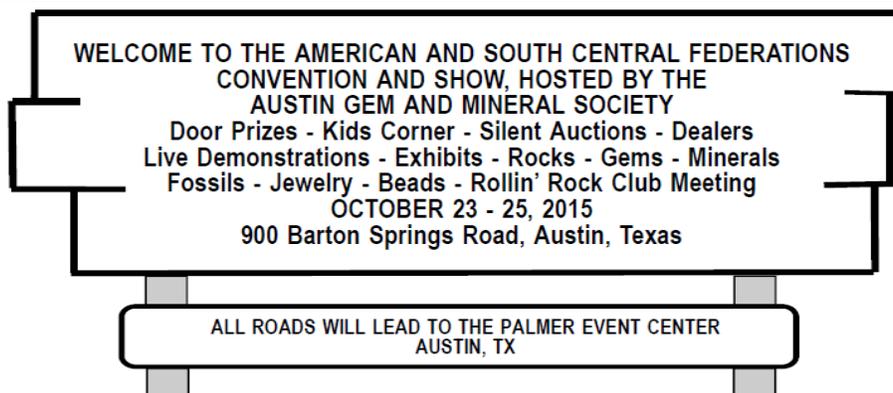
Dec 4-6, El Paso, TX, El Paso M&GS, El Maida Auditorium, gemcenter@aol.com

Ref:

December 2014 – January 2015 AFMS Newsletter

November / December 2014 SCFMS Newsletter

Rock & Gem Show Calendar, <http://www.rockngem.com/show-dates-display/?ShowState=ALL>



April's Birthstone, Diamond

Don Shurtz, Pleasant Oaks Gem and Mineral Club of Dallas

Diamond, the April birthstone, is formed from pure Carbon (C). Carbon is abundant in the earth's crust, the atmosphere, and in the earth's crust. Carbon is the 4th most abundant material in the cosmos and 15th most abundant in the earth's crust. Carbon is found in over 300 minerals, frequently as a carbonate radical (for example, azurite and malachite which are copper carbonates). Carbon, in its pure, solid form, it is either graphite or diamond. Diamond is generally found in octahedral crystalline habit and is the hardest known natural material having a Mohs hardness scale rating of 10. When we think about diamonds we normally think about clear diamonds. We normally think of the value of a diamond as determined by the 4 Cs – the carat weight of the piece, the cut (symmetry, polish, etc.), color (how close to being colorless), and clarity (absence of inclusions, cracks, etc.). However, color can be an enhancement to diamonds. Diamonds come in different colors; in order from most common to rarest they are yellow, brown, clear, blue, black, pink, orange, purple, and red. Thus, all other factors being equal (carat, cut, and clarity), a red diamond is much more rare and considerably more valuable than a clear diamond.



Diamonds are formed deep in the earth's crust where the pressure and temperature are high. They are generally formed at depths between 87 and 113 miles in the earth's mantle below a continental plate. Special volcanoes which extend deep into the crust to transport the material to the surface but stop their eruption before they have ejected large quantities of material upon the surface are required to bring diamonds close to the surface. These volcanoes are only found in areas where the earth's crust is thick and stable. The diamonds are not formed in the magma (generally kimberlite or lamproite); the magma is simply an elevator to bring the diamonds up towards the surface.

The temperature and pressure conditions to form diamonds are also favorable in some meteorite strikes. Unfortunately, only very small diamonds are formed during those meteorite strikes that do create diamonds. An example is the Popigai crater in Russia. The crater is the 4th largest impact crater on earth with a diameter of just over 60 miles. The crater was formed about 35 million years ago. The impact changed the graphite that existed in the ground into diamonds within about an 8 mile radius of the center of the impact. It is estimated that there are trillions of carats of diamonds formed by this meteorite strike. Most of the diamonds are less than a 10th of an inch in diameter with a few being up to 0.4 inches in diameter. Russia claims the mines can supply the world's need for industrial diamonds for the next 3,000 years. However, the mines are in northern Siberia near the Arctic Circle. They are difficult to reach and the mining is arduous due to the environment. In the end it may turn out that it is cheaper to produce synthetic industrial diamonds rather than try to mine them at the Popigai crater.

The diamond market is controlled by only a few companies. DeBeers controlled most of the diamond market in the 20th Century. While DeBeers remains a major player in the diamond market, they have significantly reduced their controlling interest.

The majority of diamonds come from Central and South Africa. Other countries with a significant diamond production include India, Russia, Canada, Brazil, and Australia. Some diamonds are found in the United States. The Crater of Diamonds state park in Arkansas is open to the public for mining diamonds. Other states where diamonds have been found include Colorado, Wyoming, and Montana.

The first report of a synthetic diamond being created was in 1879, but it wasn't until the 1950s that a repeatable process for creating synthetic diamonds was demonstrated. Synthetic diamonds are generally produced by the High Pressure High Temperature (HPHT) or the Chemical Vapor Deposition (CVD) processes. The overwhelming majority of synthetic diamonds are produced for industrial use. Most gem quality synthetic diamonds are made for colored (blue, green, red) due to the cost of making gem quality synthetic diamonds. Diamond simulants are generally either Cubic Zirconia or Moissanite, both synthetically produced stones. It is relatively easy to differentiate between a diamond simulant and a true diamond by measuring the thermal conductivity (diamond being an excellent thermal conductor), but differentiating a synthetic from a natural diamond is much harder requiring microscopic optical examination.

Ref:

Wikipedia, <http://en.wikipedia.org/wiki/Diamond>

American Gem Society, <http://www.americangemsociety.org/april-birthstone>

Picture from Wikimedia Commons, photo by Mario Sarto, licensed under Creative Commons Attribution-Share Alike 3.0 Unported

Safety Matters – Bad Hair Days

Ellery Borow, AMFS Safety Chair
From the April, 2015 AFMS Newsletter

Is a bad hair day such a difficult thing? Or, might it be more of an attitude thing? Could a bad hair day be an opportunity to change something in one's life – a different hat, a different hoodie, a different hair style, a different attitude?

Look at firemen and firewomen – theirs is a difficult and stressful job. They do, from time to time, rescue a kitty stuck in a tree. However, usually they respond to disasters, difficult situations, stressful times, and all manner of instances that tax their abilities. Working under those conditions for prolonged periods of time are bound to test one's intestinal fortitude and challenge one to one's wits ends, even on occasion, to the verge of mental health issues. Many first responders face similar issues. What does one do to keep their wits and well being intact? Well, there are many solutions to the problem. One of the solutions relates to one's attitude. As simple a thing as a positive attitude can make a difference. Think of a serious situation of a house fire. While one would, of course, always wish for no damage, no property loss, no injuries, seldom is that the case. A positive attitude could be... "Well, the garage was a total loss, but we saved the house" or "We couldn't save the house, but we got the whole family and all the pets out safely." The positive attitude of what did go right can be a mental health life saver. While this description is grossly over simplified – having a positive attitude is not.

Rockhound safety matters are thankfully seldom life threatening in scope. Yes, we often dwell on the negative – lacerations, watching field trip members for signs of angina pectoris (chest pains), contusions, foreign bodies in one's eye, broken bones, chemical burns, situations which might cause hearing loss, reminding show helpers to mind their limits because one wants to trigger an arrhythmia! How

does one maintains a positive attitude with all these safety concerns at every club function? Where is the positive side? Well, the positive side to all manner of safety issues is ...all the negatives!

First let me explain. When a negative, say an abrasion is prevented, that is a good thing. When a laceration is prevented – that is good! When any potential problem is addressed before it rises to the level of an actual accident, the potential negative becomes a positive. If one stresses the positive aspects of prevention, the positive aspects of being pro-active when it comes to safety or the positive aspects of being prepared in our rock, mineral, and fossil clubs, there are more good feelings generated than when one has to deal with the aforementioned lacerations, etc.

Putting safety matters in the best light possible such as by stressing the small expense of a pair of safety glasses versus the doctors careful removal of a foreign body from the eye, has advantages. Putting safety matters in a positive light can play a part in creating a good attitude. Framing safety matters into a prevention versus treatment issue can offer positive reinforcement of good behavior.

With safety matters being a part of every club meeting, show, picnic, field trip, club function etc., having a positive attitude can make all the difference in helping others find their own positive attitude.

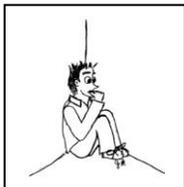
Now, I had a bad hair day for six days in a row. I think, however, in the overall mix of things, I have more important things to worry about. Still, I think a new hat is in order!

Be safe...your safety matters

The Earth's Most Common Mineral

Don Shurtz, Pleasant Oaks Gem and Mineral Club of Dallas

When asked, most people would respond that Quartz (SiO_2) is the earth's most common mineral, and they would be correct if we limited the question to just the earth's crust. However, the crust is really just a thin outer layer of the earth ranging from 20 to 40 miles thick. Scientists have only recently given a name to the earth's most common mineral. It is silicate perovskite, now named "Bridgmanite". It is found in the earth's mantle at depths of 420 to 1,680 miles. It has a chemical composition of $(\text{Mg, Fe})\text{SiO}_3$ (Magnesium Iron Silicate). Scientists have speculated about the existence and abundance of the material for many years, but did not have a specimen to work with. However, they recently identified the mineral in a meteorite. The mineral was formed when the meteorite slammed into the earth creating heat and pressure conditions similar to the conditions in the deep mantle (also see April's Birthstone, Diamond on the preceding page for similar formation of diamonds). The mineral was name in the honor of Percy Bridgeman who won the Nobel Prize for physics in 1946. The mineral's formal naming as "Bridgemanite" was in June of 2014.

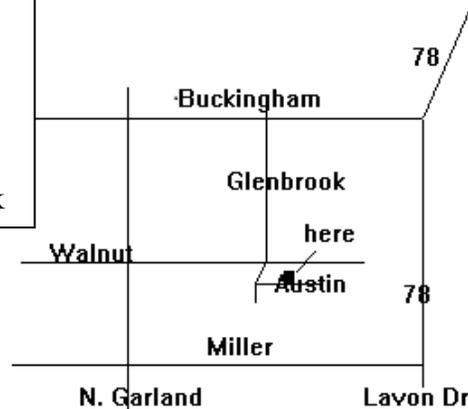


PLEASANT OAKS GEM and MINERAL CLUB of Dallas



Meetings
First Thursday of each month, 7:30 PM
Garland Women's Activities Building
713 Austin St.
Garland, TX
(Northeast corner of Austin & Glenbrook)

Membership
Single Adult: \$16.50
Junior: \$5.00, Family: \$27.50
(Plus badge fee for new members)



CHIPS AND CHATTER

Pleasant Oaks Gem & Mineral Club
PO Box 831934
Richardson, TX 75083-1934

To:

Next meeting: Thursday, April 2nd at 7:30 PM at the Garland Women's Activities Building. We will have a special guest speaker, Dr. Daniel W. Moulton, Ph.D., author of "Texas Nature and Environmental Centers Guide"

May meeting: May 7th at Garland Women's Activities Building

Visit an Area Club

- Arlington Gem & Mineral Club, 1408 Gibbins, Arlington, TX, 1st Tuesday of each month at 7:30 pm
- Dallas Bead Society, The Point at CC Young, 4847 W. Lawther Dr., Dallas, TX meets 1st Saturday of each month at 10:00 am
- Dallas Gem & Mineral Society meets the 3rd Tuesday of each month at 7 pm, VFW Hall, 10205 Plano Rd, Dallas TX (next to their shop)
- Dallas Paleontological Society, 2nd Wed. of each month at 7:30 pm, Brookhaven Geotechnology Institute, 3939 Valley View Lane, 75244 Ft. Worth
- Ft. Worth Gem & Mineral Club, meets the 4th Tuesday of each month at 7:30 pm, 3545 Bryan Ave, Ft Worth, TX
- CERA (Cowtown G, M, & Glass Club), meets the 2nd Tuesday at 7:00 pm, 3024 Acme Brick Plaza, Ft. Worth (formerly LM Stone Steppers)
- Oak Cliff Gem & Min Soc., 4th Tuesday of each month at 7:30 pm, South Hampton Community Hospital, 2929 S. Hampton Rd, Dallas, TX
- Pleasant Oaks Gem & Mineral Club meets the 1st Thur. of each month at 7:30 pm, Garland Women's Activities Bldg., 713 Austin, Garland,