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 1st Place, 2017 AFMS Mini-Bulletin
 1st Place, 2017 SCFMS Mini-Bulletin

Quartz with Color – Amethyst and Citrine

Don Shurtz, Pleasant Oaks Gem and Mineral Club of Dallas

Continuing the discussion of the last several months about quartz, this month's topic will be purple and yellow colored quartz, generally called amethyst and citrine. Both amethyst and citrine have the same physical characteristics as quartz, including formation in the trigonal crystal system, the typical quartz six sided crystals terminated in a six-sided pyramid, Moh's hardness of 7, and conchoidal fracture.



deeper. In many cases, the color is banded with alternating dark and light bands.

Amethyst is the birthstone for February. The word amethyst comes from Greek language word *amethystos* meaning not drunk. The Greeks and the Romans believed that wine, served in a goblet, fashioned from amethyst, would not cause drunkenness. It would keep the one consuming the wine clear

Most amethyst derives its color from inclusion of trace quantities of iron with a plus three valence (Fe^{+3}) replacing some of the silicon (Si) atoms in the crystal matrix. The ratio of the number of iron atoms to the number of silicon atoms is about ten to one hundred parts per million; less than 0.01 per cent of the silicon atoms are replaced by iron. Color intensity depends on concentration of the trace iron, and is generally variable throughout the stone. If the concentration is near the crystal faces, the color will be



headed and witty. Amethyst can be found in the Bible as one of the twelve stones on the Breastplate of Aaron and representing one of the twelve tribes of Israel

Citrine's source of color is still being studied with a number of possible answers. One type of citrine derives its color from trace

amounts of aluminum replacing some of the silicon atoms, and then subjected to natural radiation. Smoky quartz also gets its color from trace amounts of irradiated aluminum.

Quartz with Color – Amethyst and Citrine (continued)

Some citrine actually has phantom crystals of lightly colored smoky quartz inclusions. A study of Brazilian citrine indicates that the color of fine Brazilian citrine comes from trace amounts of aluminum and lithium, and the ratio of aluminum to lithium determines the color. When the ratio is near 1 to 1, the material is very dark or black. When the ratio is near 0.5 the stone is the color of honey. When the ratio is less than 0.3, the color is yellow. The concentration of aluminum and lithium determine the depth of the color. Yet another cause of the yellow color in citrine can be trace amounts of iron and heat treated. This can and does occur naturally, but most citrine on the market today is actually heat-treated amethyst; natural citrine is quite rare.

One interesting note on The Quartz Page (see references) is that it is permissible for jewelry traders to describe heat treated amethyst as citrine. Other sources indicate that any treatments, including heating, should be divulged. With citrine, the correct answer is “buyer beware.” Deal with a trusted source.

Citrine is one of two the birthstones for November; the other birthstone is topaz. The word citrine is derived from the Latin word *citrina* that means yellow. Citrine is sometimes known as “the healing quartz” for the belief that it can cause a person to become calm. Citrine is also known as “the merchant’s stone” for the belief that it can attract prosperity and wealth.

References

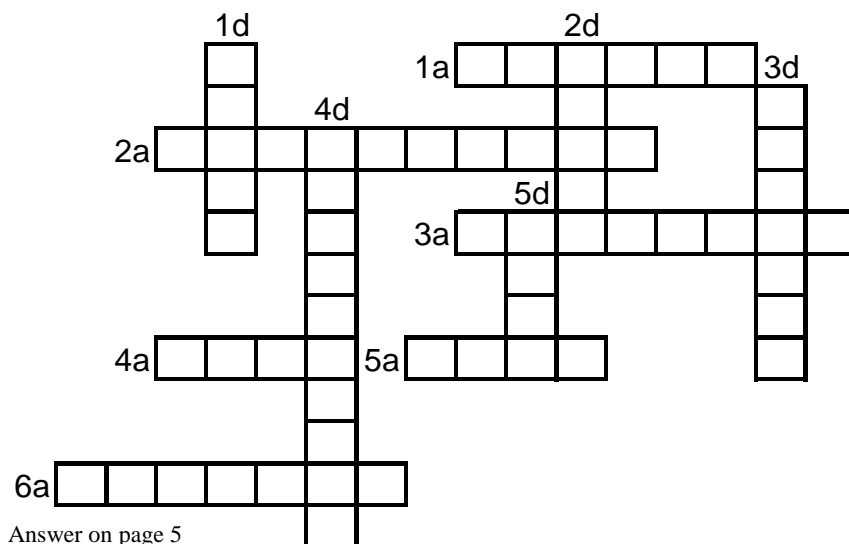
- Wikipedia, <https://en.wikipedia.org/wiki/>
- Amethyst, mindat.org, <https://mindat.org>
- American Gem Society, <https://www.americangemsociety.org>
- Citrine, The Quartz Page, <http://www.quartzpage.de>
- What Were the Gemstones of the Breastplate of Aaron, International Gem Society, <https://www.gemsociety.org>

Pictures

- Amethyst, released to public domain, <https://pixabay.com>
- Citrine, released to public domain, <https://pixabay.com>

Quartz Crossword Puzzle

Don Shurtz, Pleasant Oaks Gem and Mineral Club of Dallas



Across

- 1a - Crystalline form of SiO₂
- 2a - Type of fracture for quartz
- 3a - Purple colored quartz
- 4a - Color of quartz crystals in Ilanite
- 5a - Pink colored quartz
- 6a - Yellow colored quartz

Down

- 1d - Inclusion sometimes found in citrine
- 2d - transparent microcrystalline quartz
- 3d - quartz type found in Arkansas
- 4d - general classification of microcrystalline quartz
- 5d - Name of common hardness scale

Answer on page 5

A Word from the (AMFS) President

by Sandy Fuller, AFMS President
from the September 2018 AFMS Newsletter



During my year as president, I get the privilege and opportunity to travel to each of the seven regions and meet with local leaders and club representatives. (Unfortunately for me, I can't make the California Regional Convention but I know President-elect Doug True will be a great substitute.)

So far, I have journeyed to Raleigh NC, Yakima WA, Lubbock TX and Rapid City SD. I have met wonderful people and enjoyed great shows as well as some wonderful collecting and local museums. Congratulations to all who helped to organize and produce these conventions. As a former show chair, I am well aware of the many hours it takes to make an idea a reality. Thank you so much show chairs and regional leaders for the work you have done.

In each region I am again struck by the passion and giving of our club and regional volunteers. People from all walks of life and political views are working together to create successful associations.

As a friend of mine often says, "We came for the rocks, minerals, fossils and lapidary arts, but we stayed for the people." (Thanks, Dennis Westman.) Regardless of our level of participation, we are about relationships, whether we are mentoring newbies, developing long lasting friendships and/or providing support and care of our oldtimers. Our clubs are really about people, working together around a common passion.

Our leaders, whether local, regional or national, give so much to make all of these things happen. Let's give them our hearty thanks for all their hard work. Let's also try to understand and keep tempers in check when things might not go as well as they might.

I'm looking forward to the upcoming conventions in Springfield IL and Jacksonville FL. See you there.

Sandy

Why Contribute to the AFMS Scholarship Foundation

by Steve Weinberger, AFMS Past President
from the September 2018 AFMS Newsletter

Whether you represent an AFMS affiliated club or individual member of such a club, the AFMS Scholarship Foundation needs your help!

The fund was established in 1964 and to date over 500 students have received financial assistance from the interest on contributions made to it. Currently six of our seven AFMS member federations are involved. Each selects an "honorary" scholarship recipient – usually a college or university professor or someone within a regional federation who should be recognized for their outstanding contributions to that federation. This "honorary" recipient then selects two graduate students studying in the earth science field to receive the monetary grant for the coming year. Currently the grant is \$4,000 per student.

When a club contributes \$1 for each of their members, they earn 100% recognition for those contributions. Totals are cumulative, so if a club or individual only contributes \$20 and the club has 200 members, the club earns 20% which is "banked" until they reach that 100% level. If a club contributes \$1 per member, for let's say 10 years, the club is recognized as a 1,000% contributor.

The Foundation students do good work in furthering our knowledge of the earth sciences and many have informed us just how much that grant to them has meant. Textbooks and tuition are expensive!!!

Please consider making a memorial contribution or annual club contribution to the Foundation to enable it to continue on a strong footing. Send your contributions to your regional federation coordinator.

Visit an Area Club

[Arlington Gem & Mineral Club](#), 1408 Gibbins, Arlington, TX, 1st Tuesday of each month at 7:30 pm
[Cowtown Gem, Mineral, & Glass Club](#), meets the 2nd Tuesday at 7:00 pm, CERA 3300 Bryant Irvin Rd. Fort Worth
[Dallas Bead Society](#), meets 1st Saturday of each month at 10:00 am at The Point at CC Young, 4847 W. Lawther Dr., Dallas, TX
[Dallas Gem & Mineral Society](#) meets the 3rd Tuesday of each month at 7 pm, American Legion, 10205 Plano Rd, Dallas (next to their shop)
[Dallas Paleontological Society](#), 2nd Wed. of each month at 7:30 pm, Brookhaven College, Building H, 3939 Valley View Lane, 75244
[Fort Worth Gem & Mineral Club](#), 4th Tuesday of each month at 7:30 pm, 3545 Bryan Avenue, Ft. Worth
[Oak Cliff Gem & Min Soc.](#), 4th Tuesday of each month at 7:30 pm, Unitarian Universalist Church, 3839 W. Keist Blvd, Dallas,
[Pleasant Oaks Gem & Mineral Club](#), meets the 1st Thur. of each month at 7:30 pm, Garland Women's Activities Bldg., 713 Austin, Garland,

A NOTE FROM ROGER

By Roger Burford, SCFMS President, From the July/August SCFMS Newsletter



Greetings Rockhounds! Well, we are getting into the hottest part of the year here in the south. I hope if any of you are out in the sun digging in the dirt or searching on the surface looking for those rocks that you are remembering to BE SAFE!!! Keep hydrated. Watch for snakes! Dress comfortably. Use the buddy system. Know what the weather forecast is for the day.

Have you ever wondered what our clubs are supposed to be doing or why they exist. I bring this up because at times we lose sight of what the overall reason is for us to get together each month. When our clubs are founded, they file an Act of Organization or some such document with the government which states the purpose of the club. This document then allows the club to file for a nonprofit (501 C3) status Charitable Organization. Our clubs are organized as non-profit educational and scientific organizations. We as clubs then organize into bigger organization which, in our case, is the South Central Federation of Mineral Societies. Our purpose and goal is to learn about and teach interested people about the earth sciences and the lapidary arts. We aid the public by assisting teachers in their class rooms as well as other organizations like the Boy or Girl Scouts. Also, we hold our annual shows to teach the public in general and to make money to help us perform our objectives. We are not just social organizations which meet once a month, we are organized to help our communities. Let's remember this as we gather together each month. Let's get out there and get more young people interested in rocks and fossils. Let's teach other people how much fun it is to know all about the things we can do with rocks.

If anyone has any questions about our clubs and our non-profit status, please send an email to:
scfmsinformation@gmail.com .

One other item that needs to be brought to everyone's attention once again – there is a considerable amount of spam being sent out right now in the name of SCFMS or in my name as the President of the region asking for money. SCFMS would NEVER do things this way, nor would I. If you receive such an email, please let an EXECUTIVE OFFICER of SCFMS know and forward them the email. This has gotten to the serious level.

I sincerely hope everyone has a safe and happy summer! Find lots of beautiful rocks and make lots of beautiful things with them!

Roger

Shows and Activities – Upcoming Show and Activity Dates

- Sep 1 - 3, Silver City, NM, Grant Count Rolling Stones G&MS, Grant County Veterans Memorial Conf. Center, www.rollingstonesgms.blogspot.com
- Sep 8- 9, Siloam Springs, AR, Northwest AR G&MS, Hwy. 14029 White Oak Ln, nwarockhounds.org
- Oct 5 - 7, Albuquerque, NM, Jay Penn, NM State Fairgrounds, www.albfallshow.wix.com/abq-fall-show
- Oct 12 – 14, Dallas, TX, International Gem and Jewelry Show, Market Hall, <https://www.intergem.com/>
- Oct 12 - 13, Mount Ida, AR, Mount Ida Chamber of Commerce, Montgomery County Fairgrounds, 31st Annual Amateur World Championship Quartz Digging Contest, www.mountidachamber.com
- Oct 13 - 14, Amarillo, TX, Golden Spread GM&TS, Amarillo Civic Center, amarillotreasure.com
- Oct 13 - 14, Temple, TX, Tri-City G&MS, Mayborn Civic Center, lroiston@ht.rr.com
- Oct 19 - 21, Austin, TX, Austin G&MS, Palmer Events Center, www.agms-tx.org
- Oct 19 – 21, Houston, TX, International Gem and Jewelry Show, NRG Center, <https://www.intergem.com/>
- Oct 27 – 28, Oklahoma City, OK, Oklahoma City M&GS, Oklahoma State Fair Park, www.OMGS-minerals.org
- Nov 9 - 11, Houston, TX, Houston G&MS, Humble Civic Center, www.hgms.org
- **Nov 17-18, Mesquite, TX, Dallas G&MS, Mesquite Rodeo Center Exhibit Hall, www.dallagemandmineral.org**
- **Jan 19 - 20, 2019, Fredericksburg, TX, Fredericksburg Rockhounds and SCFMS Convention, Lady Bird Johnson Park**

Ref:

- July - August 2018 SCFMS Newsletter
- Rock & Gem Show Calendar, <http://www.rockngem.com/show-dates-display/?ShowState=ALL>

President's Message

Ling Shurtz, POGMC President

The fall IGEM show will be October 12 – 14. POGMC will participate. Plan for set up on October 10. The Pleasant Oaks web site domain name has been renewed for five more years. David Dobson will be our speaker for our September meeting. He will be talking about fossils.

Club Officers for 2018

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

Meeting Minutes

Ling Shurtz, President, called the August 2, 2018 meeting to order at 7:00 PM

Don led the Pledge of Allegiance

Quorum: We have a quorum as defined by the Club's Constitution and By-Laws

Sunshine Report: Patty is back at the Hospital's Emergency Room

Visitors: Dr. Mark Carter (prior club member)

Minutes: The minutes of the July meeting as printed in the August Chips and Chatter were discussed. A motion to accept the minutes as printed was made by Carolyn and seconded by Cheryl. The motion passed.

Treasurer's Report: Del Grady presented the Treasurer's Report. A motion to accept the report was made by Carolyn and seconded by Cheryl. The motion passed.

Old Business: There was no old business.

New Business:

Shows:

- IGEM October 12 – 14 set up on October 10. Contract has been submitted
- Aug 11 - 12, Gonzales, LA, Baton Rouge G&MC, Lamar Dixon Expo Center, www.brgemandmineral.org
- Aug 17 – 18, Tahlequah, OK, Tahlequah R&MS, Cherokee County Community Bldg, crescentmooncrafts.elaine@gmail.com
- Aug 18 - 19, Bossier City, LA, ARK-LA-TEX G&MS, Bossier City Civic Center, www.larockclub.com
- Aug 25 – 26, Mountain Home, AR, Ozark Earth Science Club, Baxter County Fairgrounds

Sep 1 - 3, Silver City, NM, Grant Count Rolling Stones G&MS, Grant County Veterans Memorial Conf. Center, www.rollingstonesgms.blogspot.com

- Sep 8- 9, Siloam Springs, AR, Northwest AR G&MS, Hwy. 14029 White Oak Ln, nwarockhounds.org
- **Nov 17-18, Mesquite, TX, Dallas G&MS, Mesquite Rodeo Center Exhibit Hall, www.dallasgemandmineral.org**

After the Break we viewed a video about earthquakes from the Great Course series. The video discussed the two major scales for measuring the destructive power of earthquakes. The two most common scales are the Richter and the Mercalli. The Richter is based on the power of the largest seismic wave while the Mercalli is based on the destructive effects. Then the video described the physical properties of earthquakes and the types of seismic waves produced, including the primary wave, the secondary wave, and the surface waves (Love waves and Raleigh waves). The most interesting point in the video was that most damage does not occur because of the seismic waves, rather from the fires that are generated after the quake.

MEETING

Our next meeting will September 6, 2018 starting at 7:30 PM. Club member David Dobson will be giving a presentation about fossils. October 6, 2018 will be the following meeting – stand by for details.

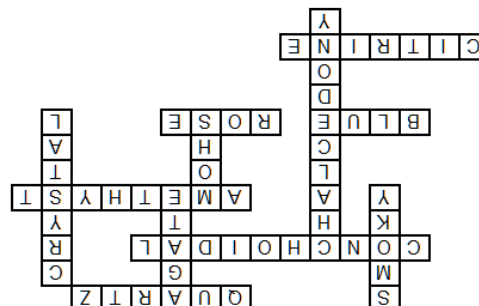
Show and Tell

Bring your September birthstone, Sapphire, or a colored quartz piece, particularly an amethyst or citrine specimen.

VISITORS ARE ALWAYS WELCOME

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Crossword Puzzle Answer

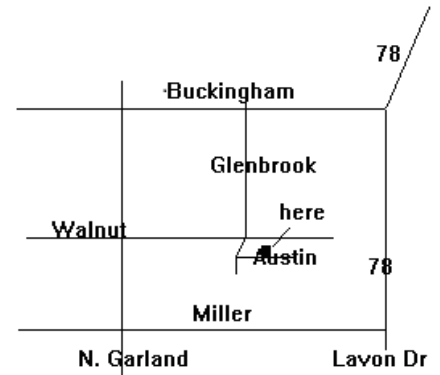


PLEASANT OAKS GEM and MINERAL CLUB of Dallas



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)



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. Pleasant Oaks Gem and Mineral Club of Dallas is a Section 501(c)(3) not-for-profit organization

CHIPS AND CHATTER

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

To:

VISITORS ARE ALWAYS WELCOME

Next Meeting: September 6, 2018, 7:30 PM at the Garland Activities Building

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