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1st Place, 2016 SCFMS Mini-Bulletin

1st Place, 2015 SCFMS Mini-Bulletin

Mineral Inclusions

Don Shurtz, Pleasant Oaks Gem and Mineral Club of Dallas

What is a mineral inclusion? We have all probably seen an inclusion in quartz or other minerals, but have you ever thought about what an inclusion is and why is it there in the stone? A simple definition is any material that is trapped inside a mineral during its formation. There are three basic types on inclusions. The first is something that formed before the mineral and then the mineral formed around it (antigenic inclusion). An example could be a rutile crystal or cluster grew, and then was trapped inside a quartz crystal as it grew around it. The second category is something that forms at the same time as the mineral (syngenetic inclusion). Phantom crystals are examples of a syngenetic inclusion. Smokey phantom crystals are sometimes found in a quartz crystal. The quartz crystal was growing the whole time, but a some point it was exposed to natural radiation causing the smokey quartz to form, but clear quartz continued to grow after the radiation was removed. The final category is something that forms after the mineral forms (epigenetic inclusions). An example could be feldspar forming in cracks of a host crystal.

Some examples of solid inclusions enclude rutilated quartz, topaz and corundum, a star sapphire or garnet (generally rutile is the inclusion), chaistolite (a variety of andalusite) which has a destinctive graphite rich cross, a trapiche emerald with its characteristice 6 spoked shape of carbon rich included material, and even tiger-eye, a

variety of quartz with inclusions of fibrous quartz and amphibole.

Inclusions can be a solid such as another mineral, a liquid, gas, or in the case of amber (which technically is not a mineral), organic material trapped in the host crystal. Liquid or gas inclusions can be of any category listed above. Liquid and gas inclusions are often found together. An example would be an enhydro quartz specimen. The Perot musuem has a very nice amethyst quartz cluster

which has multiple pockets of entrapped water. As the water does not fill the void completely, the rest of the void is filled with air and / or water vapor. Another example of a gas included mineral would be common white quartz – the white color in caused in included microscopic air bubbles.

At our next meeting, Warner will be bringing in some Quartz specimens with inclusions. Our **Show and Tell** will be minerals with inclusions. Also, bring

in a fossil (to go along with our presentation).

Reference

- GIA, <https://www.gia.edu/gems-gemology/>
- Murphy, Patirick, Inclusions in Gems and Minerals, www.cigem.ca
- Wikipedia, <https://en.wikipedia.org/wiki/>

Picture:

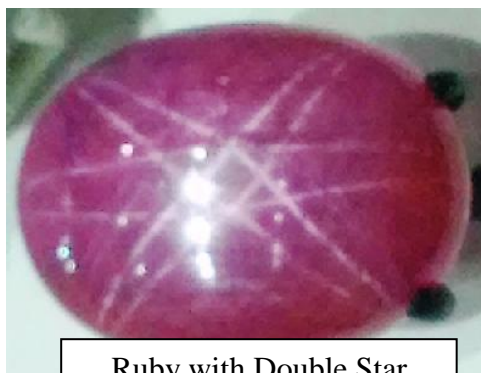
- Rutilated quartz, picture by Rob Lavinsky / iRocks.com, licensed under Creative Commons Attribution – Share Alike 3.0 Unported
- **Editor's note: Please see web version of Chips and Chatter to see pictures in color.**



Minerals with Inclusions



Aquamarine – The Helix
(Phantom Crystal Faces)



Ruby with Double Star
(Twinned Rutile)



Garnet with Star
(Rutile)



Fluorite
(Phantom Crystals)



Faceted Quartz
(Rutile)

Pictures by Don Shurtz. Specimens are or have been on display at Perot Museum of Nature and Science

Editor's note: Please see web version of Chips and Chatter to see pictures in color.

Show Calendar – Upcoming Show Dates

June 2 – 4, Tulsa, OK, Gem Faire Inc, Expo Square, info@gemfaire.com, www.gemfaire.com

Jun 9 - 11, Ventura, CA, Ventura G&MS and AFMS Convention, www.vgms.org and www.amfed.org

Jun 16 – 18, Carlsbad, NM, Carlsbad G&MS, Living Desert State Park, www.carlsbadgms.org

July 01 – 02, Grapevine, TX, Arlington G&MS, Grapevine Convention Center, www.agemclub.org, show@agemclub.org

Nov 10 – 12, Humble, TX, Houston G&MS and SCFMS Convention, Humble Civic Center

Nov 18 – 19, Mesquite, TX, Dallas G&MS, Rodeo Center Exhibit Hall, www.dallasgemandmineral.org, case53d@yahoo.com

Ref:

- January - February 2017 SCFMS Newsletter
- Rock & Gem Show Calendar, <http://www.rockngem.com/show-dates-display/?ShowState=ALL>

Visit an Area Club

[Arlington Gem & Mineral Club](#), 1408 Gibbins, Arlington, TX, 1st Tuesday of each month at 7:30 pm

[Cowtown G, M, & Glass Club](#), meets the 2nd Tuesday at 7:00 pm, Corp. Emp. Rec. Association (CERA) 3300 Bryant Irvin Rd. Fort Worth

[Dallas Bead Society](#), meets 1st Saturday of each month 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,

Article/Picture/Story

This Space Reserved for Club Member Articles, Pictures, etc.

Editor's Note: Through the first 6 months of this year, the only person to have contributed an article, pictures, etc. to the Chips and Chatter has been the Editor. Yes, we do get the Minutes and the President's Report from members, but they do not count as Articles or Features. Last year we were able to enter seven Articles and three Features (field trip reports, book reports, puzzles, etc.) in the SCFMS Editor and Author contest. That means we had seven members who took the time to write an article and three members who took the time to write a Feature for the Chips and Chatter. If we had to enter the contest right now, there would only be one article entry (it would be from the editor). We did well last year – this year, not so much. The Chips and Chatter is the club's newsletter - a club activity, not an editor activity. The editor should primarily be doing editing. **Editor – Editing; get it?** I will continue to save space in the Chips and Chatter for club member's articles, pictures, puzzles, stories, etc. How about filling up some of that space?

Safety Matters – Going it Alone

Ellery Borrow, AFMS Safety Chair
From the May-June 2017 SCFMS Newsletter

Going it alone, getting away from it all, escaping the concrete canyons, taking a hike, or just goin' rockin', we are a traveling hobby. Unless one does a good deal of mail order, we go to the rocks instead of their traveling to us. A friend of mine enjoys going it alone while looking for the yellow metal. He enjoys using his metal detector in the remote high country of California. His preference is to go where no man has gone before — or at least no one has gone in a long, long time. When I ask him of his adventures he often mentions “incidents”. Those “incidents” have raised the hair on the back of my neck on several occasions. I know it's none of my business, but as a safety minded person, I feel obliged to express my concern about his desire to go it alone. “No problem”, he assures me. While young men may think themselves indestructible, I have other thoughts on the matter -- and this friend of mine is not young. So using that story as a lead-in, here are some thoughts on goin' rockin' alone:



1. Keep the folks or friends or relatives or someone you trust apprised of your travel plans - roads, trails, time tables, details. If one is going up mountain, mention which trail. Many areas have several trails all going to the same place, yet offer different starting points. It is not a good idea to tell folks you are going one place and not bother to tell them that you have changed your mind and will instead, at the last minute, go some place different. Periodic contact with the folks back home is a good safety idea and will go a long way in reassuring them of your well being!

2. Have a fully charged cell phone and, if possible, an extra batter or way of charging the phone in the wilds and woolies. Keep checking your bars (not the ones along the highway, but the ones on your phone) for reception and be aware that there are many areas where there will be no bars (of either kind) to be found.

3. Bring sufficient water times two. It is often the case that, when working in a hot pit, one drinks more (or should drink more).

4. Have maps with you, the kinds that do not require a battery. Learn how to use the maps! There is a good deal of useful information on them.

5. Have a first aid kit and your meds with you - not back in the truck which is parked a good (or not so good) five miles away.

6. Have and utilize good clothing, footwear and safety gear including snake bite proof boots, bug powder, sun screen goggles, survival gear, flash light or whatever one thinks is appropriate to the conditions...and speaking of conditions...

7. Mind the weather as conditions can change rather suddenly.

8. Have a plan B (and C, D and E) as the conditions and situations warrant.

9. Take rest breaks before you are tired, not after. The same goes for drinking water. Drink before you are thirsty, feeling thirsty means you are already dehydrating.

10. Have food with you. To save carrying weight, there are numerous energy foods and power bars available.

There are perhaps 11 million other safety rules, think OSHA and MSHA, so just keep in mind the ones most germane to the going-it-along place you are heading. Numerous safety and survival guides are available. You might find a great many practical and useful ideas in them. Yes, I can hear eyes rolling loudly and comments of “Yes dear”, and “Yes mother” with the above point; but my yellow metal digging friend is still with us, no more “incidents” have been mentioned to me - so maybe what I mentioned to him is working. Please be safe. Your being safe is, I suspect, important to more folks than you might realize.

President's Message

Ling Shurtz, POGMC President

May's program was great (thanks go out to Lee and Carolyn). Our June program will feature a visitor from the Dallas Paleo Society and a bunch of quartz specimens with inclusion from Warner. Don't forget the July meeting will feature a potluck salad bar and will start at 7:00. For August, we are considering a demonstration/hands-on project (class) of an Emu Egg kaleidoscope or jewelry box. This project requires special order of materials and will be about \$30.00 for each participant if we do it as a hands-on project. We need to discuss if this sort of project is desirable.

Club Officers for 2017

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

Minutes of the May 4th 2017 Meeting

The meeting was called to order at 7:35pm by Ling Shurtz.

The Pledge to the flag was led by Lee.

Sunshine report: Patti is in the C. C. Young Rehab Center in Dallas.

We did not have any visitor present at tonight's meeting.

Minutes: We discussed the minutes of the April meeting as printed in the May Chips and Chatter. A motion to accept the minutes was made by Carolyn. The motion was seconded by Hat. The motion passed.

Treasurer's report: Del Grady gave the Treasurers' Report. A motion to accept the Treasurers' report was made by Lee. The motion was seconded by Carolyn. The motion passed.

Old Business:

- IGEM was a moderate success. More participation would be welcome.
- Status of new name tags. Del has not ordered them yet.
- July meeting will be at GWAB- bring an item for a "potluck" salad bar.
- Robert Martinez was the winner of our Special Award at the Dallas Regional Science & Engineering. His report shows how fracking could be causing earthquakes. We

will send him an invitation to present his project at a future meeting.

New Business:

- The June meeting will have a visitor from the Dallas Paleo Society (Roger Farish) to introduce their new book, "Guide to Fossil Collecting". Copies of the book will be available for purchase.
- Items from the floor: The Arlington Swap Meet is this weekend.

After our refreshment break, our first presentation was from Lee who had just come back from a cruise to the lower Virgin Islands, formerly known as the British West Indies. She scoured the "straw markets" on all five islands to find the best price on Larimar, the beautiful blue stone of the Caribbean. It is mined in the Dominican Republic but is sold on all of the Caribbean Islands. She found that the best prices were in Philipburg, St. Maarten.

For our next presentation, we got to "mine" breakfast cereal for iron. We had 5 "high iron content" breakfast cereals that we pulverized into powder and poured a little of each cereal onto a flat lid and ran a powerful magnet under it to see if the iron in the cereal would follow the movement of the magnet underneath. It was a lot of fun trying each cereal to see which one really had the most iron in it. The results were the shredded mini wheat had the highest iron content and the Reese's Puffs cereal was the lowest iron content.

We had our raffle, and then the meeting was adjourned at 9:00pm.

Respectfully submitted,

Lee Elms, Secretary

Meetings

Our June 1st will start at 7:30 at the GWAB. Roger Farish from the Dallas Paleo Society will introduce their latest book, "Guide to Fossil Collecting".

SHOW and TELL

Bring: (1) a FOSSIL, (2) a MINERAL with an INCLUSION, and / or (3) the June Birthstone (PEARL, MOONSTONE, or ALEXANDRITE.

VISITORS ARE ALWAYS WELCOME

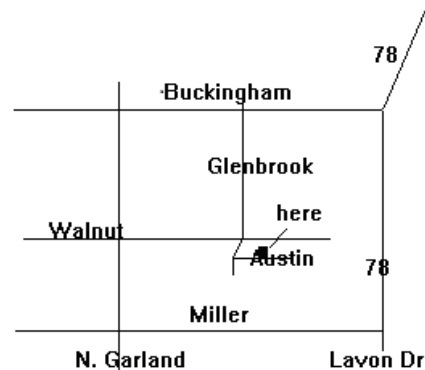
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PLEASANT OAKS GEM and MINERAL CLUB of Dallas



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.

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

To:

VISITORS ARE ALWAYS WELCOME
Next Meeting: June 1, 2017

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