

2016
November – December

2016 - 2017

Officers & Directors

President:

Mark Marikos

Vice President:

Mike Hollonbeck

Recording Secretary:

Marilyn Reynolds

Treasurer:

Ellen Alexander

Membership Secretary:

Alrene Hibben

Director:

Mark Ascher

Director:

Ron Gibbs

Director:

Ortrud Schuh

Past President:

Diane Braswell

Librarians:

Robert & Elaine Royer

TUCSON GEM & MINERAL SOCIETY

Ph.: 520-322-5773

Email: tgms@tgms.org

ROCK TALK is the official publication and is © 2016 by the Tucson Gem and Mineral Society, Inc. to reproduce material contained herein for non-profit use only. All commercial and other use requires written permission from the Tucson Gem and Mineral Society, Inc.

EXPLORE DISCOVER SHARE

President's Page



With the end of 2016 approaching, we will soon be in the Holiday Season. For TGMS, that means the Christmas Party, December 14, 2016 and the December Sale, December 3, 2016, two great opportunities for time together sharing two of our favorite things in life – food and rocks!

Just as the dust begins to settle from the Holiday hustle and bustle, we will be into the Show season. I am looking forward to the 2017 Show, as I spent the first part of my life in the Midwest, and have collected in some of the mines and other localities that will be represented. It will bring back a lot of good memories.

Early on in my mineral collecting, there was an Arizona link. Besides the fact that the first Tucson Gem and Mineral Show[®] was held on my first birthday, the person that got me interested in collecting minerals was from Arizona. Sally Rothe, from Morenci, was the sister-in-law of my next-door neighbor, Lucy. Sally's husband, Art, was a miner at the Morenci Mine, and they would come to visit Lucy for a couple weeks every summer. She was an avid mineral collector and when I took an interest at the tender age of five, she began to feed my habit. It's been downhill ever since!

I mention this to remind us how easy it is to share the hobby with others, especially kids. I am sure that the specimens Sally gave me were not that valuable, but to a young novice they were treasures. And look what it wrought - two geoscience degrees, almost 20 years in the industry, and approaching 60 years of collecting. Back in 1994, on our way back from the Denver area, my wife and I stopped in Morenci. I had not seen them in over 30 years, but I knew that Art and Sally were still there, because my parents kept in touch with them. So I called them and took them to dinner. I thought they should know what they caused, and after their initial shock, we had a great time reminiscing and talking about rockhounding. True-to-form, Sally sent us on our way with a bucket of fire-agates!

Each of us knows young ones or others with whom we could share the collecting disease. Even many adults, when they see the beauty and fascination of the mineral and fossil worlds, get hooked, all it takes is a little exposure. I am sure some of you "caught the bug" later in life. Our meetings are a good time and place to do that. Invite friends, let them see some of the specimens, maybe they will win the door prize; who knows what might happen from there!

One new thing that may help with that is that we are making provision for display of some live specimens at the meetings. We will have a display cabinet set up where speakers, or others can bring specimens to display for the evening. If you are interested, contact Pat or Rose in the office. We plan to

President's Page – CONTINUED

also set up other cases with TGMS specimens, or specimens for longer-term loans by members.

The rockhounding hobby grew very rapidly in the 50s and 60s. Those of us that remember back then recall that even small towns had one rock shop and almost any town of any size was likely to have a club, and even an annual show. I have often wondered what factors led to such rapid expansion in those two decades, and if we could recreate that today. I know that the rapid economic expansion during the post-war period played a role, as well as the increase in leisure time and that the automobile opened many opportunities to get out and collect. I know that more sites were accessible back then, and that was probably a factor, but I think one factor may be more important than we might think.

As described above, I, and many others originally got into the hobby through the influence of collectors that were generous with specimens and with their time. They were willing to invest in young collectors, sharing their knowledge, enthusiasm, and specimens. TGMS now has the opportunity to move forward in that way, now that we have full use of our clubhouse. I would like to see us establish a "junior division," maybe in the form of a Saturday meeting to teach new collectors and "not yet collectors" about the wonders of the mineral world. This would complement the Junior Education efforts at the Show, giving a way for participants to follow-up on their new found interest throughout the year. It would also be a great way to infuse new blood into the organization, ensuring that it continue beyond our own tenures here.

I am not sure what form such a venture would take at this point, but we are open to suggestions and input from the membership. Put yourself in the shoes of a new collector, and think what you would appreciate. But also get back into your own shoes and think what you would enjoy sharing with a new generation of collectors. All of us have much to offer, and sharing it with beginners is a great way to stir up renewed excitement in our own lives. And all of us also have plenty of excess specimens that would excite a new collector, and help them learn more about rocks, minerals and fossils. Who knows, maybe a kid participating in such an activity may one day be a TGMS President! Stranger things have happened.

Keep on rocking!



Mark Marikos
President



**TUCSON
GEM & MINERAL
SOCIETY**

The December 5, 2016 Guest Lecturer for the TGMS General Meeting will be Dr. Alex Schauss. His lecture will be on; **“How Do the Elements in the Periodic Table Effect our Health?”**

Dr. Schauss will be adding to his presentation a slide show on what he saw when he attended the opening of the new David Friend Hall at the Peabody Museum. How about a two ton 5' 4" fluorite specimen, or the 75.4 carat Burmese "Blue Dragon" sapphire; the 9.07 carat from the legendary Golconda mines of India: or the outrageous "Yellow Rose" diamond weighing 77.14 carats, loaned to the museum by Christie's in New York. You won't be disappointed!



TGMS General Meeting — September 12, 2016

The General Meeting of the Tucson Gem and Mineral Society was called to order by President Mark Marikos at 7:33 p.m. Visitors and new members were recognized and welcomed to the meeting. There were cheers for having our clubhouse just for our use now.

FIELD TRIPS: Kerry Towe announced that there are 17 field trips currently scheduled and more may be added. Kerry, Don Cuson and Merritt Simmons will be leading the trips. There are new Field Trip Guidelines which must be adhered to and which allowed us access to Tiger and Duquesne. The field trip budget includes \$50 for the best field trip photo, \$50 for the best field collected mineral photo and \$10 per person for some field trips. Reminder: Must be a member of TGMS in good standing to attend field trips.

PROGRAM: Marcus Origlieri, Ph.D. presented a talk on “Minerals of the Ojuela Mine” which has been a silver mine for over 400 years. Natives mined the site before the Spaniards discovered it in 1598. A town was built and a suspension bridge was built which was designed by the Roebling brothers who also designed the Brooklyn Bridge. Some buildings and the bridge still survive. A cooperative of about 80 miners still work the mine which contains a lot of arsenate minerals which are very lustrous. A large adamite “grotton” was found which yielded many fine specimens. Paradamite was the first new species identified. The vibrant color of the adamite is due to U^{6+} . Purple adamite is colored by Mn^{3+} . Green is due to Cu for blue combined with yellow. The adamite and legrandite have set the standard for these species. More than 100 mineral species have been identified for this mine.

BREAK: Refreshments were provided by Shiela Powell which included cheese, meat, veggies, fruit, chips, dips, cake, gingerbread, cookies and pie. Quite a feast! Thanks Shiela.

OLD BUSINESS:

Approval of Minutes for May 6, 2016: **MOTION:** To approve the minutes. Seconded and approved.

NEW BUSINESS:

Scholarship Recipient: Tatiana Stoutmeyer was scheduled to be here but was unable to attend the meeting. Hopefully she will be here for the next meeting for the presentation of her award.

December Sale: Vera Schlichter is now in charge. Booth fee is \$25. Participants must bring their own 10 ft. table.

Tour: Information is on the table for an 11 day tour “Gems of Hunan, China.”

Cleanup Volunteers: Thanks to Bob and Jeannette Barnes, Ron Gibbs, John Callahan, Bruce Kaufman, Dick Gottfried, Mark Marikos, Rose Marques and Pat McClain.

Clubhouse: The carpet was professionally cleaned which was expensive and the clubhouse is cleaned once a month so try to keep everything clean, please. Plans for the space include starting programs for kids on Saturdays and other activities. Micromount scopes will be set up and display cases with minerals TGMS owns. If you have any ideas, please let the office or Board know. There will probably be some work days coming up. Unwanted rocks will be put outside the fence to help prevent people climbing the fence to take rocks from around the Jr. Ed. shed. Pat and Rose are working on getting chairs and some tables.

Letter From Sunsites Gem & Mineral Club re: Collecting: The men's digging turned out to be mineral exploration with the claim owner's permission. Anyone digging for TGMS will have appropriate paperwork.

Name Tags: Available from Alrene Hibben, Membership Secretary, for any new member or old member who does not have a tag with the copyrighted logo on it.

DRAWING FOR DOOR PRIZES: Shiela Powell, as meeting host, made the first choice. Drawing winners were Mary Ann Penkova, Victoria Fila, Louis Pill, Donna Pugh, John Ebner and Pete Peterson.

The meeting was adjourned at 9:10 p.m.

Respectfully submitted,
Marilyn Reynolds
Recording Secretary

TGMS General Meeting — October 3, 2016

The General Meeting of the Tucson Gem and Mineral Society was called to order by Vice President Michael Hollonbeck at 7:30 PM. He asked new members and guests to stand and introduce themselves. Several people were guests tonight. He then introduced the two speakers, Ron Gibbs and “Chef” John Callahan (as John is also the member providing refreshments later on this evening).

PROGRAM: Ron and John have worked extensively at the 79 Mine near Superior, Arizona for decades. John has had the claim since early 2000. The evening’s slide presentation covered the many and various micro-minerals found at the 79 Mine, very well known for its wulfenite. John was the first speaker. He spoke of the background, the geology, the mineral deposits, and the ownership history of the mine. There are six levels underground in the mine. Ron then explained how he takes the beautiful photographs of the micro-minerals using a camera apparatus and ‘Focus Stacking.’ He takes about 30 rapid succession photos and allows the computer to stack them into a single image. He explained the many mineral groups found at this mine, i.e., sulfates, sulfides, carbonates, oxides, etc. and had photos of all the specimens mentioned. Many of the mineral specimens have been analyzed by the University of Arizona. Everyone enjoyed the program very much and they were given a hearty round of applause at the end.

BREAK: The members took a small break for refreshments before the business meeting was convened. John Callahan provided his wonderful assortment of starters, fruit, chicken salad with crackers, and two types of mini cheesecakes, blueberry and cherry, all handmade.

President Mark Marikos reconvened the business meeting.

OLD BUSINESS:

Approval of Minutes for September 12, 2016: **MOTION:** To approve the minutes. Seconded and approved.

Vera Schlichter gave a report on the upcoming Mineral, Jewelry Art & Craft Sale to be held on December 3rd. She still has five tables available. If anyone is interested, the cost is \$25.00. This year we can set up beginning on December 2nd at noon. Dealers must provide their own tables!

Kerry Towe gave the field trip report. He had Jerry Glazman give the accounting for the last two trips, one to the Fat Jack and the other to Duquesne. Jerry described how he had to use bamboo skewers to locate the Fat Jack quartz amethyst crystals in the mud/clay matrix. Nice pyrite and garnets were found at the mines near Duquesne. The next three trips scheduled are the Apache Reservation for peridot, the Critic Mine for copper, gold and silver, and the Red Cloud for wulfenite. November will also include the trip to Albuquerque for fluorite. To participate, we must join the Albuquerque Rock Club.

NEW BUSINESS:

New business included the announcement of the annual holiday dinner on December 14, 2016. Members are encouraged to give suggestions to the office regarding the menu and entertainment.

Volunteer sheets for the February TGMS Show are at the back of the room. Please fill out and return them to the box provided on the table.

The members approved the changes to the upcoming meeting dates in January and February, 2017. The first meeting of the year cannot be held on the 2nd of January because of the federal holiday. The January meeting has been moved to the second Monday which is January 9, 2017. The February meeting has to be moved as well. The first Monday is only three days before the start of our Show and it is too hectic to hold a meeting that close to the Show. The members approved moving that meeting to January 30, 2017, replacing the February 6 meeting.

The mineral give-away ended the meeting. John Callahan gave his ‘first choice’ selection to Noah Trujillo. Other winners included Mary Ann Penkova, Jan Rasmussen, Brandon Trujillo, Carl Bowlby, Janette Simister, Vera Schlichter, Barb Elliott and Kim Filips.

Respectfully submitted by

Alrene Hibben,
Secretary pro tem

2017 TGMS Show “Competitive” Exhibit Information



TUCSON GEM & MINERAL SOCIETY

To: TGMS Members

Please join us at the 63rd Annual Tucson Gem and Mineral Show®, February 9 - 12, 2017. The numerous mineral collectors and visitors who enjoy viewing beautiful exhibits will appreciate your participation in the Show. Your competitive exhibit(s) will add greatly to the Show. The area for the competitive exhibits will be right at the center of the Exhibition Hall. This will really highlight your exhibit and the others who compete.

The Tucson Gem and Mineral Society and Show Committee are very interested in promoting interest in young exhibitors. Each junior age exhibitor, regardless of which exhibitor class they enter, will receive a \$100 check from Dr. Rob Lavinsky of The Arkenstone. He wishes to help encourage young collectors to exhibit and compete and this is his way of honoring those adults who helped him when he was a junior-age collector. The high point score by a junior-age exhibitor will receive a \$500 check and the second high point score will receive a \$300 check, regardless of the exhibitor category.

Various applications are available for you to enter competitively. If you would like to have the forms, information or a competitive handbook sent to you (**mailed or emailed**), please contact our TGMS Office. **Applications must be received no later than December 5, 2016. Due to increasing security concerns, ALL competitive entries, including those for the Special Trophies and Best of Theme competitions, shall require a signed Competitive Exhibitor Agreement. No Agreement, No Entry.**

The Tucson Gem and Mineral Show® theme for 2017 is “**Mineral Treasures of the Midwest.**” Trophies will be awarded for the best specimen in each of five size categories and lapidary/jewelry in the Best of Theme competition. An individual is eligible to enter a specimen in each category. This competition is open to all individuals and entries will be accepted up to 6:00 p.m. on Wednesday, February 8, 2017 (Best of Species/Bideaux Trophy entries 4:00 p.m.).

The Show Committee awards five special trophies to honor those who have contributed to mineralogy and the collecting hobby. The Desautels Trophy is for the “Best Case of Minerals in the Show,” with the emphasis on quality and aesthetics of the specimens. The Lidstrom Trophy is awarded to the best single specimen contained within a competitive exhibit. The Yedlin Trophy is awarded to the best case of Master micromounts. The Bideaux Trophy is awarded to the best single Arizona specimen entered in this competition. The Romero Trophy is awarded to the best Mexican specimen or case in the Show. Any case or specimen to be judged for these trophies, except the Romero, must have a signed Competitive Exhibitor Agreement submitted.

If you have any questions or need more information, please contact me at (602) 370-0639 or email: presmyk@cox.net, or the Tucson Gem and Mineral Society office at 520-322-5773, or email: tgms@tgms.org.

We look forward to receiving your application.

Sincerely,

A handwritten signature in black ink that reads "Les Presmyk".

Les Presmyk
Competitive Exhibits Chairman

2017 TGMS Show “Guest” Exhibit Information

Dear Fellow TGMS Members

We invite hundreds of museums and guests to exhibit at our Show each year and generally fill all our cases; but for many reasons **relatively few of our exhibitors are TGMS members**. There are plenty of reasons why this may be...some of us are more than a little “busy” during Show time and somehow pulling together an exhibit just doesn’t seem to take a high priority. (In my personal instance I always sign up for a case and either give it up to a late-breaking last-minute new exhibitor or wind up having to fill two others due to last minute no-shows...these latter cases are usually easy to recognize). **WE WANT TO CHANGE THIS...here’s why and how.**

Our Show is one of our greatest assets for community outreach and potentially attracting new members to our hobby and Society. But, although our Information Booths and Docents give out lots of membership applications at the Show each year, we hear from many folks expressing amazement at what’s on exhibit that “this looks like an expensive hobby” or “I could never see myself owning something so valuable” and we lose them as potential members. Of course this means they also miss out on the educational and social benefits of mineral collecting and rockhounding...and we miss out on the new blood we need to keep TGMS vibrant. We think that more TGMS member exhibits, showing off what they’ve collected themselves (thanks Carol, Bill, Alyce and Jaye), what they’ve picked up at our show by being diligent bargain-seekers (thanks Glazmans for leading that charge), and exhibits of what they’ve made themselves (thanks Helen and Gloria) could function as a more realistic example of entry-level collecting and where you can take it through personal involvement rather than “silver-pick” collecting (translation for those unfamiliar with this expression...*buying rocks*).

So to facilitate this we are going to set aside a pod of eight cases for TGMS member exhibitors **and we will put in liners and risers for you so all you have to do is bring in your pieces and set them in place**. There are plenty of members who have exhibited and are happy to give some guidance...and the Competitive Handbook has some guidelines that are helpful too (see our website). I personally find it’s



easiest to mark off a case-sized space on a table and start arranging my specimens weeks before the Show. This gives me the chance to review repeatedly and move things around until I am happy with the layout. My daughter Lauren (who won Desautels at 17...proud papa department) likes to say the pieces need to “dance” with each other...balancing shape and colors across the case. A quick shot of the final results with your cell phone or camera gives you a map to use at set-up. I did this for 50 cases this summer and each one took less than 15 minutes to set up, so that’s not a big bite out of your set-up duties schedule...*and I’ll give you a note from the “doctor” to give to your TGMS “boss” so you have leave to take that time!*

WE ARE ESPECIALLY INTERESTED IN GETTING SOME CASES OF MINERALS COLLECTED BY TGMS MEMBERS, ESPECIALLY ON TGMS FIELD TRIPS. “Group-Shoot” collective cases where several of you get together to fill a case with things you collected together would be really welcome. If you have an idea and are willing to organize others, please let us know and we will announce it at meetings.

Or, you can play to the Show Theme “**MINERAL TREASURES OF THE MIDWEST**” or a theme of your own choosing...we always welcome as wide a range of exhibits as possible, especially items that can attract the public: gemstones, jewelry, historical items, exceptional fossils, dinosaurs, etc. **Or start the ball rolling for the 2018 Show whose theme is “Crystals and Crystal Forms.”** Remember, exhibits need not all be “pretty”, so educational exhibits, rarities and items of unusual mineralogical, paleontological, cultural or mining interest are encouraged.

2017 TGMS Show “Guest” Exhibit Information ... CONTINUED

As an extra incentive the FM gives an award for best Educational Exhibit and TGMS gives the Schupp Trophy to the best case by a TGMS member...in honor of Bill and Millie Schupp the late great TGMS stalwarts who roped me into TGMS governance and Exhibits Chair 35 years ago. Retired Harvard Mineral Museum Curator, Carl Francis has noted that it takes two things to build a great collection...access to good minerals and time. The TGMS Show certainly gets you access, and if you are involved long enough the time part takes care of itself.

We need you to apply soon since available space fills up rapidly and there is a lot of exhibitor interest from the Midwest this year. If we don't get enough to fill a pod, I will still put the TGMS member exhibits together. Responding early lets us include your name in as much advance advertising as possible and will help get you the size case you desire. **We would really like to advertise our membership cases as much as possible.**

TGMS is pleased to announce that exhibitors and public alike love our new exhibit cases. In case you haven't exhibited in them yet, they are different from our old Pony Cases. They are 30" tall and are roughly 30", 48" and 66" wide instead of 22", 46" and 70". Cases sit directly on tables, making them very stable. Remember **WE WILL PUT RISERS AND LINERS IN FOR YOU...WE JUST NEED YOUR COLOR CHOICE** (white, off-white, beige/neutral, gray, navy, black). Please contact me well in advance if you need special additional assistance with liners and risers....*or exhibiting in general.*

We would be pleased to send you the **Guest Exhibit Application (contact the TGMS Office to either email or mail you the application)** that needs to be submitted to the TGMS Office **no later than December 5, 2016.** PLEASE include the Guest Exhibit Agreement and Guest Exhibit ID Form, and please note the display requirements and case preparation details. **Applications received after the deadline will be considered only on a “space available” basis.** Late applicants may not get into the Show program or other advertising. Note that we can almost always make room for an exceptional exhibit....so if you get one suddenly, or know of someone who would like to exhibit with us...you can contact us right up to Show Time. You should have confirmation by late December. If you need it sooner than that, please so note on your application.

Registration and move-in for exhibitors: Please be sure to read your Guest Exhibitor Agreement, Page 1 & 2, #5 and #6 for dates and times.

We employ the Tucson Police Department as our security in the Tucson Convention Center from Wednesday, February 8, 2017 through Sunday, February 12, 2017.

If you have any questions or need more information, please contact me at 520-529-2231 or e-mail pmegaw@hotmail.com; or Rose Marques, Executive Assistant, at 520-322-5773, or e-mail tgms@tgms.org.

Best Regards,



Peter Megaw
Guest Exhibits Chairman



**TUCSON
GEM & MINERAL
SOCIETY**

Thought you might like to know

If you haven't taken the time to look at our website ... please do so because we are always updating and changing things. Something that we have added this year is "Bill's Corner." Bill Shelton has been conducting "Educational Classes" since 2011, on the first Tuesday of the month. Bill is now writing articles for us and they are being published on our tgms.org website. Check out some of his other articles on "Collection Building, Rarity and Type Minerals."

The following article is a follow-up to an educational class and has been posted to the website.

Azurite and Malachite By Bill Shelton

Recently, we held a class on the two species listed above – apparently a few people thought it was a good lesson and would like a short review of the highlights on the website for TGMS.

I think the associated species are worth knowing about and please note six are found with both azurite and malachite. They are cuprite, tenorite, calcite, chrysocolla, copper and wad – all according to Dana texts we consulted. Azurite also may be seen with Fe oxides and chalcidony. Malachite may come with chalcocite or limonite. Of course, there are others but these are perhaps the most common and well-documented associates. We also find pseudomorphs are commonly noted and for azurite we include azurite after cuprite, cerussite, tetrahedrite and gypsum. In the case of malachite, it is noted to replace azurite and cuprite. There are others as well but they are probably less common or widely known than the examples given.

Chemistry is one good way to compare minerals and here we find a great deal of similarity – they are both basic cupric carbonates. For your own benefit, take a look at the formulas on mindat.org or in your favorite textbook. While azurite has 69.2% CuO, malachite has 71.9%CuO – a minor difference. Malachite has, upon chemical testing, shown to contain occasional traces of zinc. Azurite is in contrast, ordinarily quite pure.

Because of this, you may expect the properties to be even more similar than they are – the actual results may be a bit surprising.

Clarity is dissimilar in that azurite is transparent to translucent while malachite is translucent to opaque. This will best describe the majority of samples one may encounter – exceptional examples may be good additions to your collection. Crystals of malachite are rare and almost always twins. Azurite, on the other hand tends to be common as crystals and here twins are rare. Color is quite different and azurite is azure blue to very dark blue. Most malachite is a bright green and may also be deeper shades that approach black which will sometimes be seen in banded pieces and also on crystals when they are found. Micro size crystals are noted to be green and transparent but such material is not usually seen. Malachite is also likely to be massive and can be botryoidal in form. Azurite is often in crystals but botryoidal and stalactitic forms occur as well.

Using mindat.org, I found that malachite has 5,478 photos and 11,798 localities. Azurite has 6,274 photos and 5,340 localities. An area of controversy concerns the type locality for azurite – some claim it to be Chessy, France but I am inclined to say there is no type locality because, as it says for malachite, it was known since antiquity. You should look at the lists for the localities given on mindat.org – there is a lot of valuable data here.

Azurite and Malachite By Bill Shelton ... CONTINUED

According to Minerals and their localities (2015) malachite is “a very common oxidation product of chalcopyrite and other secondary Cu sulfides occurring with azurite and some other secondary Cu minerals in gossan. It is widespread throughout the world”. Azurite is a “very abundant product of oxidation of Cu sulfides and it nearly always accompanies malachite. The Handbook of mineralogy lists aggregates to 9 cm and exhibiting several forms (maybe 20 or so) for malachite. They list crystals to 30 cm for azurite with typically complex crystals and over 100 forms. You should look at the Mineralogy of Arizona for the long lists that they contain – you will find a lot of places for both species on a county by county basis.

We do not make a huge effort to cover gem data but it seemed appropriate to do so and chose several sources. First, the Color encyclopedia of gemstones, where we find azurite as a source of rare faceted stones, mostly less than a carat but cabochons may be up to several inches. Malachite is virtually unknown as a faceted stone but cabochons and carvings are very frequently observed. If faceted, the stone would be under ½ carat and opaque. As you know, we do not usually bother to facet a stone when it is not quite transparent. Masses to 50 tons are also noted, so we should take that fact into consideration. Fluorescence, in multiple sources is said to be non-existent.

As a final note, we can find information as to what causes the two species to be different colors. It seems that the structure is different enough to affect the absorption of the copper ions and perhaps the bond size as well so that azurite produces a blue color unlike the green we see in malachite. In 1979, Marfunin said the structure in azurite was arranged so that the copper ion was in elongated octahedral coordination while malachite was in octahedral coordination – the difference may translate to bond length and that can cause a slight change in the absorption and color you actually see.



"The TGMS Christmas Party"

WHEN: Wednesday, December 14, 2016

WHERE: TGMS facility - 3727 E. Blacklidge Drive

WHAT TIME: Starting at 5:30 p.m., dinner at 6:30 p.m.
and the concert will begin around 7:30 p.m.

It will include a catered dinner and entertainment by Nossa Bossa Nova & Blues. This year we have added a dance floor, so don't forget to wear your dancing shoes!!

TGMS members pay \$5.00 and TGMS member invited guests \$10.00. This helps cover the expenses incurred in having a "GREAT" party. You can also contact the TGMS office and make reservations by calling 520.322.5773 or emailing tgms@tgms.org.

The deadline for signing up is December 9, 2016.

"Mark your calendars and come join the fun!"



ROCK TALK

Encouraging the interest and study in geology, mineralogy, lapidary and allied earth science.

FROM:

T.G.M.S.
P.O. BOX 42588
TUCSON, ARIZONA 85733



TO:

Tucson Gem and Mineral Society, Inc.

P.O. Box 42588
Tucson, AZ 85733

Phone: 520-322-5773
Fax: 520-322-6031
Email: tgms@tgms.org

Website: www.tgms.org

Facebook: [Tucson Gem and Mineral Society](https://www.facebook.com/TucsonGemandMineralSociety)

Twitter: [@TGMSociety](https://twitter.com/TGMSociety)

YouTube: [TGMS Video](https://www.youtube.com/TGMSVideo)

PURPOSE: To encourage interest and study in geology, mineralogy, lapidary, and allied earth sciences.

Meetings: Usually the first Monday of the month, starting at 7:30 p.m., except September (second Monday because of the Labor Day holiday), June-August (potlucks). The TGMS facility address is: 3727 East Blackledge Drive, Tucson, Arizona 85716

The Tucson Gem and Mineral Show ®:

The second full weekend in February, starting with Thursday.

Affiliations: American Federation of Mineralogical Societies, Inc. (AFMS), Rocky Mountain Federation of Mineralogical Societies (RMFMS), Visit Tucson, Tucson Metropolitan Chamber of Commerce (TMCC), Greater Oro Valley Chamber of Commerce

ROCK TALK is the official publication and is © 2016 by the **Tucson Gem and Mineral Society, Inc.** To reproduce material contained herein, commercial and other use requires written permission from the Tucson Gem and Mineral Society, Inc.

ROCK TALK Editor: P. R. McClain

ROCK TALK Assistant Editor: R. Marques

ROCK TALK Reporters/Contributors: Mark Ascher, Anna Domitrovic, Peter Megaw, Diane Braswell, Kerry Towe, Donn Cuson, Helen Serras-Herman, Paul Harter, Ellen Alexander, Bill Shehlton