The purpose of Daisy Mountain Rock & Mineral Club is to promote and further an interest in geology, mineralogy, and lapidary arts, through education, field experiences, public service, and friendship.

SOLNHOFEN LIMESTONE

By Susan Celestian

This year’s Tucson Gem and Mineral Show was as overwhelming as ever, but Stan and I discovered a vendor selling fossils out of the Solnhofen Limestone. It is an interesting rock formation, so I thought I’d focus on it for this issue.

Bavaria’s Solnhofen is what is called a Lagerstätte --that is a sedimentary rock that holds fossils displaying exceptional detail. In this case, it is a very fine-grained light-colored carbonate rock, deposited during the Jurassic Period, about 150.8-145.5 mya. The rare fossils include an unusual assemblage of hard- and soft-bodied marine and terrestrial organisms. See Figure 1.

Plattekalk is also a word applied to the Solnhofen. This is a limestone deposited in an environment wherein there is no bioturbation (disturbance of the sediment by burrowing, boring or other disturbance). Thus, the rock is thinly bedded and finely laminated, allowing the exceptional preservation of fossils. In some areas, the Solnhofen is fine-grained enough (grain size 1/250 mm!) to have been used as lithographic plates for printing.

Besides lithographic plates, the Solnhofen has been quarried over centuries for building stone, roof tiles, and floor tiles. It continues to be used as tiles, in artwork, and for concrete (http://www.solnhofen-natural-stone.com/solnhofen).

The YouTube video at https://www.youtube.com/watch?v=MeRfspn67j8 is a really interesting look at some past quarrying methods, including the creation of a lithographic plate. It is silent and 15 minutes long.

FIGURE 1 Area of Solnhofen Limestone in Germany

The box in the map of Germany above, outlines the area of Bavaria where the Solnhofen can be found.

Graphic by Susan Celestian

WIRE-WRAPPING CLASS

4:30-6:30 pm
Prior to the meeting on
Tuesday, March 5, 2018

• Bring: cab or stone, about quarter-sized or larger; 20 gauge or higher round dead soft wire; Round nose pliers and wire cutter.

Free, but donations are appreciated. Questions?
Contact Jennifer at Jennifer@eliteshuttersandblinds.com

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February 5, 2019
Board of Trustees Meeting Minutes

Correction from last minutes: Bill S. (Heads Education Committee) – not Bill F.

- In attendance: Clark L., Claudia M., Cynthia B., Deanne G., Don R., Ed. W., Howard R., Rebecca S., Stan C., Susan C., Tammy E., Tiffany P. and William F.
- Cynthia B. discussed our finances
  - Income: $2729.00
  - Expenses: $1607.14
  - Total Cash: $26,713.53
- Claudia M. presented new scholarship application
  - NAU costs about $27,266/yr. and UA costs $27,030/yr.
    - Recommendation to change scholarship to $1,500 was discussed
  - Winner must want to go into geosciences
  - Application will be considered by an appointed subcommittee
    - If no one accepted, money will roll over to next year
  - Scholarship recipients may reapply in subsequent years to receive additional assistance
  - A recommendation from teacher or another adult now required
  - No GPA requirement
  - The application form was accepted and can now be found on DMRMC website
- Howard R. discussed lapidary saw
  - Fee structure was approved to be changed
    - Small cut: $2 nonmember, $1 member
    - Large cut: $4 nonmember, $3 member
  - DMRMC has priorities on Monday’s 9 am to noon
  - A new blade will need to be purchased soon
- Show meeting was discussed
  - 1st meeting had about 20 attendants
  - Message boards will be used
  - S.T.E.A.M. night was a success
    - 180 people came to our table, were given coupon for show
- If anyone knows of other S.T.E.M/S.T.E.A.M. nights, please inform us

Respectfully submitted,
Rebecca Slosarik

February 5, 2019
General Club Meeting Minutes

- Thanks to member Susan C. for her presentation on rocks collected from her Australia trip last year
- Nancy G. led the raffle
  - $81 raised for the prize raffle, was very successful
  - Pictures were taken of winners
- Cynthia B. read the financial report, we are in good standing
- Stan C. discussed field trips
  - Red Cloud Mine went well
  - February 9th Field trip to Dragon Mine (by Wickenburg)
    - Stan sent email with additional information
    - Mica, feldspar, gold, black tourmaline, course lined geodes and thunder eggs
    - Please bring bucket, first aide, water, etc.
  - Coalition trip to Camp Verde February 23
    - CANCELLED DUE TO WINTER STORM
  - March 16th trip needs to be rescheduled due to show
  - Bill S. discussed S.T.E.A.M. night
    - SRP and DMRMC had presentations
    - Fluorescent tent was used
    - Rock identification was tested, will be used in show
    - Old tools, fossils and petrified wood presented
    - Response was overwhelmingly positive
  - Ed W. presented proposed scholarship increase to members
    - Will be discussed further
    - Option to raise amount from $1000 to $1500
  - Bob E. created transilluminator box for fluorescents to be viewed
    - Will be stored in civic center
    - Bring your own specimens to meetings to see them fluoresce

Respectfully submitted,
Rebecca Slosarik
January 17, 2019
Show Meeting Minutes

These are the minutes as abridged by the newsletter editor -- all monetary amounts have been deleted. Rebecca (secretary) will retain the more specific minutes.

- Open meeting, no attendance necessary
- Jim R. talked about vendors (third show as coordinator)
  - 156 tables displayed, 1 auxiliary table
    - 5 less than last year because of reconfiguration
    - Some vendors wanted more space, which is great!
    - 12% median turnover rate, ours was 18% this year
    - We have a strong waitlist and should have no empty tables
    - Only loss was Jerry and Patsy’s lapidary booth
  - If anyone wants a certain vendor, please pass along their information to the club
- Howard R. discussed marketing
  - Venues being considered: In & Out Magazine ad, Posters, Flyers, Message Boards on Highway, Foothills Focus ad
    - The message boards are difficult because ADOT, permits and liability insurance issues
    - Most want to cut this cost, no reduced price for continuously using them and not an affective avenue for advertising
    - Through surveys given at the shows, these are the advertising means that brought people in:
      1) Previous shows, or other rock hounds, word of mouth
      2) Websites
      3) Signs
      4) Flyers
  - Harkins free PSA being used again in surrounding theatres (Adobe format is needed for this)
  - Looking into the cost to advertise on Facebook
  - #rock shows 2019 on your own social media to help us advertise the show please!
  - S.T.E.A.M. (science, technology, engineering, arts and mathematics) Night used to advertise to children and parents
- Cynthia B. gave the good news about show finances
- Bob E. oversees the gym layout
  - 3 pm is the earliest we can setup because students are in class until then
  - The contract states the school will have tarp down by 3pm (may or may not get done)
  - Vendors cannot enter to setup before 4:30 pm
  - Table setup should begin around 4 pm
  - We are renting 45 tables, costing $1000
    - They are getting delivered by company around noon, and will be left near gym
  - Volunteers will be put into two groups with leads
  - Alan will be doing electricity again
  - We have until 8 pm Friday night to setup
- Nancy G. let us know we were all set on food trucks
  - New food truck because Flying Hawaiian will be on vacation
    - Burgers Amoré
      - They have a backup as well
  - Hot dog cart will be back
- Bill and Jeanne S. gave an update on the kids’ corner
  - We are expanding prizes and education for kids
    - Kits for kids to make bracelets at home
    - Children can decipher the difference between several similar minerals by different field tests ie. Magnetism, hardness, color, streak, etc.
  - 325 painted rocks were made
  - Rock animals almost done
  - Dino’s ordered
  - 6-7,000 rocks labelled, cleaned and organized into egg cartons

Minutes continued on page 4….
Show Meeting continued:

- Bolstering the knowledge for the future generation is pertinent within the club
  - Glad to see we will have the youngest volunteer yet working the kids’ corner
  - Chloe will be helping us, she wants to be a geologist when she grows up
- Kids corner participation is very high (considered best in state by other rock hounds)
  - Total 430 kids last year
- Lynda R. was not present to discuss admissions
  - Will have sign up sheet at next meeting
  - Admissions will be on both sides of entrance again, it worked out well in past shows
  - The survey table will be moved
    - Robin S. will announce the raffle
  - Will need volunteers to help her
- Jennifer G. will get ATM machine again

**NEXT MEETING WILL BE TUESDAY February 12TH AT 7:00 PM**

Respectfully submitted by Rebecca Slosarik

February 17, 2019
Show Meeting Minutes

- Open meeting, no attendance necessary
- Vendors: Jim R.
  - 158 tables
  - 31 vendors
  - 6 new vendors
- Advertising: Howard R.
  - 50+ websites will have our ads
    - Will start closer to show date
  - Will have several days as ad on FB
  - All media used:
    - In & Out
      - On the “In” section (what’s happening around town)
      - ¼ page ad as well
      - 3 years we have received the same price
    - Posters
    - Flyers
      - Have plenty of them without coupon if anyone wants some
- Expenses: Cynthia B.
  - In good standing
  - $1156 in expenses
  - Only 6 vendors have not paid at time of meeting
- Gym layout: Bob E.
  - Nancy team lead on left, Howard on right side of gym
  - Linda team lead in vestibule area
  - Alan will setup electricity
  - Wire wrapping, club admissions, faceting demonstration, t-shirt sales & club displays will all be at the exit
- Food trucks: Nancy G.
  - Burgers Amoré and hot dog cart still available for show
- Kid’s Corner: Bill & Jeanne S.
  - 2 more people needed for games
  - 2 more volunteers for egg carton distribution
  - 604 rocks labelled and ready, galena is the only specimen left to finish
  - More variety in quantity and quality of specimens in cartons than ever before
  - Many thanks to all the large quantity donations that made this possible
  - Future shows will include a handout with the egg cartons

Barros
Anthem Way and Daisy Mountain locations
Message Boards
Verbal approval given
$716 for 2 days
$1506 spent on all advertising so far (lower than last year)
- Coupons have been emailed to other local rock hound clubs
- Advertising to other rock clubs proves most effective
- Zones for Flyers:
  1) Walmart
  2) Safeway Anthem
  3) N. side Anthem Way, W. of Gavilan Peak Pkwy
  4) NE & NW corner, Gavilan Peak and Anthem Way
  5) Walgreens
  6) Fry’s Shopping Center
  7) Boulder Creek H.S. Library
  8) Tramonto
  9) Cave Creek
  10) Black Canyon City

Minutes continued on page 5....
TIPS ON MAKING A FINE CABOCHON*

1. **Grind Wet:** rock dust can be harmful to your lungs, some is toxic. You could also wear a dust mask.

2. **Assess Dry:** we all know water makes rocks look better than they do dry. Scratches will show more clearly when the rock is dry.

3. **Check, Check, and Re-check:** Throughout the process, check your dry rock for scratches and imperfections.

4. **Wander the Wheel:** don’t linger on one spot on the wheel. Grind across the whole wheel, and the wheel will last longer.

5. **Don’t Skip a Grit:** you may get impatient to finish, but don’t skip steps, if you expect to remove all scratches. Move sequentially through the grits.

6. **Keep it Slow:** rocks start to become polished when the pad partially dries, and the rock catches on the leather. A slow wheel generates less heat, and reduces chances of harming the rock. And hang on tight!

7. **Cleanliness is Next to Godliness:** always rinse stones between grits or polishes. And clean machines between grinding sessions. Seal grits & polishing compounds in containers to avoid contamination. It wouldn’t hurt to cover polishing wheels also. It’d be a shame to add a scratch on the last step!

*(adapted from https://www.interweave.com/article/jewelry/how-to-polish-rocks-8-expert-stone-polishing-tips/)*

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Claudia talks with kids choosing rocks and minerals for their egg cartons, during the 2017 club show. *Photo by Susan Celestian*
ENVIRONMENT OF DEPOSITION: During the late Jurassic, most of Europe was flooded by a warm, shallow sea, occupied by an archipelago of small islands. Reefs served to divide the sea in the Bavaria, Germany area into lagoons, isolated from the open ocean AND from the land. As a result, the water became quiet, stagnant, anoxic, and hypersaline -- not water that supports life -- and so essentially no organisms were able to survive, and as a result the sediment was undisturbed, nor were dead organisms ravaged by scavengers/predators. Organisms might swim in and feed in the upper, more oxygenated water; however, upon death they sank into the toxic lower layers (devoid of predators/scavengers). Rapid burial by very fine carbonate sediment created the exquisitely detailed fossils we find today -- even to the preservation of feathers, fine antennae, and solely soft-bodied creatures (like jellyfish).

The list of organisms preserved include (among many others) about 750 species: marine reptiles, fish, pterosaurs, dinosaurs, the very famous feathered Archaeopteryx (https://commons.wikimedia.org/wiki/File:NHM_-_Archaeopteryx_lithographica_Fossil.jpg), dragonflies and other insects, plants, feathers, brittle stars, starfish, lobsters, crabs, shrimp, jellyfish, horseshoe crabs, rays, floating crinoids, ammonites, turtles, sea urchins, and squid.

IMPORTANCE: These fossils give scientists a glimpse at the biodiversity of the time, as many of them are unlikely to be preserved, under normal conditions. The detail preserved reveal fragile and fleshy physical characteristics that normally are destroyed before preservation. For example, the feathers preserved in some of the Archaeopteryx fossils help to establish a link to modern birds.

FOSSILS: See Figures 1-8 for examples of Solnhofen fossils, out of the Barking Gecko Enterprises collection.
Mecochirus longimanu, an extinct lobster-like creature. “Longimanu” means “long arm”.
Photos by Stan Celestian

Left: Eryon cuvieri, an extinct crustacean.

Right: Eryma minuta, an extinct lobster.
Photos by Stan Celestian

Solnhofen continued on page 8…. 
Aeger tipularius, a large fossil shrimp. Photos by Stan Celestian

Palinurina longipes, an extinct crustacean. Photos by Stan Celestian
Everybody started out on the pegmatite, with empty buckets. On the immediate bottom right, Dave hunts for the elusive green -- and rarely pink -- tourmaline.

Purple Owl's Clover (Castilleja exserta), and other wildflowers adorned the hillsides -- despite the fact that it is still a cool winter!

Photos by Susan Celestian
Stan points the way to a nearby hillside hording thundereggs with quartz crystal-lined vugs.

Photos by Susan Celestian

California Poppy (Eschscholzia californica) - above; Daisy Desertstar Desert Star (Monoptilon bellidiforme) - right; and several as yet unidentified flowers from the area. Can’t wait for wildflower “season”! Photos by Susan Celestian
REFLECTIONS ON BURRO CREEK COLLECTING
By Stan Celestian

I recently re-visited the site of our Burro Creek field trip. It is fascinating place to explore, in fact, I know of several other rockhounds who have spent years exploring the area and have found many interesting deposits of colorful and patterned chert. From where we parked on the field trip I explored an area a bit south and west and found an abundance of “cut-able” chert. There was what is locally known as pastelite and other chert called bacon chert as well as what I called Picasso chert (after the examples of Picasso agate and Picasso marble). This Picasso chert formed by a previously formed chert (solid and brittle) that was fractured and then re-lithified to create an interesting, angular pattern.

PICASSO CHERT
A three-dimensional jigsaw puzzle preserved in rock. The original brittle chert was broken, and then moved up-and-down, and in-and-out. Voids between the pieces were filled with more chert to make a very durable, and polishable rock. Photo by Stan Celestian

PICASSO CHERT - Close Up View
This view shows the delicate and extensive degree to which the chert was fractured. The distinct, narrow dark lines are fractures filled with chert. The small dark blotches are tiny growths of magnesium oxide crystals. If they had continued to grow they would have produced a dendritic chert… too bad they didn’t. Photo by Stan Celestian
This is an area of volcanic rocks that were deposited around 70 million years ago, as an explosive eruption deposited layers of silica-rich ash, in the area near what is now Bagdad. A short walk west of the Picasso chert led to an area where beautiful white drusy quartz was found. Typically, to form quartz crystals large enough to see, silica-laden water must move into an area where voids or openings in the rock exist. It is in these voids where the solutions can deposit their load of material to form minerals - in this case quartz. Years after the deposition of the silica-rich ash, and its transformation into the solid rock, volcanic tuff, movement and fracturing of the rock took place. Cracks along small faults were formed which allowed fluid (water) to move. The evidence I saw of movement was a piece of chert that had "slickensides. This is a surface feature that is produced under great pressure when one rock slides past another. The result is a very fine-grained rock with grooves or striations that formed as one block slid past the other. This is evidence that faulting occurred. Faulting also breaks the surrounding rocks, and if the rocks are brittle, like the chert in this area, many voids are created. It is in these voids that the drusy quartz crystals were formed.

SLICKENSIDES

This example of slickensides is not from Burro Creek. It is another volcanic rock, rhyolite, from near the Dragon Mine. In this case an abundance of iron and magnesium in the rhyolite caused the slickensides to be very dark. At Burro Creek, the slickensides were nearly white due to the different composition of the rock.

Photo by Stan Celestian
As a rockhound, geologist and photographer, I am always on the lookout for interesting geological examples. I look not only for the rocks to collect, but for examples of various types of weathering. The hills in this area provided excellent examples of differential weathering, i.e., rocks that weathered at different rates to produce uneven surfaces.

Wonderful examples of rock weathering are abundant on the hills of the chert collecting area. Each rock has a story to tell, if you listen closely enough… Here are some examples I found.

**DRUSY QUARTZ**

This is a side view of the drusy quartz shown above. It shows that the crystals coated fragments of rock, that were created during the faulting event. Much chert can be seen filling in what were open spaces between the many fragments. *Photo by Stan Celestian*

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**RILLENSTEIN**

A truly amazing surface pattern consisting of very small, shallow ridges and valleys, that can develop on very fine grained rocks exposed at the surface, is called rillenstein pattern. Typically it forms on limestone through a slow chemical process where the limestone is dissolved by natural acids in rainwater. This rock, however, is a calcite-rich volcanic tuff. It is very fine-grained and has weathered, in place, by the infrequent rains (that carry carbonic acid - as does all rainwater). These tiny little ridges and valleys represent many centuries of weathering in this desert environment.

This tuff was fractured by forces working in the area - probably from various igneous intrusions working their way underground and to the surface as later volcanic eruptions. With the tuff broken, silica (dissolved in ground water) was able to create deposits of chert around the tuff fragments. When exposed to the agents of weathering, the tuff, being weaker, weathered faster than the chert. Although the carbonic acid in rainwater is very weak, after many… many years the tuff has weathered, while the chert has not. This what is meant by differential weathering. It is a rock that consists of different types of rocks (like the tuff and chert above), that when exposed to the agents of weathering and erosion, break down at different rates and produce distinctly different profiles. In this case, the chert stands out, away from the weaker tuff.
MORE RILLENSTEIN

Even within the same rock type, the process of weathering can change. Here, this light-colored tuff has developed the rillenstein pattern, but a closer look (enlarged view on the right) shows that there is a textural change from a coarse to fine rillenstein pattern. The finer pattern is closer to the chert boundary. The boundary between the two pattern textures is delineated, at least in the upper portion of the image, by a thin, dotted yellow line. Why is there a pattern change? Was it an infusion of chert into the tuff? Was it a baking of the tuff associated with the intrusion of the chert? These are questions that could be answered by further research.

This final pair of images is of the same rock. The image on the left shows the weathered surface, rich with shades of brown. The back of this piece of chert is shown on the right. Why is the weathered surface so different? Small amounts of iron within the chert were exposed and then were weathered. That iron did not appreciably color the chert; however when weathered, the iron was released and formed iron oxides that stained the nearly white chert various shades of brown. More weathering released more iron. Over many years that iron built up on the surface of the chert, staining it darker and darker. A little iron goes a long way in staining the nearly white chert.

Also note the fragmented nature of the chert. This is evidence of movement, perhaps along or near a fault zone. Sharp breaks indicate rapid movement, along with low confining pressure (close to the Earth’s surface). Bending, or many small breaks, is an indication of slow movement over many years, and, probably deeper beneath the surface. At greater depth (and higher temperatures), the brittle chert would behave like a plastic. It would simply bend under the pressures. But, that is a subject of a future article.

In summary, there are a lot of interesting Geologic phenomena in even the most common rocks. Take a closer look and ask… Why?
Recently the Board voted to initiate a raffle, at the general meetings. Free door prizes will still be given out—remember you get a second ticket for wearing your name badge! However, items with a bit more panache will be available for a drawing, whose tickets cost $1 each. This is a chance to acquire some more upscale specimens/jewelry/tools, and add to the club coffers. Good luck!!!

Here are a couple items on the block in March.

**Blue Mountain Jasper, Malheur Co, Oregon**
102mm x 82mm x 7mm
Donated by Howard Roose

**Aragonite, Mexico**
Donated by Bob Evans

**SPEAKER FOR MARCH MEETING**

March’s speaker will be Catie Carter, mineral curator for the Mining, Mineral and Natural Resources Museum (MMNRE), now under the direction of the University of Arizona.

She will be updating the club on the status of the effort to re-establish a museum at the old Shriner’s temple, formerly the home of the Arizona Mining and Mineral Museum, on Washington Avenue in downtown Phoenix.
### UPCOMING FIELD TRIPS

**WHEN:** Saturday, March 2, 2019  
**WHERE:** Planet Mine  
**WHAT:** Specular Hematite, Chrysocolla; may take side trip to Swansea ghost town, other mines in area  
**MEET:** 9:00 at rest area IN Bouse (there is a WWII tank nearby)  
**LEADER:** Stan Celestian

**WHEN:** Sunday, March 10  
**WHERE:** DoBell Ranch  
**WHAT:** Petrified Wood  
**MEET:** TBA  
**LEADER:** Ed Winbourne  
**OTHER:** Fee

**WHEN:** Saturday, April 6  
**WHERE:** Contact Mine  
**WHAT:** Amethyst  
**MEET:** TBA  
**LEADER:** Ed Winbourne

**WHEN:** TBA  
**WHERE:** Black Pearl Mine on Aguila Rd.  
**WHAT:** Fluorescent Minerals  
**MEET:** TBA  
**LEADER:** Ed Winbourne  
**OTHER:** This will be an evening/after dark trip. Prior to dark, there will be a potluck. Sounds like fun! Portable UV lights will be coming along for the ride. (feel free to bring your own).

**WHEN:** Saturday, May 11, 2019  
**WHERE:** Payson area  
**WHAT:** Zebra Chert, Pennsylvanian Fossils  
**MEET:** TBA  
**LEADER:** Ed Winbourne

### NOTE FROM THE EDITORS

Have a geological interest? Been somewhere interesting? Have pictures from a club trip? Collected some great material? Send us pictures — or write a short story (pictures would be great).  
**Deadline for the newsletter is the 22nd of the month.**

Mail or Email submissions to:  
Susan Celestian  
6415 N 183rd Av  
Waddell, AZ 85355  
azrocklady@gmail.com

### NEEDED: QUALITY MINERAL (or OTHER) DONATIONS WITH LABELS — for monthly raffle prizes; and for raffle, door prizes, and sales tables at the annual show. If you have specimens to donate, please see Robin Shannon. The Daisy Mountain Rock and Mineral Club is a 501(c)(3) non-profit organization, and will gratefully acknowledge your donation with a Tax Deduction Letter. Thank You!

### DATES SUBJECT TO CHANGE

Stan and the field trip committee will be actively looking for productive spots for field trips. If you have any suggestions, you are encouraged to contact him at stanceles-tian@gmail.com

Visit http://rmfms.org/ for news about conventions, events, and associated clubs. If you are travelling, you might want to contact a club local to your destination. Maybe they have a field trip you could join, while in town.
**UPCOMING AZ MINERAL SHOWS**

**March 2-3 - Mesa, AZ**  Apache Junction Rock & Gem Club; Skyline High School, 845 S Crismon Rd; Sat 9-5, Sun 10-4; Admission: adults $3, students $1, 12 and under free.

**March 8-10 - Cottonwood, AZ**  Karmic Beads & Gems; Verde Valley Fairgrounds, 800 E Cherry St; Fri-Sat 10-6, Sun 10-4; Admission: free.

**March 9 - Coolidge, AZ**  Pinal County Gem and Mineral Club; Pinal Geology and Mineral Museum at Artisan Village, 351 N Arizona Blvd; Sat 9-5, Sun 10-4; Admission: Free.

**March 16-17 - Anthem, AZ**  Daisy Mountain Rock and Mineral Club; Boulder Creek High School Gym, 40404 N Gavilan Peak Pkwy; Sat 9-5, Sun 10-4; Admission: $3 adults, $2 seniors and children, children 12 and under free. For $1 off coupon, go to page 18 in this newsletter.

**April 5-7 - Tempe, AZ**  Flagg Mineral Society 2019 Minerals of Arizona Symposium; Drury Inn & Suites, 1780 W Ranch Rd, Tempe, AZ; Fri 3-5 Micro-mineral Session, 5-10 Mineral Sale, Sat 8-4 and 6 p.m. banquet; Sun 9-11; Registration required. [http://flaggmineralfoundation.org/home/minerals-of-az-symposium/](http://flaggmineralfoundation.org/home/minerals-of-az-symposium/)

**April 27 - Cornville, AZ**  Verde Valley Rockhounds; Windmill Park, 9950 E Cornville Rd; Sat 9-5; Admission: free.

**May 4-5 - Kingman, AZ**  Mohave County Gemstoners; Kingman Academy of Learning, 3420 N Burbank; Sat 9-5, Sun 9-4; Admission: free.

**July 6-7 - Pinetop, AZ**  White Mountain Gem & Mineral Club; Hon-Dah Casino and Resort, 777 Hwy 260; Sat 9-6, Sun 10-4; Admission: $2 adults, free for children under 16.

**October 12-13 - Sierra Vista, AZ**  Huachuca Gem & Mineral Club; Cochise College, 901 N Columbo Av; Sat 9-5, Sun 10-4; Admission: free.


A good source for a list of Arizona Mineral Clubs and contact information is [http://whitemountain-azrockclub.org/Public_AZ_Clubs_Links.html](http://whitemountain-azrockclub.org/Public_AZ_Clubs_Links.html)

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**FACEBOOK**

Visit and join the club page periodically. See what is happening, and boost our visibility on the web. Go to: [The Daisy Mountain Rock and Mineral Club](https://www.facebook.com/daisyrockandminerals/). It is set up so you can post photos of outings or related items.

**WEBSITE**


If you have comments, contact Nancy Gallagher.

**GROUPWORKS**

As a DMRMC club member, your name should be available at https://app.groupworks.com/#/login, and you should receive an email linking you to registration. Create an account and receive reminders about club events, meetings, and important club information. You may post pictures and information – all seen only by club members.

**Upcoming Meeting Programs**

Club President, Ed Winbourne has been working hard to schedule great programs for this season’s club meetings. Below is a list of the current program offerings:

- February: Australia by Susan Celestian

**Officers, Chairpersons, & Trustees**

- President: Ed Winbourne…ewinbourne@gmail.com
- Vice President: Stan Celestian
- Secretary: Rebecca Slosarik – rslosarik1@gmail.com
- Treasurer: Cynthia Buckner
- Publicity: Howard Roose
- Membership: Tiffany Poetsch – tpoeutsch@gmail.com
- Editors: Susan & Stan Celestian…azrocklady@gmail.com
- Field Trip: Stan Celestian…stancelasian@gmail.com
- Show Chair: Ed Winbourne
- Trustees:
  - Claudia M
  - Cynthia V
  - Susan C
  - Tammy E
  - Bob E
  - Jennifer G
  - Don R
  - Tiffany P
  - Jim R
  - Witt R
  - Howard R
  - Bob S
  - Rebecca S

Meetings are held the 1st Tuesday of the month at the Anthem Civic Building, 3701 W Anthem Way, Anthem, AZ 85086. Business meeting at 6:30 pm. We do not meet in July or August.

DMRMCLUB@GMAIL.COM

Membership Dues:  **$20.00** Adults per Person  
**$25.00** Family (2 people)  
**$5.00** Additional children

**Meeting Dates for 2019**

Jan 8, Feb 5, Mar 5, Apr 2, May 7, June 4, Sept 3, Oct 1, Nov 5, Dec 3
2019 ANTHEM
GEM & MINERAL SHOW
March 16th  Saturday  9am—5pm
March 17th  Sunday  10am—4pm
Boulder Creek High School
40404 N Gavilan Peak Pkwy
Anthem, AZ 85086

Kids events, Gems, Minerals, Fossils, Jewelry,
Fluorescents, Beads Wire Wrapping, Geodes,
Adults $4, Seniors and Students $2,
Children 12 and under FREE

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2019 ANTHEM GEM & MINERAL SHOW

March 16th-17th

@ Boulder Creek High School
40404 N. GAVILAN PEAK PKWY
ANTHEM, AZ

SATURDAY MARCH 16 9am—5pm
SUNDAY MARCH 17 10am—4pm

www.dmrmc.com
Find us on Facebook

Kids Activities, Jewelry, Gems, Minerals, Fossils, Fluorescents, Beads, Wire Wrapping, Geodes, Raffles

Adults $4, Seniors and Students $2, and Kids 12 and under are FREE
4th ANNUAL
TOUCH OUTER SPACE

PINAL GEM & MINERAL SHOW

MARCH 9, 2019
Pinal Geology & Mineral Museum: 351 N. Arizona Blvd, Coolidge, AZ.
9:00 AM - 2:00 PM