

JULY-AUGUST, 2024

NEWSLETTER OF THE
SOUTH CENTRAL FEDERATION
Of Mineral Societies



Member of: American Federation of Mineral Societies

ABOUT THE SUBJECT MATTER ON THE COVER



INSIDE THIS ISSUE

1. Front Cover
2. Table of Contents
3. SCFMS Information
4. President's Corner / Tri-City
GMS Show Flyer
5. The President's Corner Too-
Help / SCFMS 2024 Website
Contest
6. Urgent Help Needed
7. Membership and Insurance /
Crack the News
8. Dues and Insurance Form
9. Officer's, Editors, and Web
Master's Form
10. Officer's, Editors, and Web
Master's Form Continued
11. A Huge Thank You / Keeping
Kids Connected to Safety
12. Keeping Kids Connected to
Safety Continued / You Might
Be A Rockhound If...
13. Gem Capers
14. Newsletter Deadline / Geology
Lab For Kids
15. Geology Lab For Kids Contin-
ued
16. Tungsten
17. Tungsten Continued
18. SCFMS Shows/Thank You

SOUTH CENTRAL FEDERATION OF MINERAL SOCIETIES, INC.

2024 SCFMS OFFICERS

President: Don Shurtz

Executive V-P: Sigrid Stewart

Secretary: Vacant

Treasurer: Henry Rojas

Web Master: Don Shurtz

**Exec. Secretary:
Susan Burch**

**AFMS Endowment Fund Raffle
for SCFMS: Walt Benezé**

**SCFMS Endowment Fund
Treasurer: Walt Benezé**

**Nominating Committee –
Ron Carmen**

Past President: Roger Burford

For more information or to send information to the SCFMS or an officer, please email:

scfmsinformation@gmail.com



PURPOSE

*To promote popular interest and education in the various earth sciences, in particular those hobbies dealing with the art of lapidaries and the science of minerals, fossils, as well as their associated fields.

*To cooperate with educational and scientific institutions or other groups engaged in increasing knowledge in the earth sciences.

*To cooperate with or become members of similar Federations in the United States and elsewhere.

*To assist in the formation of earth sciences societies in localities where public interest justifies their formation.

**E-MAIL ADDRESS
CORRECTION AND CHANGES**

It is each members responsibility to send your email address corrections to the SCFMS Editor:

Susan Burch,
scfmseditor@yahoo.com

**NEWSLETTER PUBLISHED
BI-MONTHLY**

DUPLICATION

In most instances material in this newsletter may be duplicated for non-commercial purposes providing full credit is given. There are exceptions, please do not assume permissions. For Commercial use, the individual author(s) must be contacted for their approval.

A NOTE FROM —THE EDITOR—

THE FINAL DEADLINE, ETC.



For each newsletter the deadline is the 25th of the month prior to scheduled publication. February-April-June-August-October-December all provide the deadline for the following bi-monthly issue. Although, the Editor may chose to adjust the deadline due to circumstances.

As a reminder! Shop hints and tips that are used in this newsletter have not been evaluated for safety or reliability by myself. Please use caution and safety when trying out any new idea. Please, if you have something urgent give me a call, but send newsletter content via email.

ANNUAL SHOW 2024

November 23-24, 2024

ANNUAL MEETING

November 23, 2024

**SCFMS WEB-SITE:
WWW.SCFMS.NET**

The SCFMS is a member of the American Federation of Mineral Societies. amfed.org

NEWSLETTER EDITOR/BEAC:

Susan Burch
scfmseditor@yahoo.com





Our Convention

By the time you receive this message, there will only be about 4 months until the SCFMS Convention. The Convention is being hosted by the Dallas Gem and Mineral Society (DGMS), and they have been working on the plans for the Convention all year. Mr. Ted Wilson, a previous president of DGMS, is heading up the planning activities. The DGMS show will be on November 23 and 24 – the Convention activities will all be on Saturday, November 23. Included will be the Breakfast with the Editors and Webmasters, the Delegate Meeting, a President's Luncheon, and the Awards Dinner.

If you have any questions as to who should attend the Convention, you only need to look at the SCFMS Constitution. The answer is the Board of Directors. The Constitution, Article VI, defines the Board of Directors as “The Board of Directors of this Federation shall be the President, Executive Vice President, eight District Vice Presidents, the Secretary, the Treasurer, and the current Presidents of each member society.” Anyone may attend the Annual Meeting, but only members of the Board of Directors are allowed to vote. The President of each SCFMS Club is a member of the Board of Directors and is required to attend the Annual Meeting. However, there are provisions for SCFMS Club Presidents to designate a Delegate and, if desired, an Alternate. Delegates (and alternates, if desired) need to be named 30 days in advance of the Annual Meeting. A form for the Club President will be available on the SCFMS Website.

There are no rock-collecting field trips planned for the convention. However, we are setting up to have a group Field Trip to the Perot Museum of Nature and Science on Sunday morning. The Perot is a great museum with a fine collection of minerals in the Lyda Hill Gem and Mineral Hall and a nice dinosaur collection featuring Cretaceous Dinosaurs and Pleistocene Mammals from Texas in the Tom Hunt Life Then and Now Hall. For a group tour, there needs to be at least 20 people to sign up and pay in advance. Normal admission to the Museum is \$25.00 per adult

(13+) and \$15 for youth (2 – 12). If we go as a group, the current rate is \$15.00 for adults and \$12.00 for youths. However, to get the reduced rates we will need to have the money and commitment by November 1st – the day the Show Registration Form is required. After that, additions to the group revert to the normal entrance rate. Additionally, parking is \$10.00 per day so carpooling is encouraged. A docent-led tour of the Gem and Mineral Hall and the Dinosaur Hall would take about an hour. After that, you may explore the rest of the Museum which closes at 5:00 PM. Sign up on the show registration form (soon to be posted on the SCFMS website). If we do not get the required minimum group size (20), the group tour will be canceled.

A lot of work has gone into planning for a successful Annual Meeting. My thanks go out to Ted Wilson and the Dallas Gem and Mineral Society for their efforts. It would sure be nice if we could reward their efforts by having the most successful Convention ever. Start your planning to attend now. Thanks!

Tri City Gem and Mineral Society
54th Annual Gem and Mineral Show

Rock

Rustlers

October 12-13 2024
 Saturday 10-6
 Sunday 10-5

Grand Prize
 Door Prizes
 Rocks
 Minerals
 Fossils

Adults \$5.00 18 and up
 Juniors \$3.00 17-13 years old
 Kids 12 and under FREE

Frank W. Mayborn Civic And Convention Center
 3303 N. 3rd St. Temple, Texas 76501

Ruth Rolston, Show Chair David Farhie, President
 @TriCityGemMineral

THE PRESIDENT'S CORNER TOO – HELP**Don Shurtz, SCFMS President**

*Don Shurtz,
SCFMS Website
Contest Chair /
Executive
Vice-President*

The SCFMS has 35 member clubs with a total membership of about 3000 people (adults and juniors combined). The Board of Directors for the SCFMS has less than 50 members (the President of each club, the SCFMS President, the Executive Vice President, the Secretary, the Treasurer, and the Eight District Vice Presidents). That is about 1.5 percent of the total SCFMS membership. You can add in the thirty Committee Chairs and be about 2.5 percent of the SCFMS membership. Considering that some people hold multiple positions it is probably closer to 2 percent of the SCFMS membership to fill in all the positions. Yet we have SCFMS officer and committee positions that are not filled. For Officers, we need a Secretary and two District Vice Presidents to fill all the positions. The Secretary can be anyone in the SCFMS membership. The District Vice Presidents are for District II and District V. The District VP must be a member of one of the clubs in the district. District II is South Texas including Clear Lake G&MS and Houston G&MS) and District V is West Texas including Big Springs Prospectors Club, Central Texas G&MS, Chihuahuan Desert G&MC, Golden Spread G&MS, Hi-Plains G&MS, Lubbock G&MS, and Midland G&MS). Certainly, there is someone in one of these clubs who could spend a couple of hours a year to be the District Vice President. As the elections were held at our last Annual Meeting, the positions may now be appointed. To volunteer, please contact me at: don.shurtz@gmail.com.

As for the Committee positions, some are filled by a designated officer (e.g., the Budget Committee Chair is filled by the SCFMS Executive Vice President). I would encourage everyone to look at the SCFMS Officer Committee Chair and Member list on our website at https://www.scfms.net/officers_committees.htm to see what positions need to be filled. I would be ecstatic if all the positions were filled. In fact, I would be ecstatic if only every Chair position was filled.

If you receive this newsletter, please forward it to the members of your club, or at least get the word out at your next meeting or in your next newsletter. There are people out there who want to help the SCFMS – we just need to find them and have them get in contact with an SCFMS Club officer.

SCFMS 2024 WEBSITE CONTEST**Don Shurtz, SCFMS Website Contest Chair**

The 2024 Website Contest entry date is coming up. All entries, both competitive and non-competitive, need to be entered by September 22, 2024. To enter the contest, the club's webmaster needs to fill in an online Entry Form. The link to the Entry Form can be found on the SCFMS Website Contest Page or the AFMS Website Contest Page. Here are links to the SCFMS and AFMS Website Contest Page:

www.scfms.net/web_contest.htm

<https://www.amfed.org/contests/website-contest>

In the past, I had been able to accept entries for a few days after the entry deadline. However, now that the form resides on the AFMS page, the deadline will be firm – no late entries can be accepted.

The good news about having the Entry Form online is that it is the only form you will need to fill in and submit. In prior years you also needed to submit a scoresheet with the header information filled in. This year, that is an automated process. I highly recommend you look at all the documentation on the AFMS or SCFMS website contest pages. The 2024 Website Contest document is a general overview of the contest and changes. The 2024 Website Contest Entry Form Instructions detail what information is required for the Entry Form. The 2024 Website Contest Guidelines provide details for each of the requirements. The 2024 Website Contest Rules provide more information on entries and the flow of the judging process. Finally, the 2024 Website Contest Score Sheet details the requirements but is intended for your own personal use. I highly recommend you download a copy of the Scoresheet for a self-evaluation. The contest has significantly changed for 2024.

As previously mentioned, an entry can be Competitive or Non-Competitive. Only Competitive entries are eligible to advance to the AFMS contest. The Non-Competitive entry is intended for those webmasters who want to have the evaluation comments from the judges to further develop their website (e.g., a new website that you want to be evaluated or an existing website that you want to update) but do not believe is quite ready for the full contest).

Remember: The Entry Deadline is September 22, 2024.



URGENT – HELP NEEDED**By Don Shurtz, SCFMS President**

The SCFMS needs HELP! We need to fill several critical officer and committee chair positions. The one most crucial position that needs to be filled is the SCFMS Secretary. The SCFMS Secretary is normally an elected position, but as no one stepped up at the last elections, the position can be filled by appointment. The duties of the SCFMS Secretary, as stated in the Constitution, By-Laws, and Operating Procedures are:

“It shall be the duty of the Secretary to keep accurate records of the proceedings of all meetings of the Federation with its Board of Directors; to cooperate with secretaries of other like Regional Federations and with member societies’ secretaries; to prepare the annual agenda at the direction of the President; to prepare, the Directors’ packet with reports received from committee chairpersons and other officers for the annual meeting (packet to be mailed, electronically or by first class mail) so as to reach the Directors at least sixty (60) days before the annual meeting); and to perform such other duties as outlined in the OPERATING PROCEDURES.”

For most of the year, there are not a lot of things for the Secretary to do. However, as we approach the Annual Meeting, we need to prepare and distribute the Directors’ Packet. The Directors’ Packet needs to be distributed by September 24 to support the November 23 Annual Meeting. I estimate it will take less than 20 hours to gather and combine the reports into the Packet. I can help with this effort.



Other critical positions that need to be filled are the Directory Committee Chair and the District Vice Presidents for District II (Southeast Texas) and District IV (West Texas). The District Vice Presidents and elected positions, but as they are currently vacant, the prospective District VPs can be appointed. The District VP needs to be a member of a club in the district she/he represents. The Directory Committee Chair is an appointed position. The duties of the District VPs are relatively minimal and can be found in the Constitution and By-Laws. The duties of the Directory Chair are a little more intensive as he/she is responsible for assembling the yearly directory. Most of the effort is required in January and February. This person should be familiar with spreadsheets and word processing.

These positions must be filled, and filled soon. If you receive the SCFMS Newsletter, please get this information out to the members of your club. Feel free to forward this and any SCFMS Newsletter to your club members. If you know a potential candidate, please contact me by email. PLEASE HELP.





MEMBERSHIP *and* INSURANCE *Annual Dues*

SCFMS DUES AND INSURANCE DEADLINE IS SEPT. 30

By Susan Burch

To SCFMS Member Clubs,

Hello all, It's that time of year again! It is with pleasure I will now serve the Federation as Executive Secretary. The prior two to hold this position have been amazing, and I have big shoes to fill.

To figure out the payment amount, make certain you're **using the combined dues and insurance fillable form** posted to the SCFMS website: [2024-2025 SCFMS dues-ins form FILLABLE.pdf](https://2024-2025-SCFMS-dues-ins-form-FILLABLE.pdf)

As always, please download the form first, (do not attempt to complete within your web browser!) Fill, save, email or print and include with your payment. If you can not use it as a fillable-form, you may utilize a PDF editor on your PC or online. If you do not have one, you can use a free online one like <https://www.sejda.com/>.

[As always, make the check payable to SCFMS or the South Central Federation of Mineral Societies.](#)

The NEW mailing address is:

SCFMS Executive Secretary
c/o Susan Burch
10911 Holly Springs Dr.
Houston, Texas 77042

Please, include the two-page officers form with your membership and insurance dues. Some of the information we have on file is from 2022 or before. Even if there has not been a change in officers since Feb 1st, be sure to update contact information for your officers via the fillable officer form at [2024-2025 OFFICER FORM FILLABLE.pdf](https://2024-2025-OFFICER-FORM-FILLABLE.pdf) and submit to the address above by September 30, 2024 or within 30 days of electing new officers so you don't miss any important communications!

Please note:

•FOR THE CURRENT INSURANCE RATE, PLEASE USE THE 2024 FORM!!!!

- Use membership numbers as of Sept. 1.
- SCFMS Dues and Insurance payments must be remitted (In my hand) no later than Sept. 30, 2024.
- Your club may be dropped from the Federation membership and Insurance Program if payment is not received by September 30th, 2024.
- Update any change in your Club Officers promptly.
- SCFMS Annual Convention takes place in Mesquite, Texas, hosted by DGMS November 23-24, 2024.
- Be sure you've submitted your club's Delegate Form to Don Shurtz if your club is sending someone other than your club President.

In case you can not download forms, I've included them on the next few pages.

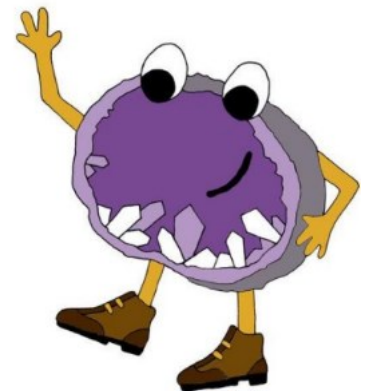
Thank you,

Susan Burch
SCFMS Executive Secretary
scfmseditor@yahoo.com
936-616-5397 (texts preferred)



CRACK THE NEWS

Find the third issue of the newsletter by kids for kids of all ages here:



<https://drive.google.com/file/d/1WRlyqmXeACORq69LzMFzIIvHTfko8RIQ/view?pli=1>





THE SOUTH CENTRAL FEDERATION OF MINERAL SOCIETIES
Arkansas • Louisiana • Texas

SCFMS Combined Dues and Insurance Form

Dues and Insurance Payments MUST BE RECEIVED BY SEPTEMBER 30, 2024

CLUB INFORMATION:

Club Name: _____

Club Address: _____

City: _____ State: _____ Zip: _____

CONTACT PERSON FOR CLUB:

Name: _____

Address: _____ Zip: _____

City: _____ State: _____

Phone: _____ Email: _____

SCFMS MEMBERSHIP DUES & INSURANCE:

- Use club membership count as of September 1
- Yearly adult membership is **\$3.75 (\$2.00 for dues and \$1.75 for insurance)** per adult
- Yearly junior membership is **\$2.15 (\$0.40 for dues and \$1.75 insurance)** per junior*
- *Junior members are those under 18 years of age on September 1
- There is a 10% late fee if payment is received after September 30
- You must download first, then fill/save/print and mail or email this completed form with a check payable to SCFMS or South Central Federation of Mineral Societies.

of Adults: _____ x \$3.75 ea. \$ _____

of Juniors (under 18): _____ x \$2.15 ea. \$ _____

Late fee 10% if received after September 30: \$ _____

Total Dues and Insurance payment: = \$ _____

DATE: _____ CHECK #: _____

SEND PAYMENT TO: THE SOUTH CENTRAL FEDERATION OF MINERAL SOCIETIES

c/o SUSAN BURCH, SCFMS EXECUTIVE SECRETARY

10911 HOLLY SPRINGS DR., HOUSTON, TX 77042

****To contact the Executive Secretary email: scfmseditor@yahoo.com or call 936-615-5397****



Member of the American Federation of
Mineralogical Societies



SCFMS CLUB OFFICER, EDITOR, AND WEBMASTER SUBMISSION FORM

CLUB INFORMATION:

CLUB NAME: _____

(Please pay special attention to "&" or "and")

CLUB MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CLUB PHONE NUMBER: _____

MEETING LOCATION ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

MEETING TIME: _____

MEETING DATE: _____

OR MEETING RECURS MONTHLY ON THE: 1st 2nd 3rd 4th WEEK
ON: Mon. Tues. Wed. Thurs. Fri. Sat. Sun.

EXCLUDED MONTHS: January February March April May June
July August September October November December

CLUB WEBSITE: _____

CLUB FACEBOOK PAGE: _____

CLUB NEWSLETTER NAME: _____

OUR CLUB IS A 501(c)(3) ORGANIZATION: YES NO

ANNUAL SHOW:

SHOW TITLE: _____

ANNUAL SHOW MONTH: January February March April May June
July August September October November December

ANNUAL SHOW CALENDAR DATES: _____

ANNUAL SHOW OCCURS ON (select all days): Mon. Tues. Wed. Thurs. Fri. Sat. Sun.

DAY 1 SHOW OPEN TIME: _____ AM PM CLOSE TIME: _____ AM PM

DAY 2 SHOW OPEN TIME: _____ AM PM CLOSE TIME: _____ AM PM

DAY 3 SHOW OPEN TIME: _____ AM PM CLOSE TIME: _____ AM PM

DAY 4 SHOW OPEN TIME: _____ AM PM CLOSE TIME: _____ AM PM

SHOW FACILITY NAME: _____

SHOW ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

NAME OF SHOW CHAIR OR SHOW CONTACT: _____

SHOW CHAIR PHONE NUMBER: _____

SHOW CHAIR EMAIL ADDRESS: _____

- WE DO NOT HOLD AN ANNUAL SHOW
- WE HOLD MORE THAN ONE SHOW PER YEAR

List additional show information: _____

**A HUGE THANK YOU
Don Shurtz, Scholarship Fund Chair**

In last month’s newsletter, I wrote that we had lost several clubs for 2024 due to the club’s dwindling membership. Losing clubs is not a good thing – but sometimes good things happen from bad situations. One of the clubs that folded was the Pine Country Gem and Mineral Society. They donated the balance left in their treasury to the AFMS Scholarship fund. They also promised to donate the proceeds from the sale of their clubhouse. Their clubhouse was small, not located in a prime location, and did not have any parking. They expected to sell the clubhouse for, at most, a few thousand dollars. They were wrong – they sold it for a few tens of thousands of dollars. The sale price was \$50,000.00. They wanted to help the SCFMS and SCFMS scholarships. I explained that the SCFMS did not have its own scholarship. Instead, it participates in the AFMS Scholarship program. The AFMS Scholarship Foundation gives two scholarships of \$4,000.00 to each of the participating regional federations. Pine Country G&MS donated \$25,000.00 to the AFMS Scholarship Fund. According to the President of the AFMS Scholarship Foundation, The Pine Country donation was the largest in the time that she has served with the Foundation, and likely is the largest donation ever!

**THANK YOU PINE COUNTRY GEM
AND MINERAL SOCIETY**

By the way, the remaining \$25,000.00 was donated to the SCFMS Endowment Fund. Thank You again!

This year, only two active SCFMS clubs and one folded SCFMS club have made donations to the AFMS Scholarship Foundation. Pine Country was the folded club; the active clubs are the Rollin’ Rock Club and the Pleasant Oaks Gem and Mineral Club. The active clubs are also the only two to receive the matching donation that I set up for this year. In case you missed it, if your club donates at least one dollar for each club member, I will match \$0.25 for each club member to the donation. The matching funds are limited to one per club and to \$0.25 for each of the club’s members. For example, if a club with 200 members donates \$200 to the AFMS Scholarship fund, I will match \$0.25 for each member adding \$50.00 to their donation. If the same club donates \$400.00, the matching would still be limited to \$50.00. If the club made a second donation of \$300 to the scholarship fund, there would be no matching dollars added as the matching is limited to one per club. Your club or society still has half a year to have matching funds added to the donation.

The scholarships are awarded by a Scholarship Honoree. The Honoree may pick two graduate students studying in the Earth Science field or may request help from a professor or scholarship coordinator at a select-ed school. If you know someone who should be recognized as the Scholarship Honoree, you should send a nomination letter to the SCFMS Executive Vice President. You should get your nomination letter in NOW as the Scholarship Honoree needs to be named by January 15, 2025.



**KEEPING KIDS CONNECTED
TO SAFETY
Ellery Borow, AFMS Safety
Chair**



Ellery Borow,
AFMS
Safety Chair

Kids are different from adults. To young kids everything is new, exciting, curious, to be explored, tasted, touched, tried. With luck, they will keep those traits and be well served by them as they mature. One of the things kids do not have in abundance is patience. How might a kid wait around while there is a huge world out there to explore?

When it comes to safety, there are several issues which relate specifically to kids. Kids are generally not ones to listen attentively to a long boring safety lecture either at a club meeting or at a mine or quarry collecting site. So, how are kids to be safe if the safety lectures are not effective in reaching them? Parents do their very best to keep their kids safe, but it is difficult to watch them every second of every hour.

One of the ways kids learn on their headlong race to adulthood is to watch the world around them. They watch other kids, they watch strangers, they watch their parents, they watch everything, every one, all the time. Now, if what kids see are other kids, strangers, their parents and everyone wearing their safety goggles, wearing safety gloves, not tossing rocks down-hill toward other collectors, and in general being safe and respectful, kids will take note of this. Kids need to learn, want to learn, struggle and strive to learn to be the adults they are destined to become. To help them on toward their goal, we, we all need to set examples of how to be safe.

Here is an example to which many can relate – before taking off, the airline cabin crew gives a brief safety lecture. In the lecture mention is made that, in case of loss of cabin pressure passengers are to put the oxygen masks on themselves first, before putting the masks on their kids. In order to protect our kids why aren’t we told to put the masks on the kids first? The answer is, if

Dear Federation Members:

I would like to inform you of the Austin Gem and Mineral Society's annual show, **Gem Capers 2024**. The dates for the mineral show are **October 18th-October 20th, 2024** at the Palmer Events Center in Austin, TX. This year's theme is turquoise.

If you have any questions about this announcement, please e-mail our Show Chair, Laird Fowler, at showchair-man@austingemandmineral.org or call the club at (512) 458-9546.

Event: **Gem Capers 2024** www.agms-tx.org

Description: Gem and mineral show to include jewelry, beads, gemstones, mineral specimens, crystals, fossils, spheres, meteorites and lapidary equipment with over 30 vendors.

Location: Palmer Events Center, 900 Barton Springs Road, Austin, Texas 78704 Here is a [map](#).

Dates and Times: Fri October 18th 9 am – 6 pm, Sat October 19th 9 am – 6 pm, Sun October 20th, 10 am - 5 pm.

Admission Fees: Children ages 12 and under free, Ages 13-18 \$2, Adults \$8, Military ID and Seniors (60+) \$7.

Exhibits: Numerous exhibits including: members' mineral collections, the popular "Touch Table" of rocks and fossils and a fluorescent mineral display with rocks that glow under special lighting. There will be a silent auction Saturday and Sunday as well as demonstrations such as stone faceting, wire wrapping, cabbing, and fossil cleaning.

For Kids: **Wheel of Fortune** – \$1 a spin with a guaranteed prize
Gem Mine – \$1 for a set time to rummage through gravel to find polished stones to keep.
Jewelry Making – \$1 to turn a stone from the Gem Mine into a piece of jewelry.
Touch Table – free, touch rocks and minerals, see what they look like when polished
Dino Rub – free, make your own fossil impression with paper and crayons
Fluorescent Mineral Display – free, see the neon colors of otherwise plain rocks under UV light
Friday, October 18th is Youth Education Day – field trips from various schools with learning aids

Prizes: On Saturday and Sunday – **hourly door prize drawings**, must be present to win. **Grand Prize** give away on Sunday. Ticket comes free with show entry. The winner does not need to be present to win.

The Austin Gem and Mineral Society is a non-profit, 501(c)(3) organization. Proceeds of the show support the society.



For more information about the AGMS, please visit our club website at www.agms-tx.org.

Sincerely, Laura Dow, Austin Gem & Mineral Society - Publicity Committee Member

Photo by Laura Dow

CONTRIBUTIONS WELCOME!

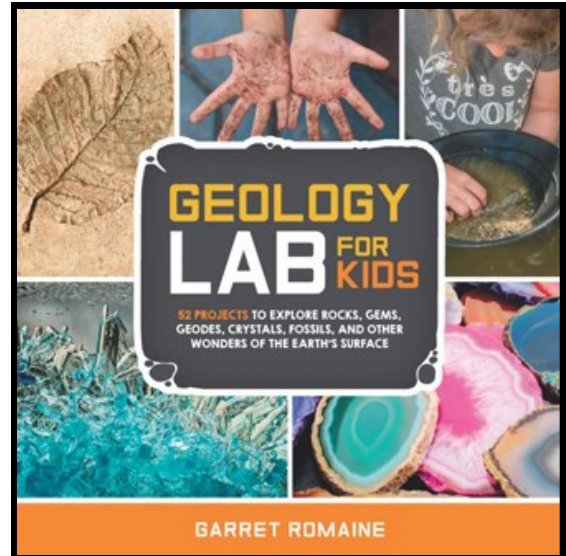
SCFMS exists for the benefit of our member clubs and we are all volunteers. Please consider enriching our club by making a photo, drawing, or written contribution to the newsletter about a geology or earth science related topic.

Pick a topic that interests you and give it a go. Please send it me at scfm-seditor@yahoo.com by the 20th of the month prior to the expected publication date and I would be glad to work with you to finalize your item for this newsletter.

Please, be sure to send me your show flyer at least several months in advance so, I can share it in our newsletter.

Susan Burch, Editor

**DEADLINE
FOR THE
SEPTEMBER-
OCTOBER, 2024
NEWSLETTER IS
AUGUST 25, 2024**



Reprinted with permission from Author, Garret Romaine. Please, include the link below.

<https://www.amazon.com/Garret-Romaine/e/B0037187T8>



Use chocolate to learn about all the different rock cycles.

MATERIALS

- Block or chips of dark chocolate
- Kitchen grater
- Aluminum foil
- Small pot
- 2 cups (475 ml) water
- 4–5 paper cupcake holders
- Block or chips of white chocolate
- Chocolate syrup (optional)



Continued from Page 15



Safety Tips

- Be careful around a hot stove.
- Ask an adult for help using the stove.
- Don't hurt your fingers when you grate up the chocolate.

PROTOCOL

STEP 1: Start by making some “sedimentary” chocolate rock. Take a block of dark chocolate, or large chips—which you can think of as cooled “metamorphic” rock. Use a grater to grate about 1/4 cup (44 g) of chocolate powder. This is like the effects of erosion, creating dry sand or mud—the basics of a sedimentary rock.

STEP 2: Create a small “boat” out of aluminum foil and place the powder inside it. Now float the boat in a small pot of water over low heat until you see the powder melt into a liquid chocolate lava flow.



This is now “igneous” chocolate.

STEP 3: Pour the hot liquid chocolate lava into a paper cupcake holder and let it cool.

STEP 4: Once cool, break the chocolate into pieces, the way mountains break apart due to erosion. Grate some small shavings from the white chocolate, add it to the broken chocolate pieces, and sprinkle in some chocolate chips if you want. You can add some chocolate syrup, too.

STEP 5: Place the mixture of different types of chocolate “rocks” in a small square of aluminum foil,

about 8" x 8" (20 x 20 cm). Fold the aluminum foil up by half several times until the chocolate is safely wrapped inside. You can also use sturdy resealable plastic bags.

STEP 6: Place the foil on a flat surface and push on it, but don't use too much force or you could break open the foil. You want enough pressure to press the chocolate particles together—like the amount of force needed to create metamorphic rocks. A light tap with a rubber mallet or a rolling pin would also work.

STEP 7: Carefully unwrap the foil and check out the result. You should see a “chocolate schist.” By applying a little pressure, and some heat from friction, you forced the chocolate particles to compress together into a metamorphic rock again.



Creative Enrichment

1. What could you do next to the “metamorphic” chocolate to re-start the cycle?

THE SCIENCE BEHIND THE FUN

Congratulations! You just made a complete cycle through the three main rock types. There is no way to say for sure where rocks start in their journey, so we arbitrarily started with a metamorphic rock and began eroding it. Next, we melted the sedimentary rock and formed volcanic chocolate lava, then we mashed it all together like a metamorphic rock. If your mixture was hard enough, you could start over and begin grating it back into a fine powder. The Earth is great at recycling rocks. That's the way it happens in the Earth's crust: rocks go through a journey from one form to the next. That's why we say that the Earth is geologically active—these processes are going on all the time.

TUNGSTEN

By Prof. Philip R. Kesten

Tungsten is an element. Tungsten is also a metal. And although Tungsten is not found in its pure form (in nature) as a rock, it can be found as a component in a variety of rocks. And, rock or not, you almost certainly have some tungsten in your pocket.

First things first. Where, in your pocket, would you find this tungsten? Yes, tungsten is used, for example, to make drills and other high-speed cutting tools, and also the filaments in many incandescent light bulbs. You probably do not, however, have any of those in your pocket. You might, however, have a ballpoint pen in your pocket, and there is almost certainly some tungsten in the ball bearing at the writing end of it! And wait, are you carrying a mobile phone? If so, you likely have almost a gram of tungsten in your pocket! There is, as it happens, a whole lot of tungsten in the mechanism that makes your phone vibrate when you put it into silent ring mode. (Tungsten is both rather dense, and also durable, so it is an excellent choice for the weight that flops around when you put your phone into “vibrate” mode.) We get tungsten by extracting it from ores, rocks that contain tungsten bound together with atoms of other elements. The most common ores from which tungsten is economically extracted are wolframite and scheelite, both of which are composed of “tungstate” molecules, that is, molecules in which a tungsten (W) atom is bound to four oxygen (O) atoms, and also to an atom of another element. Tungstate molecules include iron tungstate, also known as ferberite, manganese tungstate, known as hübnerite, and calcium tungstate, which is known as scheelite. With Fe representing an iron atom, Mn representing a manganese atom, and Ca representing a calcium atom, the chemical expressions for these minerals are FeWO_4 (ferberite), MnWO_4 (hübnerite), and CaWO_4 (scheelite). To complete the picture, the mineral known as wolframite is a mixture of ferberite and hübnerite. You might, by the by, be wondering why “W” is the symbol we use for the element tungsten. The symbols for most elements, after all, make sense: “H” is the elemental symbol for hydrogen, for example, and the word “hydrogen” starts with the letter “h.” And “C” represents carbon; the word “carbon” starts with the letter “c.” But although “tungsten” does not start with the letter “w,” perhaps you noticed that “wolframite,” an ore of tungsten, does start with that letter. The words “wolfram” and “tungsten” have a curious, intertwined history. Way back in the 1500s, the German mineralogist and metallurgist Georg Agricola observed that large amounts of tin were consumed, as if devoured by a wolf, in order for tungsten to be extracted from tin ore. For that reason, he coined the name “lupi spuma” or “wolf’s froth”, for the element we now call “tungsten”. Later, based on “wolf’s froth”, the Swedish chemist Johan Gottschalk Wallerius coined the term “wolfram” for tin ore. (By the by, “wolfram” is still used in some countries to name the element most English speakers call tungsten.) And in the late 1800s, the Swedish German chemist Carl Wilhelm Scheele conducted experiments using the metal extracted from this ore, known as “heavy stone,” or tungsten in Swedish. If you already have in your collection a specimen of the stone this Swedish German chemist studied (or are looking to add one) you

might have been, perhaps, calling it by a different name. To honor Carl Scheele, this mineral was renamed “scheelite” in the late 1800s. Fig. 1 shows a specimen of scheelite – one from my own collection.

To complete the picture of the relationship between wolfram, wolframite, and tungsten... some years after Scheele carried out his experiments, other scientists discovered that the same acid Scheele discovered could be made from the stone known as wolframite. Same acid, same element... wolfram and tungsten are one and the same! Tungsten, as the Swedes knew, is a



Fig 1. A specimen of Scheelite.

“heavy stone”. Or, to be strictly correct, tungsten is a dense stone. Density is a measure of how much of a substance can fit into a given volume. Lead, for example, is far more dense than, say, Styrofoam. Sure, a block of Styrofoam the size of the Empire State Building would weigh more than a piece of lead the size of a pea. But that pea-sized piece of lead would for sure weigh more—would weigh way more—than a pea-sized piece of Styrofoam. Lead is more dense than Styrofoam. A pea made of Styrofoam would have a mass of about fifteen thousandths of a gram. A lead pea? More than five grams. Yes, lead is hundreds of times more dense than Styrofoam—indeed, lead is one of the densest materials we know. And where does tungsten fit into comparison? Tungsten is one and three quarters more dense than lead! So why would the maker of a mobile phone choose to use nearly a gram of tungsten in order to create its vibrating mechanism? Consider attaching some weights to an axle using flexible arms. If you make the axle spin rapidly, those weights will fly out and away from the axle... and bang against whatever is close by. If you put such a setup into a mobile phone, that banging is the *bzzz, bzzz, bzzz* of the vibrator built into the phone. And the heavier the weights, the stronger and louder the vibration sound that is created. But space inside a mobile phone is at a premium; using a dense material such as tungsten means more weight in a smaller volume. Tungsten counterweights make better mobile phone vibrators!

To complete the picture of the industrial applications of tungsten, let us consider some of its other properties. In particular, tungsten is moderately hard, with a Mohs hardness of over five. (The Mohs hardness scale can be remembered by the mnemonic “The Girls Can Flirt And Other Queer Things Can Do”: from one to ten in hardness there is talc, gypsum, calcite, fluorite, apatite, orthoclase feldspar, quartz, topaz, corundum, and diamond. At a hardness of

Continued on Page 17

Continued from Page 16

five, tungsten will not be scratched by, for example, a specimen of calcite, at three on the hardness scale. Although a piece of glass, which has a Mohs hardness of five and a half, will scratch a specimen of tungsten.) But: being moderately hard means that tungsten is relatively durable. It will not, in general, be damaged by banging against the innards of the vibrator in your phone. Tungsten also has the second highest melting temperature—over six thousand degrees Fahrenheit—of all elements, second only to carbon. So tungsten sounds like a good material from which to make tools that will get hot when used, tools such as drill bits and saw blades. Yes... but no! Tungsten is also rather brittle, which makes it a difficult material with which to work. The solution? Mix some carbon in with some tungsten. Heating tungsten in powdered form together with carbon and hydrogen results in an alloy, tungsten carbide, which is rigid, as hard as a diamond, and resistant to impacts. A tungsten carbide drill bit, for example, does not deform or break when it gets really hot, and will cut its way through almost any material. And a tungsten carbide drill bit can last hundreds of times longer than one made of steel. For these reasons, you will find so-called “carbide” drill bits for sale at your local hardware store. Recall that tungsten is also often used to make the filaments that glow inside an incandescent light bulb. It was Thomas Edison who created the first commercially viable incandescent bulb: he uncovered the fact that when an electric current flows through a thin wire (a “filament”), the wire gets hot. Hot enough to glow... that is, hot enough to give off light. Unfortunately, the filament also gets hot enough to burn up—which is not a good thing for the filament in a bulb to do. Edison discovered, however, that enclosing his filaments in a glass bulb from which the air (specifically the oxygen) had been removed would prevent them from burning up. Or even better, Edison realized, was to enclose a filament in a glass bulb in which the air had been replaced by an inert gas such as argon. Do this, as Edison did, and (hazzah!), you have created an incandescent light bulb. And while Edison’s most successful bulbs used filaments made by infusing a cotton thread with powdered carbon, the filaments in the bulbs we use today are coils of thin wire made of tungsten. Tungsten filaments burn brighter and last longer than the carbonized cotton ones that Edison created. You might want to look around and add some minerals containing tungsten to your collection. And although they are not as striking as scheelite, specimens of both ferberite (see Fig. 2a.) and hübnerite (see Fig. 2b.) can have attractive crystal habits... so finding the right ones could lead to an excellent addition to your collection. And wolframite makes an ideal companion piece to these two.

As the mixture of ferberite and hübnerite, wolframite looks—not surprisingly—quite similar to both ferberite and hübnerite. A specimen of wolframite, embedded in a crystal of quartz, is shown in Fig. 2c.

Tungsten... It is a stone with a variety of industrial applications, and it is also found in a number of minerals and crystals... minerals and crystals that would be interesting to display in your rock, gem, and mineral collection.

Prof. Philip R. Kesten, Ph.D., Department of Physics, Santa Clara University, via Breccia 7/24.



Fig. 2a. A specimen of ferberite.

<https://www.dakotamatrix.com/images/products/ferberite49705d.JPG>

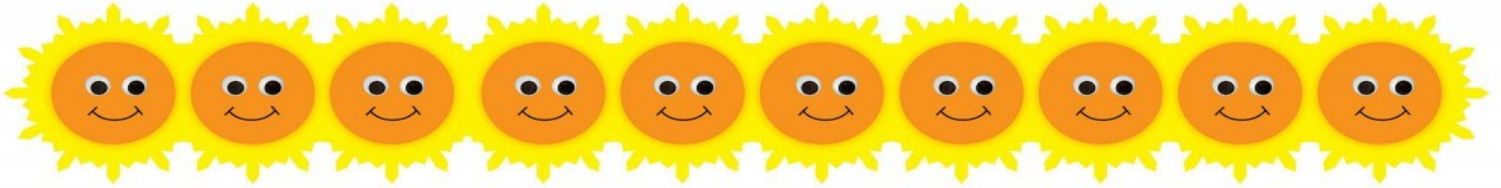


Fig. 2b. A specimen of hübnerite. <https://www.mindat.org/photo-1326.html>



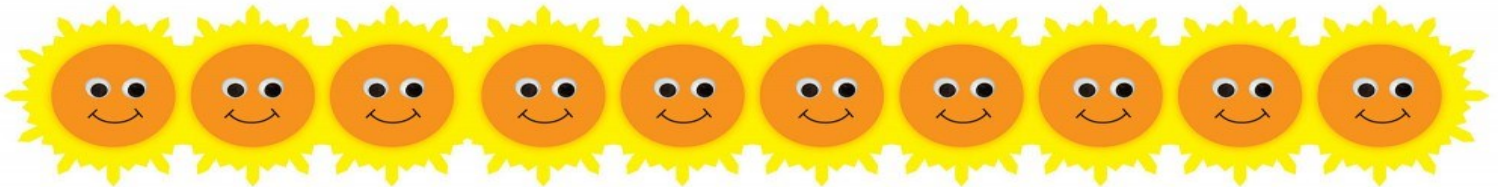
Fig. 2c. A specimen of wolframite embedded in a crystal of quartz.

http://www.minerals-n-more.com/images/thumbs/0001670_wolframitequartz_550.jpeg



UPCOMING SHOWS 2024

- August 10-11, Baton Rouge G&MS, Lamar Dixon Expo Center, Gonzales, LA, brgem.min.input@gmail.com
 - August 17-18, ARK-LA-TEX G&MS, Bossier City Civic Center, Bossier City, LA, larockclub@gmail.com
 - September 21-22, Lubbock G&MS, Lubbock Memorial Civic Center, Lubbock, TX www.lubbockgemandmineral.org
 - November 23-24, Mesquite, TX, Dallas G&MS, Mesquite Convention Center, www.dallasgemandmineral.org. IT IS ALSO THE SCFMS CONVENTION
- Ref: Rock & Gem Show Dates, <https://www.rockngem.com/ShowDatesFiles/ShowDatesDisplayAll.php?ShowState=ALL>
 - Ref: SCFMS Website, Local Shows, www.scfms.net/local_shows.htm
Via Chips and Chatter 7/24



To those who helped make this issue possible...



Don Shurtz
Dallas Gem and Mineral Society
Crack The News
Ellery Borow
Lynn Metcalf, GG GIA
Austin Gem and Mineral Society
Laura Dow
Garret Romaine
Santa Clara Valley Gem and Mineral Society
Prof. Philip R. Kesten