

GRITTY GREETINGS



Waco Gem and Mineral Club

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P.O. Box 8811, Waco, TX 76714-8811

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Next meeting, October 5th at clubhouse 10 AM! John Hillman presents: "Checking out Czech Rocks"!

2024 Upcoming events

- 9/28-9/29 Lubbock Gem and Mineral Show, Lubbock
- 10/12-10/13 Tri-Cities Gem and Mineral Show, Mayborn Center, Temple
- 10/18-10/20 Austin Gem Capers, Austin Palmer Events Center
- 10/25-10/27 Fossilmania, Glen Rose Expo Center

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Contacts

President	Roy Cooper 254-749-9961 coopersfarmstore@yahoo.com	Treasurer	John Hillman hillmanjohn316@gmail.com
Vice-President	Scott Halvorson 254-424-8829 Baylordad312@gmail.com	Secretary	Harry Senn senn.harry@yahoo.com
Newsletter	John Langston johnjkbear@aol.com	Website	www.wacogemandmineral.org
		Club email	wacogemandmineralclub@gmail.com

Meeting for September 7, 2024 Waco Gem and Mineral Club

Call to Order: The meeting was called to order at 10:06 am by Harry Senn, Secretary, President pro tem.

The **Minutes of the previous** meeting as published in Gritty Greetings was approved by acclamation.

John Hillman did a wonderful job presenting the **Treasurers Report.**

Committee Reports

A. Program Committee

I. John Hillman today, "Checking Out Czech Rocks:

II. October: Bob is working on it.

III. November: Annual Club Auction

Need donations of good Material

IV. December: Christmas Party

B. Field Trip Committee: still working on this

C: Show Committee:

Show Date: May 2 (Friday – Setup Day), 3, 4, 2025

Lee Lockwood Library, Waco Drive

Old Business

There will be a Temple Show the second weekend in October.

New Business

Harry reported that the clubhouse toilet needs a new flapper valve and float.

By general consent it was agreed that John Hillman give again his "Checking out Czech Rocks" presentation for the October meeting.

Adjourn: 10:13 am

Program: John Hillman did a wonderful job with his "Checking out Czech Rocks" presentation about his recent trip to the Czech Republic.

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October Birthstones

Tourmaline and opal



The name “**opal**” originates from the Greek word *opallios*, which meant “to see a change in color.” The Roman scholar Pliny used the word *opalus* when he wrote about this gemstone’s kaleidoscopic “play” of rainbow colors that could simulate shades of any stone.

Opal’s characteristic “play-of-color” was explained in the 1960s, when scientists discovered that it’s composed of microscopic silica spheres that diffract light to display various colors of the rainbow. These flashy gemstones are called “precious opals.” Those without play-of-color are “common opals.”

Dozens of opal varieties exist, but only a few, such as fire opal and boulder opal, are universally recognized. Opals are often referred to by their background “body color” of black or white.

Opal’s classic country of origin is Australia. Seasonal rains soaked the parched Outback, carrying silica deposits underground into cracks between layers of rock. When the water evaporated, these deposits formed opal. Sometimes, silica seeped into spaces around wood, seashells and skeletons, resulting in opalized fossils.

Since opal was discovered in Australia around 1850, the country has produced 95 percent of the world’s supply. Opal is also mined in Mexico, Brazil, Honduras, Ethiopia, the Czech Republic, and parts of the U.S., including Nevada and Idaho.

The water content of opal gems can range from three to 21 percent—usually between six and 10 in gem-quality material. This, combined with hardness of only 5.5 to 6 on the Mohs scale, makes opal a delicate gemstone that can crack or “craze” under extreme temperature, dehydration, or direct light.

Wearing opal jewelry is well worth the extra care, though. This October birthstone has remained a popular choice for centuries.

The name “**tourmaline**” comes from the Sinhalese words *tura mali*, which mean “stone of mixed colors.” As its name implies, tourmaline stands apart from other gemstones with its broad spectrum of colors in every shade of the rainbow.

Tourmaline is not one mineral, but a fairly complex group of minerals with different chemical compositions and physical properties. Certain trace elements produce distinct colors, and many resulting varieties have their own names.

Black tourmaline, known as “schorl” is rich in iron, which causes dark shades from deep brown to bluish-black. This variety makes up 95 percent of all tourmaline, though most of it isn’t gemstone-quality.

Dravite or brown tourmaline is rich in magnesium, which causes colors ranging from brown to yellow. It’s named for the Drave District of Carinthia (now Slovenia) where this stone is found.

Elbaite offers the widest range of gem-quality tourmaline colors, due to lithium traces combined with other coloring elements.

Rubellite or red tourmaline is caused by manganese. However, if the color becomes less vibrant under different light sources, it may be called pink tourmaline.

Indicolite or blue tourmaline can appear purplish blue or bluish green, depending on the amount of iron and titanium.

Verdelite or green tourmaline can resemble emerald. However, if its color is caused by chrome and vanadium, it’s called a chrome tourmaline.

Paraíba tourmaline is a vividly colored purplish or greenish blue variety found in Paraíba, Brazil. It’s the most recently discovered, and because of its desirably intense colors, it’s one of the most valuable. The element copper is responsible for its vivid colors. Copper-bearing tourmaline is also found in other parts of the world such as Mozambique and Nigeria; but only copper-bearing tourmaline from Paraíba, Brazil is called “Paraíba tourmaline.”

Achroite or colorless tourmaline is rare.

Parti-colored tourmaline displays more than one color, due to chemical fluctuations during crystallization. A common color combination is green and pink. These are often cut in slices to reveal a red center surrounded by a green rim, earning the name “watermelon tourmaline.”

Tourmaline is mined in Brazil, Sri Lanka, Nigeria, Mozambique, Madagascar, Afghanistan, Pakistan and the U.S.—primarily Maine and California.

Tourmaline is desirable because of its sheer range of color options. Combined with a good hardness of 7 to 7.5 on the [Mohs scale](#), tourmaline makes very wearable birthstone jewelry.

One of this gemstone's most impressive traits is its ability to become electrically charged through heat (pyroelectricity) and through pressure (piezoelectricity). When charged, tourmaline can act as a magnet by oscillating and by attracting or repelling particles of dust.

- See more at: <http://www.americangemsociety.org/>

Brad's Tips

TAPERED REAMERS



A tool you don't see often these days is a tapered reamer. It's not a tool you'll use every day, but they're particularly useful for making an irregular hole round or for enlarging a hole to an exact diameter. For example, the small set in the yellow pouch is for holes in the range of 0.3mm to 2.5mm. They are great for sizing a tube to fit a hinge pin. Other times when I'm drilling a hole for riveting and can't find the exact size drill, I simply drill the holes with a slightly smaller bit and enlarge them with a reamer until the wire just fits.

For larger hole sizes in sheet metal up to 14 ga, I really like the reamer with the black handle. It makes quick work of sizing holes from about 3mm to 12mm. You can find them in well-equipped hardware stores.

You may never use the large diameter reamers, but when sawing out a ring from 4mm thick sheet, I found they worked well for rounding and sizing the hole.

TESTING FOR SILVER

Often you need to identify some of those unknown "silvery" pieces of metal in the bottom of the toolbox or some piece of old jewelry that is not hallmarked. Is it silver or is it something else?

Of course, if you need to know exactly what you have, it's best to send your metals off for refining. But inexpensive silver testing solutions can be used to help distinguish higher silver content alloys from alloys that have the same appearance but with little to no silver content, like German Silver or Nickel.

I purchased a half-ounce bottle of JSP Silver Testing Solution #GT41. It's not a rigorous analytic test, but it lets you know if you're on the right track. And it's inexpensive. Mine was only \$3.

With a fresh solution you have an instant reaction after applying it to the metal being tested. The procedure is simple - apply a small drop and watch for a color change. Note that the acid will leave a slight mark, so choose a spot that is out of the way or will be easy to polish.

If you suspect the object is silver plated, you should file a little notch somewhere inconspicuous to expose what metal is below the surface. Otherwise, all you test will be the surface plating.

Here's the reaction I got when testing various materials:

Fine silver	Red/Orange
Sterling silver	Brick Red
80% silver 20% copper	Dark red changing to gray
Brass	Yellow changing to blue
Nickel	Gray-green
Copper	Yellow changing to blue
Steel	Black
Stainless Steel	No color change

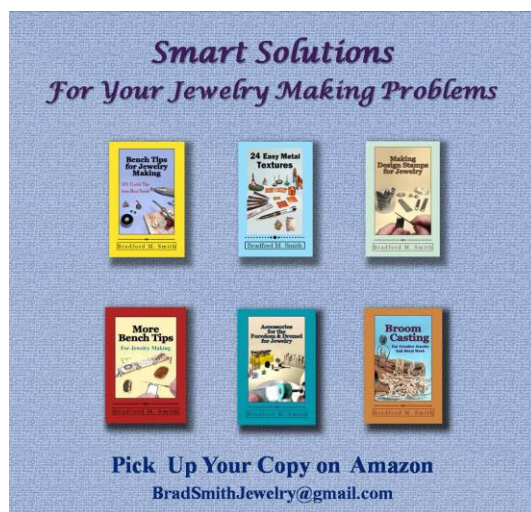
Caution - If you do any of this testing, know that you are handling a reasonably strong acid. The GT41 label says it includes nitric acid and potassium dichromate.

Wear safety glasses.

Do not get any testing solution on your skin.

Use a solution of baking soda and water to neutralize acid.

Wash and clean up well when you're done.



Notes

The editor requests news items from any member to be included in the Gritty Greetings.

Deadline for submissions is the 20th day of the month. Contributions to the newsletter are encouraged.

Name Tags:

It is great that we feed the pig at our meetings because we don't have or have lost or forgotten our nametags to drop a dollar in the pig. The money from the pig goes toward our Scholarship program, and we really do appreciate every dollar or more. However, if you need a name tag you can purchase them at the businesses below!

Waco Gem & Mineral Club nametags are available at **Print Mart**, 202 Deb (behind AutoNation Chevrolet). Cost with a pin back is \$8.00 (with tax \$8.66), and with a magnet back is \$11.00 (\$11.91). or at Award Specialties at 431 Lake Air Dr.

Club Dues:

Annual Waco Gem and Mineral Club dues are \$12.00 for an individual membership or \$20.00 for a family membership. Please check with John Hillman if you aren't sure whether you've paid your Dues!

Shop Fees:

Lapidary Workshop fee is \$2.00 per hour. Slab Saw fee is an additional \$2.00 per hour. Class fees are always dependent upon class and instructor.

The Waco Gem and Mineral Club is a member of the South-Central Federation of Mineral Societies and the American Federation of Mineralogical Societies. Meetings are held on the first Saturday of each month (except July and September) at 10:00 a.m. at the Waco Gem and Mineral Club Clubhouse, 187 South McLennan Drive in Elm Mott, Texas. The lapidary workshop is in the clubhouse.

Our website is www.wacogemandmineral.org

Facebook: <https://www.facebook.com/WacoGemAndMineralClub>

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Club Purpose

- to bring about a close association of those persons interested in earth science and lapidary arts
- to increase and disseminate knowledge about rocks, minerals, fossils, Indian artifacts and other geological materials
- to encourage lapidary art and the collection and exhibition of rocks, minerals, fossils and artifacts
- to conduct field trips, meetings, lectures, displays and an annual show for the edification of the public
- to cooperate with educational and scientific institutions and other groups in increasing knowledge and popular interest.

